

**MARKET INVESTIGATION INTO SUPPLY OF BULK LIQUEFIED PETROLEUM
GAS FOR DOMESTIC USE**

Provisional findings report

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The Competition Commission has excluded from this published version of the provisional findings report information which the inquiry group 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 ✂.

Provisional findings report

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Summary

1. On 5 July 2004, the Office of Fair Trading (OFT) referred to the Competition Commission (CC) the supply of bulk liquefied petroleum gas for domestic use (which we refer to as domestic bulk LPG). The reference was made following a number of complaints to the OFT, particularly in relation to pricing of domestic bulk LPG, the difficulty of switching between suppliers and certain other aspects of the relations between customers and their suppliers.
2. Domestic bulk LPG is used by almost 150,000 households in the UK. Only natural mains gas provides the same range of functions as LPG; but the cost of LPG is significantly higher than that of mains gas reflecting in part the need to deliver LPG by tanker to households in mainly rural areas, and its use, except in parts of Northern Ireland, is largely confined to areas situated away from natural gas mains.
3. Domestic bulk LPG is a hazardous product. Safety is a key concern to the suppliers, and in our own consideration of this industry. The supply of domestic bulk LPG is therefore subject to a legislative regime, supplemented by voluntary codes of practice, but also by the suppliers' own practices which sometimes go beyond the codes to ensure legislative requirements are satisfied. We saw no evidence that the UK industry had any serious safety problem, which suppliers also partly attributed to the current arrangements for supply of domestic bulk LPG; in particular to the integration of the supply of LPG with ownership of the tanks.
4. Four suppliers (referred to as the 'major suppliers')—BP, Calor, Flogas and Shell—supply about 90 per cent of domestic bulk LPG in Great Britain, two of which—Calor and Flogas—are the only suppliers in Northern Ireland. The major suppliers argued that there was strong competition to domestic bulk LPG from other fuels, in particular

heating oil. But we found the price constraint on domestic bulk LPG from such other fuels was not sufficient for them to be regarded as part of the same market, and that the supply of domestic bulk LPG in Great Britain and Northern Ireland could be regarded as separate economic markets.

5. The rate of switching between LPG suppliers is very low, even among customers who could obtain significant net savings by switching.¹ One reason for this is that customers face charges from both the incoming and outgoing supplier, to cover or contribute to the suppliers' switching costs. Many customers are uncertain as to their liability for such charges. Charges are not always set out in contracts, and in practice the charges actually levied depend on the discretion of suppliers. The switching process can also be a source of inconvenience for customers; the extent of such inconvenience is not known to customers in advance, and in fact depends on the efficiency and care with which suppliers complete the switch. Suppliers normally retain ownership of bulk tanks on domestic customer premises. It is standard practice, when a customer switches, for the outgoing supplier to remove its tank, to be replaced by an essentially similar tank owned by the incoming supplier. This operation incurs a substantial cost and adds to the inconvenience, both actual and perceived, faced by a customer who is considering switching. The practice of tank switching is one of the reasons for three-month notice periods being standard in the domestic market.² Customers may also be prevented from switching by minimum-term contracts (standard among new customers but also held by some established customers, for example as a condition of receiving a discounted price). Customers have little awareness of alternative suppliers, and tend not to be approached by other suppliers, although this may be explained in part by the difficulties in switching

¹A small proportion of customers obtain savings by negotiating discounts rather than switching, as we discuss later.

²Three-month notice periods are justified by suppliers by the need to run down the gas in the tank before removal. However, if the customer is switching to another LPG supplier this is often unnecessary, as the gas can be transferred to the new supplier's tank.

outlined above. The limited extent to which suppliers approach one another's customers may also be explained by the difficulty in identifying such customers, and the use of selected discounts (see below). We regard the charges and inconvenience faced by customers when switching, the suppliers' ability to determine or influence these charges and inconvenience, the practice of uplifting and replacing tanks when a customer switches, the lack of information available to customers on the costs and benefits of switching, and other constraints on their doing so, as features of the domestic bulk LPG market in Great Britain and Northern Ireland which prevent, restrict or distort competition.

6. A number of aspects of the pricing of domestic bulk LPG support the view that competition is constrained in this market. There are sustained differences between average prices of suppliers; and a degree of independence (from one another) in the movements of these average prices. Individual suppliers also charge different prices to different customers, largely unrelated to differences in cost. The main reasons for such price differences would appear to be price discrimination according to customers' desire or ability to negotiate, for example by threatening to switch to other suppliers, or whether the customer is new or established. Low switching rates, as noted above, exist despite the availability of lower prices from other suppliers, and despite a lack of evidence that customers have any loyalty towards, or preference for the service of, their existing supplier.

7. We regard the offering of selective discounts to customers as a feature of the market in Great Britain which prevents, restricts or distorts competition, in that customers who object to general price increases can be excluded from the price increase, allowing suppliers to increase prices without prompting an increase in the rate of account terminations. Selective discounts also increase the ability of large

incumbent suppliers to resist attempts by smaller suppliers, entrants, or other large suppliers to win customers from them. Lack of transparency in prices is also likely to deter users from switching to another supplier and is a further feature of the Great Britain market adversely affecting competition. These features do not, however, apply in Northern Ireland, where standard prices are charged.

8. We accept that the major suppliers have made efforts to compete on non-price factors, but have found little evidence that consumers perceive differences in quality of service between suppliers.
9. We also found barriers to expansion by smaller suppliers in the Great Britain and Northern Ireland markets which constitute a further feature of the markets we are examining which reduces competition. Switching costs referred to above create a barrier to expansion, in that in trying to win a customer, an entrant or smaller competitor will always be at a disadvantage to the current supplier. This disadvantage is particularly significant in a mature market such as that for domestic bulk LPG. With relatively few new-to-market customers, a new or expanding supplier has limited scope to expand without winning customers from larger incumbent suppliers. Selective discounting in Great Britain also enables existing firms to respond to specific competitive threats without lowering prices to their broader customer base. In consequence, the threat of entry or expansion by smaller suppliers, is likely to provide only a very limited constraint on the prices charged by LPG suppliers.
10. We also considered two other aspects of the market which, although not necessarily features which prevent, restrict or distort competition, are relevant to our assessment of competition.

11. First, two suppliers in Great Britain currently appear to us to be earning returns on capital employed persistently and substantially in excess of the cost of capital we have calculated.
12. Secondly, we considered whether any of the features outlined above—particularly the uplifting of the tank at the end of the supply period—were necessary to ensure the safety of LPG supply. But we are satisfied that alternative arrangements would have been possible without compromising safety.
13. In summary we have provisionally identified adverse effects on competition arising from the features of the markets outlined above. We consider that these adverse effects have a detrimental effect on most customers, particularly in their paying a higher price for LPG than they would otherwise pay. In the next stage of our investigation we will consider whether action should be taken by ourselves, or whether we should recommend the taking of action by others, or both, to remedy, mitigate and prevent the adverse effects on competition and the detrimental effect on customers that have resulted, and may be expected to result, from them. For this purpose we will be issuing separately a notice of possible remedies.

Provisional findings

1. The reference

- 1.1 On 5 July 2004, the OFT referred to the CC the supply in the UK of LPG for domestic use³ (which we refer to as 'domestic bulk LPG'). Our terms of reference are set out in Appendix A.
- 1.2 The reference was made to the CC following a number of customer complaints to the OFT, particularly in relation to:
- (a) the pricing of domestic bulk LPG;
 - (b) the difficulty of switching between suppliers; and
 - (c) certain other aspects of the relations between customers and their suppliers.
- 1.3 Under section 134 of the Enterprise Act 2002 (the Act), the CC is required to investigate whether any feature, or combination of features, of each relevant market⁴ prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in the UK or a part of the UK. If so, there is said to be an 'adverse effect on competition'.⁵
- 1.4 If the CC decides that there is an adverse effect on competition, it is required under Section 134(4) of the Act to decide whether action should be taken by it, or whether it should recommend the taking of action by others, for the purpose of remedying,

³Originally the terms of reference referred to the supply of 'domestic bulk LPG' with domestic being defined as supplied for use by households as well as for use by businesses whose consumption of LPG by volume was similar to that of households. Following consultation by the OFT, the terms of reference were amended on 20 October 2004 to refer to the supply of 'bulk LPG for domestic use' and the definition of domestic was removed. 'Bulk' means supplied by tanker to fixed storage tanks, as opposed to cylinders.

⁴For the purposes of the CC's investigation, 'relevant market' is defined in Section 134(3) of the Act as a market in the UK for goods or services of a description specified in the reference concerned.

⁵Section 134 of the Act is reproduced in Appendix A. The Act states (section 131(2)) that, for the purpose of a market investigation reference, a feature of a market in the UK shall be construed as:

- (a) the structure of the market concerned or any aspect of that structure;
- (b) any conduct (whether or not in the market concerned) of one or more than one person who supplies or acquires goods or services in the market concerned; or
- (c) any conduct relating to the market concerned of customers of any person who supplies or acquires goods or services.

mitigating or preventing the adverse effect on competition concerned or any detrimental effect on customers⁶ so far as it has resulted from, or may be expected to result from, the adverse effect on competition; and, if so, what action should be taken and what is to be remedied, mitigated or prevented.

1.5 During the course of this investigation to date, we have placed a number of documents on our web site including some of the evidence from suppliers and users of domestic bulk LPG; an Issues Statement and Emerging Thinking Statement; a qualitative and a quantitative survey of domestic bulk LPG customers by ORC and a report by technical consultants, Mott McDonald, all of which we commissioned during the investigation; a working paper on safety; and comments from suppliers on some of that material. In reaching our provisional findings, we have taken into account all the evidence received during the course of this investigation, including comments made in written submissions and hearings.

2. Domestic bulk LPG

2.1 Domestic bulk LPG is used by almost 150,000 households in the UK. In Great Britain, almost all users of LPG are located away from the main gas grid, although in Northern Ireland a significant proportion of users are located in areas served by mains gas. LPG performs the same household functions as mains gas, but at greater cost reflecting in part the need to deliver LPG by tanker to individual households situated in mainly rural areas. Unlike mains gas or other network utilities, there is no price regulation of LPG. As noted in Appendix E, heating oil performs many of the functions of bulk LPG but is less suitable for cooking, for which only a restricted range of equipment can be used; generally, therefore, users of heating oil

⁶A detrimental effect on customers is defined in section 134(5) of the Act as one taking the form of:

- (a) higher prices, lower quality or less choice of goods or services in any market in the UK (whether or not the market to which the feature or features concerned relate); or
- (b) less innovation in relation to such goods or services.

would have to use an electric cooker. Descriptions of the product, for which only propane is used in domestic bulk tanks in the UK, and of the supply chain, are in Appendices B and C.

2.2 Four suppliers (referred to as the ‘major suppliers’)—BP LPG UK (BP), Calor Gas Limited (Calor), Flogas UK Limited (Flogas) and Shell Gas Limited (Shell)—supply about 90 per cent of domestic bulk LPG in Great Britain.

(a) BP’s UK domestic bulk LPG operations form a small part of BP plc’s total UK operations. The LPG business has grown organically and through acquisitions (including the businesses of North East Farmers, Border Gas and Mobil Gas). BP plc is a wholesale supplier of LPG to other suppliers of bulk LPG globally.

(b) Calor is focused on marketing and distributing LPG. It is the largest supplier of domestic bulk LPG in the UK by 2004 tonnage, having grown organically from its original LPG cylinder operation. It is wholly owned by the private Dutch group SHV which has LPG and other operations across the world.

(c) Flogas is a wholly owned subsidiary of DCC plc, a company headquartered in the Republic of Ireland with LPG and other operations predominantly in the UK and the Republic of Ireland. Flogas is focused on marketing and distributing LPG. In November 2002, Flogas acquired the nationwide LPG business of British Gas from Centrica. This business now represents the bulk of Flogas’s enlarged domestic bulk LPG operations.

(d) Shell’s UK domestic bulk LPG business grew out of its cylinder operations through a number of acquisitions, including those of Esso in 1997, and represents a small part of its total UK operations. In 2000 Shell divested its cylinder business and some of its small bulk LPG to British Gas plc (at the same time receiving some other non-domestic bulk LPG business from British Gas plc).

We are aware of over 20 other suppliers of domestic bulk LPG in Great Britain.

- 2.3 There are only two suppliers of domestic bulk LPG in Northern Ireland, Calor NI and Flogas NI,⁷ where the total volume sold is small in comparison to the total UK market.

Safety

- 2.4 As noted in the safety working paper on our web site, LPG is a hazardous product. The safe delivery, containment and use of this product are paramount. High standards in tank and valve design, manufacture, installation and maintenance, and appropriate emergency response are all necessary to minimize LPG leaks and mitigate associated risks.

- 2.5 The supply of domestic bulk LPG in the UK⁸ is therefore subject to a legislative regime governing its safety which comprises:

- (a) legislation designed to protect the health and safety of employees and other persons affected by the activities of a commercial undertaking; and
- (b) certain EU regulations intended to harmonize product safety standards throughout the EU.

This legislative regime is supplemented by codes of practice approved under the statutory regime by the Health and Safety Commission (known as Approved Codes of Practice or ACoPs) and voluntary Codes of Practice (CoPs) of the main industry trade association, the Liquefied Petroleum Gas Association (LPGA). In so far as these affect the supply of tanks and domestic bulk LPG, these legal requirements relate almost exclusively to suppliers. Customers, in contrast, have limited legal responsibilities other than certain general duties under civil law (including the Occupiers' Liability Acts 1957 and 1984) to ensure the safety of their premises, and

⁷We use the name Flogas NI to refer to the LPG business of DCC Energy Limited, a DCC subsidiary, in Northern Ireland.

⁸For more detail of the Great Britain and Northern Ireland regulatory regimes, see Appendix D.

their responsibilities under contracts with their suppliers (for example, to protect the tank from damage, or to insure a tank other than from damage for which suppliers are liable), of which they may not always be aware.

- 2.6 The Health and Safety at Work etc Act 1974 (the 1974 Act)⁹ imposes a number of general obligations on employers to ensure, so far as is reasonably practicable, the health, safety and welfare at work of their employees, including a requirement to ensure the safe use, handling, storage and transport of substances. Employers' (and self-employed persons') obligations extend to persons not in their employment who may be affected by the activity of their undertakings. Equivalent provisions applicable in Northern Ireland are contained in the Health and Safety at Work (Northern Ireland) Order 1978 (the Northern Ireland Order).¹⁰
- 2.7 LPG suppliers, along with all other employers, are under an obligation to comply with the general duties laid down in the 1974 Act. They are required to ensure, so far as is reasonably practicable, the health, safety and welfare of any employees engaged in activities 'at work', which include installing and maintaining bulk LPG tanks and delivering LPG to domestic premises. Suppliers are also required to ensure, so far as is reasonably practicable, that domestic LPG customers are not exposed to risks to their health and safety as a result of such commercial activities.
- 2.8 The 1974 Act confers powers on the Secretary of State to make 'health and safety regulations' for securing the health, safety and welfare of persons in connection with work. A number of these regulations, the details of which are set out in Appendix D, affect the activities of LPG suppliers, in particular:

⁹c.37.

¹⁰1978 No 1039 (NI 9). For further details of the Northern Ireland regime, see Appendix D.

- (a) the *Gas Safety (Installation and Use) Regulations 1998*¹¹ (GSIUR);
- (b) the *Pressure Systems Safety Regulations 2000*¹² (PSSR);
- (c) the *Dangerous Substances and Explosive Atmospheres Regulations 2002*¹³ (DSEAR);
- (d) the *Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004* (CDGR);¹⁴ and
- (e) the *Management of Health and Safety at Work Regulations 1999*¹⁵ (MHSWR).

Of these, for example, the PSSR apply to pressure systems such as bulk LPG tanks and associated pipework which are 'used or intended to be used at work'. They regulate certain matters related to tank installation and (for older tanks) design and construction, and require the 'user' of the pressure system to establish the safe operating limits of the tank, ensure that the tank is properly maintained and implement a written scheme of examination, including periodic inspections.¹⁶

2.9 Compliance with the specific regulations affecting LPG activities (and with the ACoPs and CoPs) will very often be relevant in determining whether an LPG supplier has taken such action as is 'reasonably practicable' to protect its employees and others. However, such compliance will not necessarily guarantee that the underlying obligations contained in the 1974 Act (or, as appropriate, the Northern Ireland Order) have been satisfied, and it will be for the LPG suppliers to take a view on how a particular activity affects the health and safety of employees and other persons affected.

¹¹SI 1998 No 2451.

¹²SI 2000 No 128.

¹³SI 2002 No 2776.

¹⁴SI 2004 No 2095.

¹⁵SI 1999 No 3242.

¹⁶For further details, see section 2 of the annex to Appendix D.

2.10 Any breach of the general obligations under the 1974 Act (or the Northern Ireland Order) and the health and safety regulations gives rise to an offence. Proceedings for an offence may be brought by an inspector appointed by the relevant enforcing agency, which in most cases involving domestic bulk LPG in Great Britain we understand will be the Health and Safety Executive (HSE).¹⁷ In addition, inspectors have the power to issue improvement notices where the 1974 Act (or the Northern Ireland Order) itself is being contravened and prohibition notices where there is a risk of serious personal injury. As well as the possibility of prosecution, breach of the relevant regulations may in some circumstances result in an action for damages by someone suffering harm as a result. The HSE is not, however, in a position generally to carry out individual site inspections.

2.11 In addition to health and safety regulations made under the 1974 Act (and its Northern Ireland equivalent), there are other regulations relevant to the bulk LPG industry which implement EU obligations intended to harmonize product safety standards throughout the EU,¹⁸ most notably:

(a) the *Pressure Equipment Regulations 1999*¹⁹ (*PER*); and

(b) the *General Product Safety Regulations 1994* (*GPSR*)²⁰

The details of these are also set out in Appendix D.

2.12 Safety is a key concern to the suppliers of LPG and in our own consideration of this industry. Suppliers own practices sometimes go beyond the codes of practice, they told us, to ensure legislative requirements are satisfied. We received no evidence that the industry has had any serious safety problems, which was partly attributed by

¹⁷In Northern Ireland, the enforcement authority will be the Health and Safety Executive for Northern Ireland, the relevant government department or such other class of person as may be prescribed (Northern Ireland Order, article 20(1)).

¹⁸There is a degree of overlap between regulations made under the 1974 Act and those implementing EU obligations. A number of the health and safety regulations outlined above implement EU obligations (eg DSEAR, CDGR) or have been made under both the 1974 Act and the European Communities Act 1972 (eg MHSWR).

¹⁹SI 1999 No 2001, as amended.

²⁰SI 1994 No 2328. The 1994 Regulations are due to be replaced this year by new regulations in order to implement Directive 2001/95/EC. Changes to be introduced include new enforcement provisions and extending the scope of products.

the major suppliers to the current arrangements for supplying bulk LPG. In particular, it was argued that safety was ensured by integrating the supply of bulk LPG with ownership of the tank—the suppliers taking full responsibility for procurement and installation of the tank, for its subsequent maintenance, refurbishment and if necessary replacement, and for supply of LPG to that tank. We noted that there are, however, exceptions to this integrated model, for example where suppliers have acquired other companies and their installed tank base, or a customer or group of customers from another supplier, including in some cases a small number of customers owning their own tanks. Some smaller suppliers also supply customers with their own tanks. But we were told that even in those cases the supplier generally takes full responsibility for the maintenance of the tank. As a result of that integrated supply of bulk LPG and of bulk LPG tanks, changes of bulk LPG suppliers in practice generally involve a change of LPG tank.

2.13 We received evidence from the HSE, which told us (as noted in the summary of its evidence on our web site) that its concern was that the duties under the legislation should be carried out, rather than that they were carried out by one firm or several firms. The HSE also stated that the ownership of equipment was one of the issues excluded from the regulations. In its view, the practice of changing tanks on changing supplier, for example, was a commercial decision, which could not be hidden behind considerations of health and safety.

2.14 We also commissioned technical consultants, Mott McDonald, to provide advice on safety issues. As noted above, Mott McDonald's report and contribution to our own Safety Working Paper were published on our web site. Annex 3 of the Safety Working Paper gives Mott McDonald's opinion on regulation in the bulk LPG industry. In its view, formed after talking to a number of suppliers and visiting a small number

of sites, the bulk LPG industry has a robust legislative and standards regime, which is well understood by operators and generally well applied. It did, though, note that the sites it visited could be improved to comply with the industry ACoPs and CoPs, but it did not regard the differences it observed to be departures from the spirit of the ACoPs and CoPs or unsafe. It also noted some areas where there was a range of interpretation of the CoPs and the health and safety regulations. However, its view was that there was no monitoring or enforcement of specific practices for industry participants except prosecution following an incident, when the relevant enforcement authority intervened; and furthermore that there were no regulatory barriers to entry, no licensing required, and no consultative technical body (with enforcement powers) to authorize new practices or equipment.

2.15 We also published on our web site the comments of the major suppliers on the Mott McDonald report and the safety working paper. They made a number of criticisms of the Mott McDonald analysis. Among other things, they believed Mott McDonald did not visit a sufficient number of sites to allow it to judge the practice of all suppliers, and also referred to their own experience following acquisition of other companies when they had found it necessary to undertake extensive rectification programmes and to replace a number of tanks. But Mott McDonald was not carrying out full safety audits of individual suppliers or of the industry as a whole, nor would it have been practical or appropriate for them to seek to do so. Despite the criticisms made by them of the Mott McDonald report, some of the major suppliers accepted many of the points made by Mott McDonald and relied on its findings in their own submissions.

2.16 We have reached our own views on safety issues, having regard to all of the relevant evidence presented to us, including the comments from the HSE and from suppliers of LPG and the technical advice of a consultant provided by one of the major

suppliers. We have noted in paragraph 2.12 that we saw no evidence of any serious safety problems, even though in Great Britain small bulk LPG tanks at domestic premises do not currently attract proactive inspections by the HSE and the safety regime is focused on avoiding prosecution. We saw no reason to doubt that the systems of the major suppliers are effective, although, as apparent also from some of the sites we ourselves saw, the codes of practice are not always applied to the letter.

- 2.17 The integrated supply of bulk LPG and tanks we noted above distinguishes domestic bulk LPG from the supply of heating oil, where customers generally own their tanks. The major suppliers argued that this different approach reflected the greater hazards involved with supply of domestic bulk LPG and the associated safety concerns. We consider below whether alternative arrangements to the integrated model could have developed for the supply of bulk LPG without putting safety at risk.

3. Market definition

The goods and services market—demand-side substitution

- 3.1 The relevant market²¹ (or markets) which the CC is required to examine for features having an adverse effect on competition is the market (or markets) for the goods and services of a description specified in the terms of reference. In order to carry out its assessment it is necessary therefore for the CC to identify the economic market (or markets) in which the reference goods or services compete. In this section, we consider the economic market (or markets) for the products concerned. We then go on in the next sections to assess competition within that economic market (or markets), before considering whether any feature of the relevant market adversely affects competition.

²¹As defined in section 134(3) of the Act.

3.2 We discuss economic market definition in Appendix E. The standard test of a proposed market definition is whether a hypothetical monopolist (or all firms in the market acting in concert) could profitably sustain a price of 5 per cent above the competitive level in the market as defined. However, very few domestic bulk LPG customers appear willing to switch to an alternative supplier (for reasons which we shall discuss in due course), even in response to a substantial difference in relative prices, and suppliers can offer discounts, on an individual basis, to customers who express an intention to switch. As such, one could argue that any domestic bulk LPG supplier could behave as a monopolist with respect to its own customer base (profitably sustaining prices at 5 per cent above the competitive level) and that therefore each supplier should be seen as operating in a distinct market from all other suppliers. However, we consider that there is at least some competitive interaction between suppliers, and that the relative scale of suppliers' volumes, revenues and customer bases is relevant to an understanding of this interaction. As we discuss below, moreover, the price constraint is limited in large part as a result of features, which may not necessarily be intrinsic to the market. Furthermore, the products and services provided by all domestic bulk LPG suppliers are essentially similar. Therefore we consider that the market is at least as wide as the supply of domestic bulk LPG.

3.3 The major suppliers argued that there was strong competition from other fuels, in particular heating oil and that in the long term heating oil and (to a lesser extent) other fuels place some constraint on the price of domestic bulk LPG, but not necessarily that they are close enough substitutes to be considered part of the same market. Calor argued that heating oil constrained LPG prices over the longer term, because of the need to maintain an acceptable differential between the prices of LPG and heating oil.

3.4 From a customer's perspective, only natural gas provides the same range of functions as LPG. But, as noted above, the cost of LPG is significantly higher than that of natural gas, hence use of LPG in Great Britain is largely confined to areas situated away from natural gas mains.²² Despite the advantages of LPG over other fuels such as heating oil to which we referred in paragraph 2.1, a larger proportion of households located away from the mains gas grid use heating oil than use bulk LPG (see also paragraph 3.5(c)).

3.5 As noted in our Emerging Thinking Statement, however, we found:

- (a) There is limited switching in Great Britain between domestic bulk LPG and other fuels in response to price changes or otherwise. On the figures we have seen, for example, in 2003 only 1 per cent of domestic bulk LPG customers switched to heating oil (although this is more than switched to another supplier of LPG).
- (b) The scope for substitution between domestic bulk LPG and other fuel sources is limited by factors such as the costs of converting to other fuels from LPG; and the limited periods when a customer may consider switching (for example, given the cost of a new boiler, when a boiler needs to be replaced, which is usually after between 15 and 20 years: see Appendix E).
- (c) The retail price of domestic bulk LPG is around double that of heating oil (on a per-kilowatt-hour basis).²³ Prices of both domestic bulk LPG and heating oil depend on input costs linked to crude oil prices, so the two tend to move together over time. However, the premium of domestic bulk LPG over heating oil has varied widely in recent years.

²²In some areas of Northern Ireland where mains gas has been introduced relatively recently, a substantial number of households have not (at least yet) switched to mains gas.

²³Part of this differential can be explained by the inclusion in LPG prices of an element of tank costs (including some installation costs), which are not included in prices of heating oil.

3.6 We acknowledge that prices of domestic bulk LPG would at some level be constrained by heating oil, but we consider that the price level at which such a constraint would bind a hypothetical monopoly supplier would be more than 5 per cent above the competitive level. We also acknowledge that the long-term objective of suppliers is to attract new-to-market customers from alternatives such as heating oil. However, as we have noted, the rate of new customers coming into the market is small relative to the size of the market overall, and suppliers have scope to charge prices to new customers which are to a degree independent of prices to established customers. Moreover, as apparent in Figure 2 of Appendix E, there have been significant fluctuations in the price of LPG relative to heating oil, of considerably more than 5 per cent, but no evidence that customers have responded to such fluctuations by switching between them. We therefore consider that, if a hypothetical monopolist of domestic bulk LPG raised prices to 5 per cent above the competitive level, customers would not switch to other fuels at a sufficient rate to make such a price rise unprofitable. We therefore conclude that domestic bulk LPG in Great Britain is not in the same economic market as any other fuels.

3.7 This conclusion applies in our view to Northern Ireland as well as to Great Britain, although circumstances are to some extent different. We noted above that, unlike Great Britain, a significant proportion of users in Northern Ireland are in areas also supplied by mains gas, as a result of the recent introduction of mains gas in those areas. As a result of mains gas development, use of domestic bulk LPG has declined and, on the evidence we saw, is likely to continue to do so. But the price difference between domestic bulk LPG and mains gas is such that domestic bulk LPG cannot compete on price with mains gas. The two Northern Ireland suppliers also told us that, in areas not served by mains gas, there was a strong preference there to use heating oil rather than domestic bulk LPG, but again with limited price

competition between the two. We therefore also regard domestic bulk LPG as a distinct market from other fuels in Northern Ireland.

Supply-side substitution

3.8 Some major suppliers told us that supply to domestic bulk LPG customers was not a distinct market from supply to non-domestic customers, since it was often economic for LPG tankers to deliver to a mix of customers, and suppliers of non-domestic customers (commercial, industrial and agricultural) could choose also to deliver to domestic customers. But almost all bulk LPG retailers supply both domestic and non-domestic customers. Hence in our view such firms are best considered already as competitors within the domestic market, rather than potential sources of supply-side competition. Although there may be some potential for competition from the small number of companies currently only supplying non-domestic customers, that is likely to be limited by some of the constraints on entry on any scale into supply of domestic bulk LPG, which we consider in paragraph 4.72 et seq. A commercial-only bulk LPG supplier could not, for example, readily respond to an increase in domestic prices by starting to supply domestic users given the difficulty of identifying those users and inducing them to switch. The extent of potential competition from suppliers of non-domestic customers is therefore limited and we believe the domestic market, in both Great Britain and Northern Ireland, can be regarded as distinct.

3.9 In our view, therefore, the supply of domestic bulk LPG, ie the relevant market as defined in the terms of reference, can be regarded as the economic market in both Great Britain and Northern Ireland.

Geographic markets

- 3.10 As noted in Appendix E, the logistics of bulk LPG supply require the supplier to use a depot within at most around 100 miles of all customers who are served from that depot. Apart from a small amount of cross-border trade from the Republic of Ireland to Northern Ireland, we have received no evidence that any customers in the UK are supplied by companies located outside the UK, nor arguments that there is scope for such supply to take place.
- 3.11 Northern Ireland appears to be a distinct market, both from Great Britain and from the Republic of Ireland. Although LPG is internationally traded, at the domestic level supply from Great Britain, from a firm not already present in the NI market, would require substantial investment in marketing and distribution. This is also true of supply from the Republic of Ireland, albeit that a small amount of cross-border trade occurs at present. The two companies with a substantial presence in Northern Ireland do not supply outside Northern Ireland, although the parent companies of both also own companies which supply to other markets, including Great Britain.
- 3.12 We have not identified any distinct local markets within Great Britain or Northern Ireland: pricing appears to be broadly similar in all regions of Great Britain, while uniform prices are charged across Northern Ireland. In Great Britain one of the major suppliers maintains standard prices that differ to some extent by region, but this variation seems to be insufficient to suggest that local or regional markets exist.

Aspects of the terms of reference

- 3.13 In its response to the Emerging Thinking Statement, Shell told us that, as the CC's terms of reference made no mention of the supply or maintenance of tanks for storage of LPG, the CC 'would need to take a view on the scope of market definition

before reaching any conclusions in relation to particular features of the relevant market'. We have accordingly done so.

3.14 We have noted above the current integrated supply of tanks and domestic bulk LPG, which (as we discuss further below) includes the need to change tank in order to change supplier, and the recovery of tank costs partly through LPG prices. Given the fact of widespread integrated supply, we believe it is valid to regard supply of both LPG and tanks as part of the relevant market (ie the market for goods or services specified in the terms of reference) and of the economic market, and that inclusion or exclusion of tanks from the economic market would not significantly affect our competition assessment. But, even if the supply of tanks could be regarded as a separate economic market, the Act provides that a 'feature' capable of adversely affecting competition includes conduct of one or more than one person who supplies goods or services in the relevant market, whether or not that conduct is in the relevant market concerned. Hence, since domestic bulk LPG suppliers and tank suppliers are to a large extent one and the same, any conduct relating to tanks which was undertaken by LPG suppliers and which we might identify as adversely affecting competition would qualify as a 'feature' of the relevant market capable of preventing, restricting or distorting competition.

3.15 About 9 per cent of domestic bulk LPG customers are residents of metered estates, from whom, as noted in the Issues Statement, we received a number of complaints. This term is used to describe a number of possible arrangements. In some cases the supplier supplies the domestic bulk LPG user direct, through a central fixed storage tank which also supplies other users. In other cases the LPG supplier's customer is an estate owner or manager, who resells the LPG to domestic users on the estate. LPG suppliers typically regard such supply as part of their commercial business. As

discussed in Appendix A, since such developers/estate owners supply LPG from a central tank through pipes to individual sites, in our view they cannot be regarded as supplying to fixed storage tanks, as specified in our terms of reference.²⁴ However, supply to those intermediaries, even where treated by LPG suppliers as commercial customers, can be regarded as falling within the terms of reference since such supply is for domestic use.

4. Market features

4.1. We now consider whether there are possible features, as defined above, of the relevant markets that may prevent, restrict or distort competition. We discuss in turn the structure of the markets; switching; pricing; non-price competition; and entry. In each case, we first discuss possible features relating primarily to the Great Britain market; and then the extent to which they may also apply in the Northern Ireland market.

A. Market structures

4.2. As noted above and in Appendix F, the major suppliers account for about 90 per cent of supply of domestic bulk LPG in Great Britain; Calor alone accounts for almost one-half of supply.

4.3. Whilst Calor's market share has reduced since the early 1980s when it held over 75 per cent, the combined share of the major suppliers appears to have risen from

²⁴We are aware of other measures that to some extent address the supply by developers and estate owners to customers. Firstly, the Office of Fair Trading in October 2004 issued a consultation paper on unfair terms in holiday caravan agreements (*Guidance on unfair terms in holiday caravan agreements. A consultation paper. Guidance on the Unfair Terms in Consumer Contracts Regulation 1999*, Office of Fair Trading, October 2004). The draft guidance included as examples of terms that could potentially be considered unfair those which without good reason tie caravan owners to purchasing services supplied by the park owner such as caravan accessories or the supply of LPG. The document also noted more generally that occupiers of park homes may have additional protection under other legislation. We also noted that the Office of the Deputy Prime Minister recently issued a consultation document on Park Home Statutory Instruments (Park Home Statutory Instruments, Consultation on Implied Terms and Written Statement, Office of Deputy Prime Minister, July 2004).

about 75 per cent in 1995 to about 90 per cent in 2003, mostly as a result of acquisitions.

4.4. We considered whether the current level of market concentration, in the supply of an essentially homogenous product, might give scope for coordination²⁵ between firms. We carried out an econometric study into whether the prices charged by the major suppliers over time supported a conclusion of coordinated effects. We considered that the results of the study did not allow us to reach a reliable conclusion of coordination.²⁶ Indeed, the extent to which the average prices charged by suppliers diverge over sustained periods tends to indicate that suppliers price with a degree of independence. A smaller supplier alleged that it had been put under pressure to offer its customers similar contract terms to those offered by the larger suppliers. On the whole, however, we have not found sufficient evidence to conclude that any of the major suppliers are engaging in any practices which it would not be in their interests to engage in unilaterally. Nevertheless, given the level of concentration in the market, it is possible such coordinated effects could emerge in future.

4.5. In Northern Ireland there has been little change in market structure in the last ten years. [S&K] has been the largest supplier throughout that time. Between 1995 and 1998, there were effectively three companies in the market: Calor NI, Flogas NI and Blugas. In 1998, Calor NI bought Blugas NI Ltd.

B. Switching

4.6. We discuss switching costs in Great Britain in Appendix G. As noted above, domestic bulk LPG suppliers in general retain ownership of the tanks which they install in domestic premises and seldom, if ever, allow customers to receive domestic

²⁵See paragraph 3.61 of Market Investigation References: Competition Commission Guidelines, CC3, June 2003.

²⁶Particularly in view of missing data and some structural shifts over the period studied.

bulk LPG from another supplier into their tanks or themselves supply into tanks they do not own.

- 4.7. Switching supplier therefore usually entails removal of the remaining LPG from the existing tank, removal of that tank, and installation of a tank belonging to the incoming supplier. As shown in Table 1 of Appendix G, the costs of installing an overground tank were estimated by the major suppliers at between £250 and £650; and of removing an overground tank at between £200 and £250. (Costs of installing and removing underground tanks can be several times higher than this (estimated removal costs are as high as [redacted]). However, installation and removal costs may be lower when the customer is switching between suppliers, rather than entering or leaving the market. While the figures above suggest combined costs of installation and removal of between £450 and £900 (for an above-ground tank), supplier estimates of the costs when the customer was switching supplier ranged from £330 to £700.
- 4.8. As noted in Appendix G, suppliers adopt different policies on the extent to which such costs of removal and installation of a tank are met by specific charges on customers; are subsequently recovered in other charges, particularly LPG prices, levied on those specific customers; or are borne by the supplier (and likely to be largely reflected in the overall level of LPG prices). Customers are not always informed of their suppliers' charges for tank uplift in advance of their initially contracting for LPG. While some contracts state the uplift charge, others note the customer's liability for the cost of removal, without indicating what this cost will be. In practice, moreover, the stipulated charges for uplift and installation are often waived either fully or in part (see paragraph 4.9). Even if customers are not therefore actually charged the stipulated amounts for uplift and installation, they will reasonably believe such

charges will be levied because the charges are stipulated in the contract. Hence there is considerable scope for uncertainty on the part of customers as to the charges they will face when switching.

4.9. As noted in Appendix G, we found that the upfront charge to a domestic customer of removing one LPG tank and installing another when switching between suppliers varies widely between customers of the same, and different, suppliers. Among the major suppliers the weighted average standard installation charge is about £100 and the weighted average standard removal charge is £135. The standard charges were applied to around half of all customers of the major suppliers for whom a tank was installed and removed (respectively) in 2003. No charges were applied in a substantial proportion (around [3<] per cent) of cases of both installation and removal. Among those charged, the weighted average charges were about £155 and £120 respectively (ie £275 in total). (We note that the average removal charge for those charged is lower than the standard charge; while the opposite is true for installation charges.) Over all installations and removals—those charged and those for which no charge was levied—the weighted average charges were about £90 and £70 respectively (ie £160 in total for switching a tank). The costs and charges for installation and removal of underground tanks, which are not widely used at present but have become more common, are considerably greater (see Appendix G, paragraphs 17 and 18), and there has been very little switching of underground tanks to date.

4.10. The average annual bill for domestic bulk LPG is about £800; hence these upfront charges are substantial in relation to the potential savings available to a customer by switching (a 10 per cent saving would, for example, be some £80 a year, or 20 per cent saving £160). As we note in paragraph 5 of Appendix G, even where there is

apparent scope for savings by switching, customers on the whole do not switch. An important reason for this may be that the inconvenience involved in switching tanks can also be considerable (see paragraph 4.19). Some suppliers told us that the process has taken up to four or five months (including time for the customer to find the best deal, a three-month notice period (discussed below), and time for the suppliers to coordinate switching), although others denied this.

- 4.11. Several industry-standard contract terms may impede customer switching. Three-month notice periods are common, and are justified by suppliers as allowing customers time to run down the supply of gas in their tank before uplift. However, most suppliers seem to see this as necessary only when the customer is switching to another fuel: if a new tank is being installed, gas remaining in the outgoing tank can be transferred to the new tank so there is less need to 'run down' supply. Despite this, suppliers do not usually make arrangements for switching tanks until the notice period has expired. The notice period offers the incumbent supplier a tactical advantage and (as noted in paragraph 3.2, and discussed further in paragraph 4.41 et seq) suppliers often negotiate discounts to retain the customer during the notice period.²⁷ Minimum contract terms of 3 or 5 years, which have been justified by suppliers as being necessary to recover installation costs, are widely used for new customers. Negotiated discounts are often conditional on the customer signing a new contract with a minimum term. In practice, penalties for early termination of contracts are often waived, but this is not known to customers in advance, and depends on negotiation between customer and supplier.²⁸ The opacity of the

²⁷We noted that [X<] contract contained a requirement that 'if following expiry of the minimum period you [ie the customer] feel that a third party can make (in total) a more competitive offering, you agree to give us the right to meet such offering or to make such proposals as are, in all the circumstances, equally competitive'. [X<] told us that the objective of the clause was to make it clear to the customer that [X<] would provide a competitive service at a competitive price, but, since the clause might be misinterpreted, it would be dropped.

²⁸We understand a number of aspects of contract terms have been modified or accepted as unenforceable by suppliers as a result of discussion with the Contract Regulation Unit at the Office of Fair Trading, but such changes may not apply to customers supplied under existing contracts and, even where this is the case, consumers with existing contracts may not always be informed.

contractual relationship may also impede switching, with some customers not being clear about the contracts and, in some circumstances, we have heard of instances where the suppliers themselves may not be certain of the terms on which they are supplying. The ORC survey asked customers to identify, from a list, reasons that had discouraged them from switching supplier. While cost and inconvenience were the most frequently identified, around half of respondents also identified uncertainty about what their contract allowed, cost penalties for cancelling the contract, and uncertainty about what the penalties were as reasons that had discouraged them from switching.

4.12. Customers on metered estates face additional barriers to switching, such as the need for cooperation between those on the estate. On the other hand, if residents on a metered estate work together to obtain the lowest price for LPG they may be able to do so more effectively than individual domestic customers: the volume of business makes it more valuable to the current supplier and more attractive to competitors, and some switching costs can potentially be divided up between the properties on the estate.

4.13. The rate of switching between suppliers is low. Each year, around 3 per cent of the major suppliers' customers end their supply arrangement. Only one in six of these (0.5 per cent of the customer base) do so to switch to an alternative bulk LPG supplier. Additionally, some customers threaten to switch in order to negotiate lower prices from their suppliers (or plan to switch and change their mind because their supplier offers a discount). There is some uncertainty regarding the proportion of the customer base (at any given time) receiving lower prices because they have threatened to switch: details of price negotiations are not always recorded accurately, and price differences between customers (or price changes) may reflect other factors

such as different costs of supply or compensation for service problems. We estimate that close to 5 per cent of customers at any one time are receiving discounts because of an actual or implied threat to switch, although some of the major suppliers have argued that the proportion is considerably higher.

Assessment of barriers to switching

- 4.14. In considering the barriers to switching between domestic bulk LPG suppliers, we had regard to the charges and inconvenience currently faced by customers who switch, to customer perceptions of the charges and inconvenience they would face in switching, and to the scope for suppliers to increase the barriers to switching—for example, by raising charges or making the process more inconvenient—in response to an increase in competition.
- 4.15. Some of the major suppliers told us that switching costs were not sufficient to deter switching in return for lower prices (although one acknowledged that switching costs had some effect). The total cost of switching tanks on switching supplier—of between £330 and £700—is however in our view significant in relation to the savings available (for example, the illustrative range of £80-£160 noted in paragraph 4.10), irrespective of whether it is borne by the individual user, or initially by the company.²⁹
- 4.16. As regards the charges to customers for switching, the major suppliers noted that the ORC survey suggested that customers were not deterred by such charges, with 62 per cent of those who had switched paying between zero and £10. However, comprehensive data, summarised in Table 1 of Appendix G, on charges provided by the major suppliers confirmed that actual switching charges were considerably higher

²⁹Some suppliers argued that switching (ie physical uplifting) of tanks allowed for inspections and possible refurbishment to be carried out at that stage, rather than having to be removed subsequently to do so. The figures quoted here for costs do not allow for any savings in subsequent inspection or refurbishment costs: but the need to remove a tank to do so usually only arises every 10 or 20 years. Were such cost savings to be significant, there would be little justification to charge customers for removing a tank on changing supplier.

than those reported by survey respondents, on average (as noted in paragraph 4.9) some £160 across all customers who switched, but £275 to those who were charged. (Although over 1,000 customers were surveyed by ORC, only around 60 had switched supplier). As shown in the annex to Appendix G, such charges have a substantial impact on the net financial benefit of switching.

4.17. We consider that, to the extent switching costs are initially borne by individual customers (whether passed on in switching charges or a higher price from the new supplier than would otherwise be offered), these costs must necessarily reduce the net benefit to a customer of switching and therefore act as a disincentive to their doing so. Costs of tank installation and removal were the most common disincentives to switching among respondents to the survey by ORC. When prompted, six in ten said these costs were a disincentive. On the other hand, to the extent these costs are initially borne by suppliers, they must necessarily reduce the net benefit to a supplier of winning a new customer and act as a disincentive to suppliers competing for the business of existing customers of other suppliers. A smaller supplier told us that few regional suppliers were actively seeking new domestic business, because of the low potential return on investment under current switching practices.

4.18. As discussed in Appendix G, in some circumstances markets with switching charges may be competitive. For example, the ability to price discriminate between new and established customers may give firms more scope to compete aggressively for each others' customers, leading to lower prices generally. But, we consider that the use of introductory prices in the domestic bulk LPG market (which we discuss in paragraph 4.41 et seq and Appendix I) has not led a significant number of customers to switch supplier to obtain a lower price, or to negotiate a lower price from their existing

supplier. Rather, the wide range of prices charged to customers (which are not explained by cost differences), and the low level of awareness among customers of lower prices available from other suppliers, or through negotiation, indicate a lack of competition in the market.

- 4.19. It was also argued to us that the inconvenience and time taken to switch were 'perceived barriers to switching' rather than actual barriers. Calor, for example, noted that 54 per cent of respondents to the ORC survey who switched supplier found it was easy to do so. However, we note that one in three found it difficult. When prompted, more than half of all customers (ie including those who had not had experience of switching) identified inconvenience as a discouragement to switching. About 70 of the 140 letters of complaint from customers to the OFT and ourselves (some of which we put on our website) referred to tank uplift as a barrier to switching.
- 4.20. We accept that the extent of inconvenience is ameliorated by the LPGA code,³⁰ which provides for coordination between the outgoing and incoming supplier in the exchange of tanks and ensures that there is little or no risk of a break in supply during the process. Some suppliers, however, told us that delays occurred, on some occasions. Some of the major suppliers also acknowledged that comprehensive details on the switching process may not always be given to all customers and that there was scope for making more information about the transfer process available to customers.
- 4.21. It was also argued that the actual costs faced by suppliers during the switching process resulted from the current arrangements for integrated supply of LPG and the LPG tank, which were essential in achieving customer benefits, including safety,

³⁰LPGA CoP 26.

efficiency and service. We discuss below whether alternative arrangements could have been developed which would achieve those benefits without imposing the same level of switching costs.

Assessment of the level of switching

4.22. Around 0.5 per cent of customers switch from one LPG supplier to another each year. The major suppliers told us that this should not be regarded as particularly low, given the total number of customers who were lost and gained over an extended period. [X] for example, told us it lost [X] customers over a five-year period. We understand that it gained around as many customers as it lost over this time. Across the major suppliers gains and losses each equate to around 3 per cent of customers a year; most losses are to other fuels or customers no longer requiring a fuel supply (for example, when a property is vacated).³¹

4.23. The previous section discussed switching charges and inconvenience. We now consider several other factors which may influence the rate of switching, or have been suggested as doing so: high levels of customer satisfaction; the practice of offering customers discounts to dissuade them from switching; the costs of winning customers away from an existing supplier; low levels of customer awareness of alternative suppliers; and contractual barriers to switching.

4.24. The major suppliers told us that high satisfaction levels were the primary reason customers did not switch, their customer surveys indicating that the large majority are satisfied with quality of service. The ORC survey confirms that far more users are satisfied than dissatisfied with their LPG supplier (76 per cent compared with 14 per cent).

³¹The (common) event of a customer moving out of a property and the new occupant signing a contract for supply of LPG from the same supplier is not counted as a loss or gain in the above figures.

- 4.25. However, responses to the ORC survey indicate that, although most customers find their supplier satisfactory, about 70 per cent do not have a view as to whether the service from other suppliers would be any less satisfactory, while those that expressed a view were most likely to think that other suppliers were about the same as their current supplier: only 4 per cent believed other suppliers offered a poorer service. A recent focus group survey for one of the major suppliers concluded that customers had very low expectations of service, primarily because of the difficulty of switching and the resultant lack of competition. As such, reported satisfaction with the present supplier does not necessarily equate to a strong preference for that supplier's service over others. Indeed, around half of domestic bulk LPG customers started using their current LPG supplier by moving into a house to which the company had been supplying, suggesting that convenience has at least as much influence on the choice of supplier as personal preference.
- 4.26. Satisfaction with bulk LPG prices, moreover, tends to be significantly lower than satisfaction with service. In the ORC survey, more users were dissatisfied than satisfied with the value for money they get from their LPG supplier (54 per cent compared with 33 per cent). The major suppliers argued that, following a period of rising prices due to increases in wholesale propane prices, it was unsurprising that, although customers were satisfied overall with their supply of LPG (reflecting the importance and value of service levels in this sector), they expressed dissatisfaction with the cost of LPG. The major suppliers also noted that 46 per cent of customers in the ORC survey who experienced price increases thought that other suppliers made similar increases, reducing their likelihood of their wishing to change supplier in response.

4.27. We accept that customers will rationally prefer a lower price to a higher price, and that the proportion of customers who express dissatisfaction with prices or value for money in part reflects increased LPG prices resulting from the current level of input prices. Similarly, as regards the complaints of some users to us that LPG prices are significantly greater than those of mains gas, it would be unreasonable to expect the level of LPG prices to be equivalent to that of mains gas given the different costs of supply. However, we note that even though many customers in the ORC survey describe themselves as dissatisfied with value from their supplier, and many (36 per cent) think that other LPG suppliers offer a lower price, 45 per cent of those who described themselves as dissatisfied (overall) with their supplier had never considered switching.

4.28. Another reason suggested by suppliers for the low rate of switching was the practice of offering discounts to customers who threatened to switch (see also paragraph 4.41 et seq). The suppliers argued that such discounts enabled customers to benefit from competition without having to switch. We consider the effects of such selective discounts on competition in paragraphs 4.75 and 4.78. We note here that estimates of the extent to which customers obtain discounts by threatening to switch are highly uncertain (the question of whether a discount was motivated by an expectation that the customer would switch is in some cases subjective). Estimates range from less than 5 per cent to more than 20 per cent. On the whole, however, we consider, from the balance of the evidence set out in paragraphs 37 to 48 of Appendix I, that the correct figure is at the low end of that range, and the number of customers, at any given time, enjoying discounts which they have won by threatening to switch, represents a small proportion of the market. Moreover, where discounts are offered, they are not necessarily equivalent to the savings the customer could have made by switching.

- 4.29. Some smaller suppliers were also concerned that, after they gave a competitive quote, and sometimes even after they had signed a new customer, that customer then decided to stay with its existing supplier in response to the offer of a price reduction, reducing their ability to compete for such customers. It can also be difficult to identify customers of other suppliers and target marketing on them. In our view, these are further factors likely to reduce the incentive to attract customers from their existing suppliers.
- 4.30. Low awareness of other LPG suppliers, as evident from the ORC survey, is a further reason, in our view, for the low rate of switching. Nine out of ten users (91 per cent) said that they had never been approached by another LPG supplier. Over half could not name or did not know any other suppliers. We also note in paragraph 4.47 the difficulty in comparing prices, for those who may wish to do so, given the absence of readily available published prices and the inability of most suppliers fully to commit to future prices. Low customer awareness of offers from alternative suppliers, as well as constituting a barrier to switching in itself, is in our view likely to be an outcome of other barriers to switching—with customers having limited incentive to investigate these offers, and the alternative suppliers having limited incentive to market them.
- 4.31. One supplier ([X]) argued that, in considering the percentage of customers switching, we should exclude the proportion of customers who accepted fixed-term contracts in return for lower introductory prices, or subsequent discounts. But we note in this regard that fixed term contracts are themselves a barrier to switching with the potential to impede competition (and that, even as a proportion of those who were free to switch, the number of switchers from this supplier was still relatively low).

- 4.32. On contractual terms, we referred in paragraph 4.11 to three-month notice periods being common and to minimum contract terms being widely used for new customers and in some cases for customers as a condition for negotiated discounts. Some suppliers acknowledged that the three-month notice period was currently longer than necessary, particularly for consumers switching to another LPG supplier, in which case remaining gas in the outgoing tank can be transferred to the new tank.
- 4.33. We also in paragraph 4.41 note the substantial differences in average prices between suppliers, between new and established customers, and between customers who have and have not negotiated discounts. We saw no evidence that these price differences reflect varying costs of supply. In our view the ability to maintain such price differentials without customers switching to other suppliers is itself indicative of switching costs or other barriers to switching.

Northern Ireland

- 4.34. As we note in Appendix H, the Northern Ireland market shares a number of the barriers to switching identified in Great Britain, in particular:
- (a) Almost no switching between suppliers.
 - (b) Integrated supply, which would result in substantial costs to both the incoming and outgoing firm were a customer to switch suppliers.
 - (c) Charges for tank installation and removal: on average a customer switching from one supplier to another can expect to pay charges of at least £[<] (but less than they would expect to pay in Great Britain).
 - (d) Contracts that specify minimum periods of exclusive supply of 15 months or 5 years.
 - (e) Three-months notice periods. There is some indication that these are waived with greater regularity than in Great Britain.

(f) Some (limited) evidence that, like Great Britain, customers have limited awareness of ability to switch supplier or of alternative suppliers, and that uncertainty as to the costs and inconvenience of switching (including tank uplift and penalties) has discouraged customers from switching.

However, the outgoing supplier appears to have less control over the switching process in Northern Ireland than in Great Britain: we are told that suppliers do not find out that a customer wants to stop using them until they are asked to collect the disconnected tank. There are, moreover, no selective discounts in Northern Ireland, uniform prices being charged to customers, although, as we note in paragraph 4.64, these prices are not published.

Conclusions on barriers to switching

4.35. We continue therefore, as in our Emerging Thinking Statement, to regard the extent of switching in this market as very low. We accept that low switching is not of itself sufficient to conclude that there is weak competition: competition could still be effective if a large proportion of customers negotiated lower prices without needing to switch; and/or the benefits of price competition to prevent customers from switching were passed on to the generality of a suppliers' customers. But, as we discuss further below, this appears not to be the case given the extent of price differences and price discrimination in this market. The proportion of customers who threaten to switch each year or who otherwise successfully negotiate some reduction in prices without actually switching is low;³² and in contrast to utilities such as gas and electricity, the ability of suppliers to price discriminate between customers (see also paragraph 4.59) means that they can respond to competitive threats at a lower cost, by reducing prices only to those customers who appear likely to switch.

³²One supplier told us that a substantial proportion of customers had avoided a standard price increase in 2003. Other evidence suggests that fewer than 1 in 20 LPG customers know they can negotiate prices, or do so.

- 4.36. We believe the following are important barriers to switching:
- (a) the exercise of discretion by suppliers over the terms on which customers can switch between them, over the switching process itself, and over the information available to customers about switching;
 - (b) the widespread practice, when a customer switches supplier, of the outgoing supplier removing its LPG tank from the site and of the incoming supplier replacing it with an essentially similar tank, with the consequential costs of removing and installing tanks, which:
 - (i) to the extent that these costs are reflected in charges to individual customers, acts as a barrier to customer switching;
 - (ii) to the extent that these costs are borne by the incoming supplier, acts as a disincentive to competing for the business of existing LPG customers; and
 - (iii) to the extent that the practice gives rise to customer inconvenience, or an expectation of inconvenience, acts as an additional barrier to customers switching;
 - (c) the lack of information among customers in that:
 - (i) some customers are not aware of their ability to switch supplier or of alternative suppliers;
 - (ii) customers generally are uncertain about their liability for switching charges;
 - (iii) there is uncertainty about the likely level of inconvenience of the switching process; and
 - (iv) customers generally are not aware of prices on offer from alternative suppliers and face difficulty in comparing prices due to lack of price transparency;
 - (d) contractual restrictions on switching, including the use of fixed minimum terms in introductory contracts of 3 or 5 years; requiring contract renewal (with a further

fixed minimum term) as a condition of selective discounts; three-month notice periods for termination; and lack of clarity in contracts; and

(e) limited ability of suppliers to identify and target their marketing efforts on each others' customers.

4.37. The major suppliers have argued that a lower rate of switching means lower total switching costs—to the benefit of consumers as they will ultimately pay for these costs. However, the negative effect on competition associated with a low switching rate may be considerably more detrimental to customers than any increase in costs resulting from a higher switching rate. At the current rate of switching between suppliers (0.5 per cent) the total cost of such switching is around £350,000 a year. An increase in competition which reduced all LPG prices by as little as 0.35 per cent would be sufficient to compensate consumers for this level of switching costs (assuming all switching costs were ultimately borne by consumers). In view of this, we consider the potential gains from increasing competition could be expected to outweigh any additional costs from increased levels of switching. (This is before considering any reductions in the cost of switching that may also result from making the process of switching easier.)

4.38. In our view, therefore, the barriers to switching identified in paragraph 4.36 are features of the supply of domestic bulk LPG in Great Britain which prevent, restrict or distort competition in those markets.

4.39. We consider in paragraphs 5.12 to 5.28 whether, as argued by the major suppliers, requirements of safety justify all the precautions taken in supply of domestic bulk LPG and ownership of tanks which may inhibit switching.

Conclusions on barriers to switching in Northern Ireland

4.40. We discussed barriers to switching in Northern Ireland in Appendix H and paragraph 4.34. In our view the following barriers to switching are features of the supply of domestic bulk LPG also in Northern Ireland which prevent, restrict or distort competition in that market:

- (a) the exercise of discretion by suppliers over the terms on which customers can switch between them, over the switching process itself, and over the information available to customers about switching;
- (b) the widespread practice, when a customer switches supplier, of the outgoing supplier removing its LPG tank from the site and of the incoming supplier replacing it with an essentially similar tank, with the consequential costs of removing and installing tanks, which:
 - (i) to the extent that these costs are reflected in charges to individual customers, acts as a barrier to customer switching;
 - (ii) to the extent that these costs are borne by the incoming supplier, acts as a disincentive to competing for the business of existing LPG customers; and
 - (iii) to the extent that the practice gives rise to customer inconvenience, or an expectation of inconvenience, acts as an additional barrier to customer switching;
- (c) the lack of information among customers in that:
 - (i) some customers are not aware of their ability to switch supplier or of alternative suppliers;
 - (ii) customers generally are uncertain about their liability for switching charges; and
 - (iii) there is uncertainty about the likely level of inconvenience of the switching process;

- (d) contractual restrictions on switching, including the use of 15 month or five-year minimum terms in introductory contracts; three-month notice periods for termination; and lack of clarity in contracts; and
- (e) limited ability of suppliers to identify and target their marketing efforts on each others' customers.

C. Pricing

- 4.41. As noted in our Emerging Thinking Statement, the prices charged to individual customers in 2003 varied significantly, the highest prices charged to individual customers being over 50 per cent more than the lowest prices. As noted in Appendix I, the prices paid by domestic customers for bulk LPG in Great Britain vary widely depending on the supplier (average prices charged by the major suppliers for LPG varying by about 10 per cent but this range would be greater if smaller suppliers were included), on whether the customer is new or established, and on whether the customer has negotiated a lower price. Variations in the cost of supplying different customers (depending on factors such as the volume of LPG purchased) are reflected in prices at most only to a limited extent, and explain only a small part of price differences between customers.
- 4.42. Domestic customers in metered estates tend to pay lower prices, largely due to the fact that tanks at estates are larger than those at individual premises (and hence there are lower delivery costs). With one exception, [redacted], the major suppliers told us that they do not, on the whole, charge systematically different prices between regions, and this is supported by our analysis.
- 4.43. Some suppliers offer standard prices to domestic bulk LPG customers while others calculate prices on an individual basis. Although the latter told us that expected

customer usage and the cost of supply influence the price offered, our analysis of prices in Appendix I indicates that, for each major supplier, such features explain only a small proportion of the variation in prices between customers. Most suppliers offer introductory discounts for periods varying from six months to three years.

- 4.44. Our own survey, and market research by one of the major suppliers, indicates that the large majority of customers are not aware that there is any scope to negotiate on price. Suppliers told us that price reductions to domestic customers usually led to requests for a lower price from customers in the same locality. While some customers requesting price reductions may refer to prices offered to their neighbours, we have seen no evidence that such comparing of prices is widespread in the market as a whole: the fact that the large majority of customers are unaware of the ability to negotiate itself suggests there is no widespread conferring amongst them. Customers who try to negotiate discounts are not always successful; among those that are, an average discount of 1p per litre (around 5 per cent) appears to be broadly typical, although some customers receive substantially deeper discounts.
- 4.45. Price changes by the major suppliers appear, in recent years, to have been caused mainly by changes in the wholesale price of propane (which has fluctuated considerably over the period). The major suppliers told us that they attempt to keep to a minimum the frequency of such price changes, increases and decreases in propane prices not being passed on immediately. Although we received some representations that suppliers were quicker to increase than decrease LPG prices to reflect changes in propane prices, this was not supported by our analysis of historical prices.

- 4.46. One supplier told us that the number of price query telephone calls it received rose after implementing a price increase: according to its records, around 1 per cent of customers queried a price increase in this way, half of whom received a discount from the standard price increase. But price increases by an individual supplier do not appear to increase the rate of account termination. One explanation offered for this was that all suppliers increased their prices together so customers had little to gain from switching in response to an increase; however, our analysis indicates that this is not necessarily the case (see Appendix I).
- 4.47. None of the major suppliers publishes its prices, for example, on web sites. Indicative offers may be made in response to telephone queries, but with final price quotations subject to a visit to the site. Some suppliers do at that stage provide information on the current level of standard prices as well as any lower introductory prices, and may commit themselves as to the prices that will be charged for between one and three years. However, the period over which the customers will in practice be supplied by that supplier is typically somewhat longer than the period for which prices are agreed. In some cases, moreover, the contract length exceeds the period of the introduction price offer; nor is there any commitment within the contract to reduce prices if input prices fell. None of the major suppliers commits to prices (whether fixed or explicitly linked to costs such as propane) over the life of the supply relationship. The difficulties to suppliers of making such a commitment mean that customers, when choosing a supplier, cannot accurately assess which supplier will be most competitive over the 'whole life' of the supply arrangement.
- 4.48. Of the major suppliers, only one ([redacted]) systematically collects information on competitor prices, monitoring a sample of its competitors' customers. It referred to its doing so as evidence of price competition. But that supplier also told us that changes

to its standard prices to the bulk of its existing customers in recent years had not been in response to changes in prices of other suppliers. As noted in paragraph 4.4, the divergence in average prices of all the major suppliers over sustained periods indicate to us that they price with a degree of independence, and are not constrained to price at the lowest competitive level.

4.49. As well as the LPG price, the major suppliers also levy a standing charge for tank rental and maintenance—typically £[redacted] to £[redacted] a year. The level of that standing charge, however, is not sufficient to cover the costs of the tank and its installation and maintenance, which are therefore partly recovered through LPG prices.

4.50. As noted above and in Appendix H, in contrast to Great Britain, customers in Northern Ireland pay standard prices from which discounts are seldom, if ever, available. Prices are lower in Northern Ireland than in Great Britain, and are discussed in paragraph 4.64.

Assessment of pricing

4.51. The major suppliers in Great Britain argued that there was effective price as well as non-price competition not only between themselves but also, on a regional level, between the major and smaller suppliers. Suppliers' company documents such as strategy plans did recognize competition between LPG suppliers but on the whole seemed to focus more on retaining customers and winning domestic customers new to LPG, for example new rural developments, than on winning customers from existing suppliers. We discuss the effectiveness of non-price competition further below.

- 4.52. The major suppliers also put forward a number of arguments why their pricing policies should not be of concern.
- 4.53. Some suppliers told us that differences in prices between customers reflected differences in costs, although others said that price differences did not necessarily reflect cost differences. Our analysis in Appendix I indicates that price differences were at best explained to only a very limited extent by features that might lead to cost differences.
- 4.54. Some suppliers argued that they competed strongly on price for new customers, and for customers who were considering switching, and that the prices offered to these customers exerted downward pressure on prices to established customers, because of the need to maintain consistency in pricing. One reason for this need for consistency was that new customers were informed both of the introductory price and standard prices. We accept that there may be a limit to how far introductory prices can diverge from those to established customers, but we have not seen evidence that this amounts to a strong price constraint on prices to established customers. In particular, we note in paragraph [3<] of Appendix I that in the case of one major supplier the difference between the introductory and standard prices has increased considerably in recent years.
- 4.55. It was also argued that price discrimination allowed suppliers to compete aggressively to win new customers and to retain existing customers. Such prices, we were told, were intended to cover marginal costs and contribute to recouping existing fixed investments, which would be unsustainable if price reductions were offered to all customers. Price differences, it was argued, would therefore result in a more efficient outcome overall, with some lower prices available that would not meet costs

if they were generally applied, but which might allow wider distribution of LPG than would otherwise be the case; if standard prices were used in Great Britain, prices would not fall to the lowest currently available price. We remain concerned, however, that while there may be competition for some customers (new customers and customers threatening to switch), price discrimination, in this case, prevents the majority of existing customers benefiting from such competition, particularly if there are constraints on existing customers switching supplier, thereby reducing the pro-competitive role of marginal consumers.

4.56. The major suppliers also told us that reducing prices to customers threatening to switch was standard in consumer markets. The fact that some customers negotiated lower prices was not discriminatory, but demonstrated that the market was competitive. Similarly, it was argued that individual pricing in response to switching reflected the vigorous operation of the competitive process. We consider, however, that the proportion of customers who obtain lower prices by threatening to switch is small, and that the extent to which prices differ in the market—both between customers of the same supplier, and on average across suppliers—is not consistent with an argument that suppliers compete vigorously to win customers from one another.

4.57. The major suppliers also disagreed that the number of customers who successfully negotiate a price rebate was low. However, we note in Appendix I that whilst 29 per cent of respondents to the ORC survey said that they had ever tried to negotiate a price decrease, only around 7 per cent had done so successfully in the past year. Among respondents to a survey by one of the major suppliers, only a low number ([~~8~~] per cent) believed that all customers could negotiate on price. The extent to which suppliers offer selective discounts as a response to competitive pressure is

also uncertain: suppliers had some difficulty in providing definitive data on this question but, in aggregate, it appears that only around 3 per cent of the customers of the major suppliers threaten to switch each year. In summary, we consider that only a small proportion of customers extract significant discounts from their suppliers by threatening to switch.

4.58. The major suppliers also told us that customers were sensitive to prices; hence the prices had to be competitive relative both to other LPG suppliers (including smaller suppliers) and other fuels (in particular heating oil). We acknowledge that customers responding to the ORC survey appeared to attach more importance to price than to other aspects of the supply relationship (such as service quality). But, as we have noted above, few customers switch suppliers to get a better price (or for any other reason), and most have not tried to negotiate lower prices with their existing supplier.

4.59. We noted in paragraph 4.28 that the offering of negotiated discounts when customers threatened to switch was put forward by the major suppliers as a justification of the low level of switching, as well as evidence of competition working. We recognize that such price discrimination can potentially lead to a better outcome for consumers and, specifically, greater competition in a market with switching costs. However, in our view the offering of selective discounts distorts competition in the supply of domestic bulk LPG, since:

(a) While, in principle, price discrimination (particularly the use of introductory prices) can be used as a means of targeting other suppliers' customers, the very low rate of switching, the limited number of customers threatening to switch, and the persistence of substantial price differences between customers, indicate that any such targeting in this market has not led to a competitive outcome.

- (b) While introductory prices may lead to a degree of competition between suppliers in winning new-to-LPG customers, such customers represent, over any reasonable period, at best a small proportion of the market. In a market with uniform prices, suppliers would have to take their ability to compete for new customers into account when setting prices for established customers.
- (c) The ability to negotiate individual discounts provides a way of responding to pressure for lower prices from marginal customers and hence of maintaining higher prices across the rest of the market.
- (d) This ability to negotiate individual discounts also reduces the potential rewards to competitors for attempting to win customers away from their current suppliers.

4.60. While competition for customers new to domestic bulk LPG may be stronger than for existing customers, the number of new to LPG customers is a small proportion of the market and it is not clear that this is sufficient to lead to a competitive outcome in the market overall. In our view therefore competition is, as a result, among other things, of switching costs, and of other constraints on switching identified in paragraph 4.36, ineffective in constraining the level of prices charged to a substantial majority of customers and other aspects of performance, resulting in customers paying more than would be expected in competitive conditions. If competition is not fully effective, moreover, the overall level of prices would also be somewhat higher than necessary, reflecting either higher profits or higher operating costs than would be the case in more competitive conditions.

4.61. On price transparency, the major suppliers argued that they themselves were not in a position readily to compare their prices with those of other suppliers. Nonetheless, they argued that prices were reasonably comparable for customers. The major

suppliers told us that they generally give indicative prices over the telephone, although a visit to the site is required before a final offer can be made. We considered, and some of the major suppliers accepted, that comparisons could be easier if published prices were available, for example, on the Internet. This limitation on price transparency, and the difficulty in suppliers committing themselves to future prices, is in our view itself likely to inhibit users from seeking alternative price quotations, and to deter switching to another supplier.

4.62. We also noted in paragraph 4.49 that the cost of tanks (including installation costs) is currently recouped in part through LPG prices. Several of the major suppliers told us that users preferred such a price structure: since an LPG tank was only of value to allow the use of LPG, users would prefer to be charged on the basis of use of LPG. They also regarded such a pricing structure as increasing their ability to compete with heating oil, and as an aspect of the integration of tank and LPG. Although such bundling reduces the transparency of charges to consumers, to some extent it reduces switching charges, since customers are not charged the full cost associated with switching supplier (but not to such an extent, as we have discussed above, as to remove the disincentives to switch). While we were concerned about the competitive effects of integrated supply of tanks and LPG, we have not reached a view, given that such integrated supply exists, that any additional anti-competitive effects currently occur as a result of the cross-subsidization between charges for the tank and LPG prices.

4.63. It was also argued that neither high profits nor high operating costs appear to be prevalent in the industry suggesting that competitive pressures do operate to maintain overall competitive prices for consumers. We return to this point below.

Northern Ireland

- 4.64. As noted in Appendix H, a number of the factors set out in paragraphs 4.41 to 4.62 suggesting that price competition is ineffective in Great Britain also apply in Northern Ireland: in particular those derived from switching costs and other constraints on switching, previously identified in paragraph 4.40. But in contrast to Great Britain, uniform prices are offered by each supplier to domestic customers in Northern Ireland, although these prices are not published by the suppliers. Suppliers do not offer selective discounts to customers who are threatening to switch, or low prices to new customers. As such, suppliers may be more constrained in the standard price they set, as too high a standard price may lead to customers switching, and make the supplier less competitive in winning new customers.
- 4.65. [X]. Price levels in Northern Ireland are consistently below those in Great Britain, possibly due in part to somewhat stronger competition from other fuels; in addition, CGNI's prices to domestic customers are below those to commercial customers—the opposite of the situation in Great Britain.

Conclusions on pricing

- 4.66. We regard the following aspects of the pricing of domestic bulk LPG as evidence that competition is constrained in the Great Britain market:
- (a) The sustained differences between average prices of suppliers and a degree of independence (from one another) in the movements of these average prices.
 - (b) Individual suppliers charging different prices to different customers, largely unrelated to differences in cost. The main reasons for such price differences would appear to be:

- (i) price discrimination according to customers' desire or ability to negotiate, for example by threatening to switch to other suppliers, with the effects on competition noted in paragraph 4.78; or
 - (ii) whether the customer is new or existing.
- (c) The existence of low switching rates, as noted above, despite the availability of lower prices from other suppliers, and despite evidence (as referred to in paragraph 4.25) that customers do not have any strong preference for the service of their existing supplier.

4.67. For the reasons set out above, we regard the following features of the supply of domestic bulk LPG in Great Britain, further to those identified in paragraph 4.36, as preventing, restricting and distorting competition in the relevant market:

- (a) the practice among most suppliers of offering selective discounts to customers, in that:
- (i) Customers who object to general price increases can be excluded from the price increase, allowing suppliers to increase prices without prompting an increase in the rate of account terminations; and
 - (ii) Selective discounts increase the ability of incumbent suppliers to resist attempts to win customers from them.
- (b) The lack of transparency in prices, likely to deter users from switching to another supplier.

Pricing in Northern Ireland

4.68. However, the use of selective discounts identified as a feature of the market in paragraph 4.67 in relation to Great Britain does not, for the reasons set out in paragraphs 4.64 and 4.65, apply in Northern Ireland. Although prices are not published by suppliers, the use of standard prices (and the limited number of

suppliers) should allow easier comparison of prices than in Great Britain; there is insufficient evidence therefore to suggest that lack of transparency of prices can also be regarded as a feature of the Northern Ireland market.

D. Non-price competition

4.69. The major suppliers all argued that there was strong non-price as well as price competition between them. We discuss the extent of non-price competition in Appendix F. We asked the suppliers for evidence of non-price initiatives that they had carried out; in general terms, the main examples we were given were marketing activity (including advertising, direct mail, Internet, exhibitions and leaflet distribution) and better customer service.

4.70. Whilst the major suppliers have told us that the level of non-price competition is high, we have seen little evidence, despite claims to the contrary, of any unique features in their offerings which distinguish one from the other such as might suggest significant non-price competition in the market. All suppliers in the market appear to offer basically the same product and service, more or less to the satisfaction of their customers. We also note that:

- (a) As noted above, many customers acquired their supplier 'passively' in the sense that they moved into a property which it already supplied and would have had to incur switching costs to use a different supplier.
- (b) Most customers are not of the view that quality of service from other suppliers is any worse than what they get now (over 70 per cent of ORC survey respondents did not have a view, most that did thought others were about the same or better).
- (c) Price was the main factor customers would think about if they had to switch supplier (mentioned by 80 per cent of ORC survey respondents).

(d) We have also noted above customers' lack of awareness of other LPG suppliers, or of being approached by other LPG suppliers.

4.71. We accept that the major suppliers have taken steps to improve their distribution and sales support systems, albeit that some of these improvements were aimed at reducing costs in addition to improving customer services. However, as previously noted, there is little evidence that customers perceive differences in the quality of service from their own and other suppliers. We have seen no evidence that any recent innovation in service quality has caused large numbers of customers to switch to a particular supplier, or a greater proportion of new customers to choose that supplier over another. We saw no reason for any different assessment in relation to Northern Ireland.

E. Barriers to entry and expansion

4.72. We discuss barriers to entry and expansion in Great Britain in Appendix G. As shown in Table 5 of Appendix F, 19 suppliers have started supplying domestic bulk LPG in the last ten years. All of these suppliers are small. However, as apparent in paragraph 4.3, the smaller supplier's share of the market fell between 1995 and 2003. This indicates that there has been very little expansion by the smaller suppliers.³³

4.73. The major suppliers told us that the competitive strength of the smaller suppliers should not be underestimated. The fact there had been new suppliers itself suggested that barriers to entry were 'perceived rather than actual'. As to expansion, they suggested to us that, while it took time, there was no reason why the 10 per cent share of the smaller suppliers could not increase to 15 or 20 per cent: one of the

³³As noted in Appendix F, one supplier gave us a number of examples of expansion by 21 smaller suppliers, but their market share remains small.

major suppliers said that it was unwillingness rather than inability to expand that prevented smaller suppliers from doing so. As to economies of scale, the major suppliers argued that smaller competitors could get similar economies in the areas in which they operate by having a high density of customers. Regional suppliers, they argued, also benefited from being hands-on, family businesses, operating in dense areas with a personal service and therefore able to exercise a wide impact on prices in an area. Whilst small suppliers, they said, had relatively small shares on a national basis, a large number had established viable businesses on a local/regional basis with a very strong brand.

- 4.74. While some small scale entry into the domestic LPG market has therefore occurred in recent years, we are aware of only one supplier which has expanded other than by acquisition, to a share of about 5 per cent of the market.
- 4.75. A main concern from some smaller suppliers we received was that incumbent suppliers could take action to retain customers by offering discounts to customers who are considering switching. As noted in paragraphs 4.29, 4.66(b) and 4.67(a)(ii), we regard such selective discounts as reducing the incentive to attract customers from existing suppliers, and, should suppliers attempt to do so, increasing the ability of incumbent suppliers to resist attempts to win customers from them.
- 4.76. This is a market characterized by at most a slow rate of growth (though with some suppliers expecting the number of domestic bulk LPG users to remain broadly at the present level). We note in Table 7 of Appendix I that only a relatively small percentage of customers cease to use or start to use LPG in any year. Given the current low rate of switching, due in part to selective discounting referred to in the previous paragraph, a new entrant would need to develop a customer base by

winning new-to-LPG customers of which there are limited numbers. These are both factors that are likely to deter significant new entry to and inhibit expansion in the market.

Northern Ireland

4.77. We noted in paragraph 4.5 and in Appendix H there has been little change in market structure in Northern Ireland, and no new entry into the market, in the last 10 years. There is also very little prospect of entry into supply of domestic bulk LPG in Northern Ireland, given the continued development of mains gas in some of the areas in which LPG is currently supplied and, on the evidence we saw, the prospects for continued decline in the domestic bulk LPG market. Switching costs also create an equal barrier particularly to expansion in Northern Ireland as in Great Britain. However, we noted in paragraph 4.64 that there is no price discrimination in Northern Ireland.

Conclusions on barriers to entry and expansion

4.78. Our view remains, as in our Emerging Thinking Statement, that there are barriers particularly to expansion by smaller suppliers in the Great Britain market, namely:

- (a) that switching costs referred to in paragraph 4.36 create a barrier particularly to expansion, for example:
 - (i) in trying to win a customer, a competitor will always be at a disadvantage to the incumbent supplier as, faced with equivalent price offers, the customer will prefer to stay with the current supplier to avoid switching costs; and
 - (ii) any such disadvantage would be particularly significant in the LPG market given the relatively few number of new customers and where a new or expanding supplier would have less scope to grow its customer base by winning customers as they enter the market (see paragraph 4.76);

- (b) that, as noted in paragraph 4.66(b), selective discounting enables existing firms to respond to specific competitive threats without lowering prices to their broader customer base, deterring entry and expansion; and
- (c) that the prospect for, at most, modest growth in the market in Great Britain could discourage entry and expansion of smaller suppliers (see paragraph 4.76).

4.79. In consequence, the threat of entry or expansion by smaller suppliers, is likely to provide only a very limited constraint on the prices charged by LPG suppliers. The barriers particularly to expansion listed in paragraph 4.78 are therefore features of the supply of domestic bulk LPG in Great Britain which prevent, restrict or distort competition in the relevant market.

Conclusions on barriers to entry and expansion in Northern Ireland

4.80. As discussed in paragraph 4.77, the following features of the supply of domestic bulk LPG identified prevent, restrict or distort competition in Northern Ireland:

- (a) switching costs referred to in paragraph 4.40 create a barrier particularly to expansion, for example:
 - (i) in trying to win a customer, a smaller competitor will always be at a disadvantage to the market supplier as, faced with equivalent price offers, the customer will prefer to stay with the current supplier to avoid switching costs; and
 - (ii) any such disadvantage would be particularly significant in the LPG market given the relatively few number of new customers and where a new or expanding supplier would have less scope to grow its customer base by winning customers as they enter the market; and
- (b) the prospect for decline in the market in Northern Ireland discourages entry and expansion of smaller suppliers (see paragraph 4.77).

5. Other aspects of the market

5.1 We also considered a number of other aspects of the market which, although not necessarily features as such, are relevant to our assessment of the adverse effects of the possible features identified above.

Profitability

5.2 As a further possible indicator of the extent of competition, we have assessed in Appendix J the profitability of the domestic bulk LPG business of the major suppliers. A competitive market is likely to generate significant variations in profit levels between firms as supply and demand conditions change, but with an overall tendency towards levels commensurate with the cost of capital of the firms involved. At points in time, the profits of some firms may exceed what might be termed the 'normal' level. Reasons for this could include, for instance, cyclical factors, transitory price or other initiatives, the fact that some firms may be more efficient than others and the fact that some firms may be earning profits gained as a result of past innovation. However, competition should result in pressure on profit levels towards the cost of capital in the medium to long run. A situation where, persistently, profits are substantially in excess of the cost of capital for firms that represent a substantial part of the market could be an indication of limitations in the competitive process. Alternatively, if firms with market power are able to operate with higher costs than would be sustainable with keener rivalry in the market, this could be another indication of limitations in the competitive process.

5.3 We have based our assessment on the major suppliers' accounting profits and capital employed, produced in line with generally accepted accounting practice in the UK, but with certain adjustments as detailed in Appendix J. Our aim was to estimate the profits of each major supplier had they been a stand-alone operator. We

received a large number of adjustments throughout the investigation, nearly all of which tended to decrease the major suppliers' ROCE. Set out below are the key adjustments we have made to the financial information provided by the major suppliers.

- (a) We have excluded the acquired goodwill and associated amortization costs from the accounts of one supplier ([§<]) as these amounts appeared to reflect the acquisition of future profits.
- (b) Our preferred treatment is to exclude [§<]. We have, also, however, considered the implications of that suppliers preferred treatment of such costs, and shown this adjustment separately in Table 1. This is discussed further in Appendix J.
- (c) For one supplier ([§<]) we have based our analysis on their management accounts for which we have four years of data. The supplier would prefer us to use a different, less detailed, set of accounts ([§<]), although it has only provided us with the last two years of these. We have continued to use the management accounts, but have adjusted them to accept the one item which appears reasonable. We have not been persuaded of the other adjustments which the supplier has proposed.

5.4 We compared these returns on capital employed with the weighted average cost of capital calculated in accordance with the capital asset pricing model. This is discussed further in Appendix K.

5.5 The scope of the reference relates to only part of the suppliers' businesses and, as this generally does not correspond directly to existing segmental reporting, it has been necessary for the major suppliers to 're-create', inter alia, a domestic bulk profit and loss account. For this purpose, the major suppliers have often needed to allocate specific costs and apportion common costs to the various segments.

5.6 Table 1 summarizes the return on capital employed for the major suppliers for a six-year period, but our assessment has also taken into account the more detailed figures and analysis set out in Appendix J.

TABLE 1 Returns on capital employed of the major suppliers

	<i>per cent</i>					
ROCE	1999	2000	2001	2002	2003	2004
Calor	(
[X]						
Flogas					X	
Shell						
BP						

Source: CC analysis of information supplied by the major suppliers.

Notes:

1. Flogas figures prior to 2003 are not representative of the ongoing business of Flogas and therefore are not shown.
2. All figures to the year ended 31 December, except Flogas for which figures are to the year ended 31 March of the following year.

5.7 The two suppliers which operate in Northern Ireland are run as separate entities and have provided separate information. The Northern Ireland market is less than [X] per cent of the size of the British market by tonnes of domestic bulk LPG sold. Prices in Northern Ireland are lower than in Great Britain and average returns of the two suppliers [X] their cost of capital. The ROCE figures of the two suppliers are not instructive on their own as they are very volatile ([X]): due in part to large fluctuations in the capital employed.

5.8 As can be seen from Table 1, the returns on capital employed in Great Britain since 2001 have been above the weighted average cost of capital of between 8.3 and 12 per cent we estimate in Appendix J as appropriate for the supply of domestic bulk LPG. Set out below are the returns lower than or in excess of the cost of capital of the major suppliers in Great Britain since 2001 expressed as a number of percentage points lower than or in excess of a mid-point estimate WACC of 10 per cent. Depending on the adjustments accepted, two or three of the major suppliers appear to have made returns in excess of their cost of capital.

- (a) *BP*: between [§<] percentage points [§<].
- (b) *Calor*: between [§<] percentage points [§<]; between [§<] percentage points, [§<].
- (c) *Flogas*: [§<] percentage points [§<] in the last two years. We are only able to conclude on these two years because of the fundamental change (a tenfold increase in volumes) in their business on the acquisition of the British Gas business in 2002. The earlier years showed [§<].
- (d) *Shell*: between [§<] percentage points [§<] in the last two years, and between [§<] in the two years prior to that. We do not have data for the earlier years.

5.9 The major suppliers have generally argued that their returns reflected a normal level of profitability and a reasonable return on this sector compared with their cost of capital and given the risk taken on the investment made. The principal arguments proposed by the major suppliers against our findings are set out below (these are discussed further in Appendices J and K):

- (a) that the WACC which we have calculated may be too low;
- (b) that we have excluded valid costs borne by the suppliers or excluded valid assets from their balance sheets, as discussed above; and
- (c) that the period for which we have data is not sufficient for a finding of persistent excess profits.

5.10 At a very late stage of our investigation, shortly before finalisation of our Provisional Findings, [§<] sent us a paper containing analysis of their balance sheet in which they had [§<]. The result was that they had achieved a lower ROCE. We intend to consider this analysis further. At this stage our conclusion is not based on this new information.

5.11 We provisionally conclude that two of the major suppliers ([redacted] and [redacted]) which together constitute a substantial part of the market (around [redacted] per cent by tonnes of bulk domestic LPG sold in 2004) have made profits persistently ([redacted]) and substantially (ie at least 5 percentage points, and generally more) in excess of the cost of capital. A return of 5 per cent in excess of the cost of capital would equate to around 1ppl or 5 per cent of the price of bulk domestic LPG. Provisionally, this appears to us to be a further indicator of the lack of competition in this market.

Safety and alternative arrangements

5.12 We have noted above that LPG is a hazardous product, and its supply is therefore subject to a regulatory regime. Safety considerations are therefore a key issue in this investigation and the major suppliers maintained that there was a safety rationale and justification for a number of business practices, namely:

- (a) ownership of tanks by the LPG supplier;
- (b) exclusivity of supply;
- (c) uplift of tank when the customer switches to a new supplier; and
- (d) the requirement for a three-month notice period.

5.13 We have noted above the three aspects of the safety regime: overriding general and in some cases more detailed legal obligations; the ACoPs and CoPs; and finally the variations between each of the major supplier's own safety policies. As noted by the HSE, however, current safety practices may also reflect the commercial approach of the suppliers. In principle, it would be possible for the safety regime to amount to a cloak for anti-competitive practice, in which case the practices outlined above would not be justified on safety grounds and might have evolved differently. The major suppliers disputed this, arguing that the agreed practices reflected the regime and the regime reflected the practices. Hence we considered whether any features of the

market outlined above, which in our view have adverse effects on competition for the supply of domestic bulk LPG, were indispensable to ensuring the safety of LPG supply—in particular the need for the customer to change tank if changing supplier. We also considered whether current arrangements were a necessary consequence of the various legal requirements, with regard to the supply both of domestic bulk LPG and the supply, maintenance, record keeping and removal of domestic bulk LPG tanks.

Ownership of tank by LPG suppliers

5.14 As noted by the HSE in their evidence on our web site (to which we referred in paragraph 2.13), none of the obligations currently imposed on LPG suppliers by the legislation outlined paragraphs 2.5 to 2.8 ('the relevant legislation') appears to derive from ownership of the tank *per se*. Hence, if ownership was vested in the customer or a third party but the LPG supplier remained responsible for safety activities (installation, maintenance, repair and removal of the tank) under contractual arrangements, there would not appear to be any significant difference to the present situation in terms of the scope and applicability of the regulatory obligations. However, separation of different safety activities has the potential, in certain circumstances, to reduce the overall integrity of the regime. But we noted that some of the major suppliers currently use subcontractors to perform the installation and uplift of its tanks. This suggests that, even if tank installation and removal was the responsibility of a third party, this would not necessarily affect to a material extent the effectiveness of the existing regulatory regime, depending on the precise scope of the contractual arrangements and the previous history of the tank.

5.15 As we discuss further in Appendix D, if the LPG supplier did not own the bulk LPG tank and was not responsible for 'safety activities' such as the installation,

maintenance, repair and removal of tanks, the application of the relevant legislation set out in paragraph 2.8 would differ from the present situation. For example, the obligations under the PSSR to establish and operate within safe operating limits, to maintain the pressure system in good repair and to set up a written scheme for periodic examination of the tank by a competent person attach to the 'user' of the tank, as defined in the PSSR, that is the employer or self-employed person who has control of the operation of the tank. A tank under the full control of a domestic customer (ie where the domestic customer has not contracted a commercial entity to carry out safety activities) will not be covered by these regulations. In addition, there is some doubt as to whether these safeguards would apply where a tank-leasing company or other third party was responsible for maintaining and repairing a tank. In such a situation, it is unclear whether the person responsible for maintenance and repair or the person responsible for LPG delivery would be the user for the purpose of the regulations. (For further details, see paragraphs 2.21 to 2.31 of the Annex to Appendix D.) The Appendix also sets out the uncertainty that may result in the applications of other health and safety regulations (the GSIUR, the DSEAR and the MHSWR) if the LPG supplier does not own the tank. In addition, one of the major suppliers argued that separation of the supply and safety activities could affect liability under the GPSR. It was also noted to us that domestic customers, unlike companies, are not subject to criminal sanctions.

Exclusivity of supply

5.16 In principle, the relevant legislation does not require or favour the use of exclusive LPG supply contracts. However, where there is the possibility of more than one supplier, the safety obligations may be slightly more onerous, and there may be duplication of functions (for further details, see paragraphs 1.21 and 2.33 of the annex to Appendix D).

5.17 If exclusivity was not the norm, it would not be certain (under the statutory regime) which LPG supplier was responsible for preventing gas escapes under the GSIUR (see paragraph 1.22 of the annex to Appendix D).

Uplift of tank and notice periods when customer switches to new supplier

5.18 The relevant legislation does not require tanks to be uplifted on change of supplier, or regulate the length of the notice period. To the extent that the PSSR applies to domestic bulk LPG tanks, where a tank changes ownership, there is an obligation for the previous owner to pass certain documents on to the new owner, such as tank examination reports (see paragraph 2.16 of the annex to Appendix D) though one of the major suppliers commented that the provisions of the PSSR do not provide for the complete history of the tank or the pipework to be transferred to the new owner.

The impact of safety management on business practices

5.19 We set out in the safety working paper, published on our web site, our assessment of the impact of safety management on business practices. We noted in that paper (as we have above) that the major suppliers' approach to safety management involves an integrated safety management system, whereby the LPG supplier takes full responsibility for the installation and the underlying liability associated not only with the delivery of the LPG, but also with the installation of the tank and associated fittings and their ongoing maintenance. Within this system, the major suppliers tend to subcontract some of the activities, such as the provision of emergency services out of working hours, engineering services, tank installation, and uplift. They argued, however, that they were nonetheless able to maintain responsibility for such activities, and control over their performance.

5.20 The major suppliers argued that, within the current legislative framework, the integrity of the safety management system described above, including the clear allocation of roles and responsibilities, is paramount. We have noted above that certain features of this system may contribute to switching costs and higher barriers to entry, in particular, the uplift of the tank at the end of the supply relationship.³⁴ Some smaller suppliers from whom we heard (for example, the evidence of ALGED on our web site) also argued strongly that suppliers should retain ownership of tank: but suggested that transfer of the ownership of a tank from the old to the new supplier, rather than to require switching of a tank itself, would give the consumer the benefit of 'virtually owning' the tank. Some smaller suppliers, however, quite readily supply to customer-owned tanks. Some customers from whom we heard also argued that they should be able to own their own tank and seek competing offers from LPG suppliers.

5.21 As we noted in the safety working paper, the integrated approach under the current supply model has recognizable advantages: clear responsibilities; and simplicity for the customer. We have also noted that the UK LPG industry has a good safety record. The analysis in the Safety Working Paper also suggested:

- (a) Exclusive contracts present many practical advantages: the approach to emergency service delivery may need to be significantly altered if customers could obtain delivery from different suppliers several times a year; and familiarity with a location for delivery and the obligation for suppliers to satisfy themselves that the tank is safe to fill does point towards the need for contracts of a minimum duration, although it is unclear how long this should be. Delivering LPG is a very different process from delivering heating oil. It is

³⁴Switching costs and barriers to entry are addressed above.

difficult to envisage a scenario in which suppliers would deliver LPG to an unknown tank as a one-off.

- (b) The responsibility for installation and maintenance of the tank by the LPG supplier also has some advantages for liability and practical reasons.
- (c) Bulk LPG suppliers have generally suggested that the ownership of tanks by customers raises significant safety issues. Nevertheless we noted that several of them supply to customer-owned tanks to a limited extent.
- (d) The widespread practice of uplifting tanks instead of selling them to the customer or to the following supplier is not required on safety grounds: the tanks are broadly similar; key differences due to historically lower levels of standardization are being reduced. We noted that several suppliers have transferred tanks in-situ on occasion.
- (e) Safety does not appear to be a justification for the three-month notice period required by most bulk LPG suppliers (we have noted in paragraph 4.32 that some of the suppliers were willing to consider shortening notice periods).

Some of the major suppliers also argued they should keep responsibility for pipework they installed when first installing the tank; but it was not clear to us that much attention was given to pipework when there was an acquisition of a business or a customer.

5.22 The following were among the comments of the major suppliers we received on the Safety Working Paper:

- (a) The integrated supply system minimizes risks, has economic advantages, and is necessary to ensure safety; it is the safest operating model, which provides most clarity on roles and responsibilities under the current legislative and regulatory regime. Alternative arrangements would not increase competition, would have economic weaknesses and would reduce safety.

(b) Any attempt to divorce commercial and safety issues in the analysis of this market is erroneous. Incentives for LPG suppliers to operate safely include:

- (i) to ensure safety of customers, employees and premises;
- (ii) to comply with the law;
- (iii) to protect the reputation of the business and of the brand; and
- (iv) to ensure a clear allocation of legal responsibility and liability.

Even if the various detailed legal requirements are complied with, a gas supplier has a continuing duty under the 1974 Act and the 1994 General Product Safety Regulations.

(c) The CoPs set out minimum standards, not 'the standard'. The more general requirements such as the 1974 Act and the regulations made under it, require the product, its means of containment, and its operation to meet the highest standard that is, in practice, attainable, and require the duty holder to ensure risks to safety are kept as low as is reasonably practical; and it is left to individual suppliers to develop their business in such a way they consider is best suited to meet their obligations. Safety levels must be as high as present levels under any alternative arrangements. The law, absent judicial interpretations, is not totally clear as to who is responsible for a tank but somebody needs to be.

(d) A system that relies on co-operation with third parties would be 'inherently less safe' than one where safety management is integrated within the sole responsibility of one company. Furthermore, it was argued that it was questionable whether an organisation which could take on the role of an independent maintenance company could be readily identified; whether there could be competition to provide such a service, including whether customers would be able to switch between such suppliers; or whether regulation of such activities would be required.

- (e) Upon a change of supplier, each supplier would be 'dependent on the integrity of the previous supplier's safety management system' unless it carried out a comprehensive risk assessment (at an increased cost) before each delivery. Certification would not directly address the issue without assurance that each supplier's safety management system was equally effective, especially as the legislation only provides minimum requirements with no prescription as to how these requirements are met. Tanks currently acquired by acquisition are brought within existing safety management systems, involving rigorous and extensive safety checks as well as undertaking remedial verification work as necessary.
- (f) Although there are risks in switching tanks (about which we expressed concern in our Emerging Thinking Statement), they are, unlike the risks for example associated with supply to a third party-owned tank, identifiable and can therefore be minimised and controlled. There are no hazardous incidents recorded in transferring tanks. (We accept that the hazards on replacing tanks on changing supplier are controllable.)
- (g) The good safety record of the industry is due to the stringent safety maintenance and procedures adopted by reputable suppliers and the heavy investment in safety and maintenance undertaken by such suppliers.
- (h) It is possible that certain suppliers might operate below minimum safety standards due to the absence of a pre-qualification or registration mechanism.
- (i) New entrants may compete primarily for customers with new tanks, or the tanks of suppliers with higher safety standards, but exit the market before the tank reaches testing age, leaving the customer without supply.

Assessment of possible alternative arrangements

- 5.23 Our view, and that of most of the suppliers to whom we spoke, is that there are no *technical* reasons, such as differences between filler valves, or in the characteristics of various tanks, for suppliers not to supply domestic bulk LPG to tanks owned by other parties. However, we accept that the current arrangements, whereby the supplier of domestic bulk LPG generally installs and owns the tanks to which it supplies, are one means to ensure clarity in responsibility for safety of tanks.
- 5.24 Nonetheless, we felt it appropriate to consider whether alternative arrangements could have been adopted which would have allowed more competition without putting safety at risk.
- 5.25 We considered possible arrangements which would have involved ownership of the tank other than by the supplier of the domestic bulk LPG: for example either by the customer or by a separate company. We note the arguments of almost all the LPG suppliers from whom we have heard that wider ownership of tanks by customers could have prejudiced safety, in that important safety regulations concerning tank maintenance obligations and written schemes of examination may not apply in the absence of ownership—or control—by the LPG supplier; that customers may be less conscious of, or knowledgeable about, safety requirements; and that contractual obligations may not have been fully effective in maintaining safety in such circumstances. We note also the argument that ownership of tanks by a separate company would have increased the costs of ensuring safety; have had contractual complications; that it may be doubtful whether there would have been effective competition between infrastructure providers; and that for this to occur there would have needed to be arrangements to switch between them, or possible regulation.

5.26 We think it possible that alternative arrangements could have involved ownership of the tank other than by the LPG supplier. But we gave particular consideration to an arrangement whereby the existing domestic bulk LPG supplier could have transferred the ownership of the tank to the new supplier at the point of switching. Among the arguments we received from major suppliers on whether there could have been an alternative arrangement involving transfer of tanks were that:

- (a) The implications of tank transfer would be uncertain and speculative. There was, for example, a risk that incumbent suppliers would inappropriately cut costs (for example maintenance) if they believed that they were less likely to recover their investment in a tank due to transfer. But we regarded this possibility as inconsistent with the major suppliers' arguments that current practices are driven by safety legislation and in particular the regulations under the 1974 Act. As the length of contract and therefore period of tank ownership would remain unknown to the supplier, it should be in its interests to maintain the same standards in order to ensure the health and safety of its employees.
- (b) There would be a need to check the provenance of a tank, authenticate its documented history, and check its physical condition, situations, valves and fittings; and there would be difficulties establishing the condition of fittings in an installed tank. Although we accept that in a minor number of cases, the full tank history may not be available, we believe that due to the stringent legal requirements associated with the design and maintenance of tanks, the low number of tank suppliers, the continuing efforts of the LPGA to harmonize tanks and tank fittings and the relative simplicity of a bulk LPG tank, the safety audit of the tank and its fittings is likely to be relatively straightforward. We also find it difficult to reconcile this description with the rather cursory due diligence of tanks undertaken by some of the suppliers when acquiring competing firms.

- (c) Under a 'must buy' system for tank transfer (in which an incoming supplier would have to buy the tank of the outgoing supplier) the new supplier would possibly have less direct control over its safety standards and reputation, and it may not be prepared to purchase (and hence to supply LPG) if no specifications were available. We accept that any tank transfer system would require a certain element of flexibility and that the transfer of a tank would need to be set against the risk assessment of suppliers. But a tank transfer arrangement would not necessarily require an obligation on an incoming supplier to buy a tank, an obligation which could be unreasonable depending on the condition of the tank. More important would be a willingness by the outgoing supplier to sell a tank, should the incoming supplier wish to buy it at a reasonable price.
- (d) There would be difficulties establishing liability for a tank that had a number of different owners and uncertainty as to responsibility in the event of accidents. We do not accept that liability issues under such circumstances would fundamentally differ from the current situation when a supplier acquires a competitor and its tanks. But, as noted above, such a situation would not arise if there were only an obligation/willingness to sell, rather than also to buy a tank; a tank would only be bought if it was clear the purchaser took on all liabilities.
- (e) Transfer of a tank in situ to an incoming supplier may create incentives to drive down safety standards overall, as suppliers with better maintained tanks would find competitors more willing to acquire their tanks. But we find it difficult to see significant scope for new tanks to be targeted by less scrupulous suppliers, such a strategy being difficult to implement, as we have been told that customers are difficult to identify at the best of times. The age (and condition)

of a tank is also likely to be reflected in the transfer price: it would not necessarily be more profitable for a better maintained tank to be acquired.

- (f) One of the major suppliers expressed concern that there would be 'exploitative new entry', mainly through the acquisition of a tank at low prices to take into account future testing costs, but with the new supplier then failing to carry out such tests while undercutting the prices of existing suppliers, or exiting the market leaving the customer without a supplier and with an untested tank. But, as with the concern in (a), the new supplier would be subject to safety legislation, and in our view the regime, including the CoPs, would itself evolve to deal with such issues: for example, possibly limiting any willingness/obligation to sell to sale to members of LPGA or equivalent body that agreed to follow the CoPs.
- (g) As a tank may have a life of up to 30 years, if tested and maintained on a regular basis, a change in operating model to permit a transfer of the tank on change of supplier would increase the chance that a tank remains in situ and that potentially dangerous work is carried out in situ. But we note that there is currently very little switching and therefore a very high number of tanks remain in situ until their 10- or 20-year test. The transfer of tanks in situ on change of suppliers should not impact the uplift of tanks for essential maintenance and refurbishment.
- (h) A supplier to a tank nearing the end of its life would have difficulties in discharging its duties under the 1974 Act if the tank had been under the control of a number of different parties. But we would not necessarily envisage in any such alternative arrangements any obligation on a supplier to purchase a tank if it had any reason to be concerned about the future safety of the tank.
- (i) It is not possible to consider alternative arrangements, in the nature of a counterfactual against which to compare the current market, without having

regard to the overriding safety obligations which the 1974 Act imposes on suppliers and employees. This we have done; since we do not envisage there necessarily being any obligation on an incoming supplier to buy a tank, we see no reason why any supplier would feel under any pressure or incentive to relax the safety regime it regards as consistent with those obligations.

- (j) Any change to the current operating model would require detailed clarification of the roles and responsibilities of all parties. But we believe that under current legislation there need be no ambiguity of roles and responsibilities if a tank is transferred on change of supplier. Any areas of uncertainty could in principle be clarified by contract.
- (k) Full account should be taken of the long-term nature of safety issues. A small drop in safety standards today may have no immediate effects: the cumulative consequences of lower safety standards may only become apparent many years from now; but it is vital that the potential impacts be considered at this stage. We have taken account of long-term safety issues; as with (f), however, the regime itself could in our view adapt to ensure there would be no adverse effects of any such alternative arrangements.
- (l) Tank transfer would give rise to significant efficiency as well as safety issues due to divergence in safety standards and procedures; there would be the cost and inconvenience of inspection (and any subsequent modification) and of negotiating a purchase price for a tank, which may equal or exceed that of changing tanks. Indeed, two suppliers quoted figures suggesting any cost savings from transferring ownership rather than switching tanks would be very limited given, for example, the need to spend up to three hours inspecting the tank. But we were not convinced that the typical cost and inconvenience of inspection, particularly of a tank from one of the major suppliers, could match

that of the removal from a customer's garden of a heavy item requiring the use of a lorry and crane.

(m) In addition to such arguments on safety and efficiency, issues were raised on the valuation of tanks. It was suggested there would be a need to establish proper value of a tank to be transferred, by negotiation or by an agreed scheme and taking into account any upcoming need for refurbishment; if prices were too low, this could undermine incentives to maintain or replace tanks. It would be difficult to get such a formula right for transfer prices; an industry standard contract would be required as well as a price matrix for the on-sale of tanks. We do not accept that valuing LPG bulk tanks would be more difficult than any other business items for the following reasons: the prices of new LPG bulk tanks are similar; there are very few suppliers and the tanks are not very complex compared with other widely traded second-hand goods (for example, cars); although not necessarily identical, the maintenance schedules of tanks are relatively standardized; and all the major suppliers routinely value tanks as part of their numerous acquisitions.

5.27 In our view it is not the case that the way the market currently operates is the only way an operator could guarantee safety. Having considered the arguments put forward, we consider alternative arrangements such as tank transfer could have developed while maintaining the current high standards of the industry, but have failed to do so. The regulatory regime and codes of practice would themselves have adapted if necessary to overcome many of the concerns expressed above, to allow transfer arrangements, on reasonable terms and conditions (including the price of the transferred tank), without compromising safety, and enhancing competition in the industry.

5.28 We have acknowledged the importance of safety, and accept that current arrangements do represent one way to ensure safety. But we were concerned to examine to what extent the features of the market set out above have been necessary to ensure safety. (We are not, however, expressing any view on whether they could be regarded as having had adverse effects on competition even if required on the grounds of safety.) We are satisfied that alternative arrangements would have been possible without compromising safety.

6. Provisional findings

6.1 We concluded in paragraphs 3.9, 3.10 and 3.11 that the supply of domestic bulk LPG in Great Britain and in Northern Ireland can each be regarded as an economic market in which to assess competition.

Great Britain

6.2 The British market is highly concentrated, one supplier currently accounting for almost one-half of the market and the major suppliers for about 90 per cent of supply. The following features of the market, either alone or in combination with each other, prevent, restrict or distort competition in the supply of domestic bulk LPG in Great Britain:

- (a) the exercise of discretion by suppliers over the terms on which customers can switch between them, over the switching process itself, and over the information available to customers about switching (see paragraph 4.36 (a));
- (b) the widespread practice, when a customer switches supplier, of the outgoing supplier removing its LPG tank from the site and of the incoming supplier replacing it with an essentially similar tank, with the consequential costs of removing and installing tanks, which:

- (i) to the extent that these costs are reflected in charges to individual customers, acts as a barrier to customer switching;
 - (ii) to the extent that these costs are borne by the incoming supplier, acts as a disincentive to competing for the business of existing LPG customers; and
 - (iii) to the extent that the practice gives rise to customer inconvenience, or an expectation of inconvenience, acts as an additional barrier to customer switching (see paragraphs 4.36 (b) and 4.78(a));
- (c) the lack of information among customers in that:
- (i) some customers are not aware of their ability to switch supplier or of alternative suppliers;
 - (ii) customers generally are uncertain about their liability for switching charges;
 - (iii) there is uncertainty about the likely level of inconvenience of the switching process; and
 - (iv) customers generally are not aware of prices on offer from alternative suppliers and face difficulty in comparing prices due to lack of price transparency (see paragraphs 4.36(c) and 4.67(b));
- (d) contractual restrictions on switching, including the use of fixed minimum terms in introductory contracts of three or five years; requiring contract renewal (with a further fixed minimum term) as a condition of selective discounts; three-month notice periods for termination; and lack of clarity in contracts (see paragraph 4.36(d));
- (e) limited ability of suppliers to identify and target their marketing efforts on each others' customers (see paragraph 4.36(e));
- (f) the practice among most suppliers of offering selective discounts to customers, in that:

- (i) customers who object to general price increases can be excluded from the price increase, allowing suppliers to increase prices without prompting an increase in the rate of account terminations (see paragraph 4.67(a)(i)); and
- (ii) selective discounts increase the ability of incumbent suppliers to resist attempts to win customers from them (see paragraphs 4.67(a)(ii) and 4.78(b)); and
- (g) the prospects for at most modest growth in the market which acts as a further barrier to entry and expansion by smaller suppliers (see paragraph 4.78(c)).

6.3 That competition is constrained in this market is evidenced by:

- (a) Sustained differences between average prices of suppliers and a degree of independence (from one another) in the movements of these average prices (see paragraph 4.66(a)).
- (b) Differences between prices to similar customers which are not explained by costs (see paragraph 4.66(b)).
- (c) Low switching rates, which exist despite the availability of lower prices from other suppliers, and despite a lack of evidence that customers have any preference for the service of, their existing supplier (see paragraph 4.66(c)).
- (d) Rates of return from the supply of domestic bulk LPG of two suppliers which together constitute a substantial part of the market that currently appear to us to be persistently and substantially in excess of the cost of capital, a further indication of a lack of competition in the market (see paragraph 5.11).

6.4 In our view, none of the above adverse effects of the features of the British market stem from safety requirements (paragraph 5.28).

6.5 We conclude that there are features of the market for supply of domestic bulk LPG in Great Britain which prevent, restrict or distort competition. That adverse effect on competition has the further detrimental effects on most customers of higher prices for most customers of domestic bulk LPG than would otherwise have been the case.

Northern Ireland

6.6 We have noted in paragraphs 4.34, 4.64 and 4.77 that the Northern Ireland market shares a number of characteristics with that in Great Britain, but to differing extents.

6.7 In our view, the following features of the market, either alone or in combination with each other, also prevent, restrict or distort competition in the supply of domestic bulk LPG in Northern Ireland, with the further detrimental effects of higher prices for customers of domestic bulk LPG than would otherwise have been the case:

- (a) the exercise of discretion by suppliers over the terms on which customers can switch between them, over the switching process itself, and over the information available to customers about switching (paragraph 4.40(a));
- (b) the widespread practice, when a customer switches supplier, of the outgoing supplier removing its LPG tank from the site and of the incoming supplier replacing it with an essentially similar tank, with the consequential costs of removing and installing tanks, which:
 - (i) to the extent that these costs are reflected in charges to individual customers, acts as a barrier to customer switching;
 - (ii) to the extent that these costs are borne by the incoming supplier, acts as a disincentive to competing for the business of existing LPG customers; and
 - (iii) to the extent that the practice gives rise to customer inconvenience, or an expectation of inconvenience, acts as an additional barrier to customer switching (paragraphs 4.40(b) and 4.80(a));

- (c) the lack of information among customers in that:
 - (i) some customers are not aware of their ability to switch supplier or of alternative suppliers;
 - (ii) customers generally are uncertain about their liability for switching charges; and
 - (iii) there is uncertainty about the likely level of inconvenience of the switching process (paragraph 4.40(c));
- (d) contractual restrictions on switching, including the use of 15-month or five-year minimum terms in introductory contracts; three-month notice periods for termination; and lack of clarity in contracts (paragraph 4.40(d));
- (e) limited ability of suppliers to identify and target their marketing efforts on each others' customers (paragraph 4.40(e)); and
- (f) the prospects for decline in the market which act as a further barrier to entry and expansion by smaller suppliers (see paragraph 4.80(b)).

In our view, none of the above features of the market in Northern Ireland stem from safety requirements (see paragraph 5.28).

7. Remedies

7.1 Having provisionally found there are adverse effects on competition of the features of the markets listed above, we will now be considering what action should be taken by ourselves, or whether we should recommend the taking of action by others, to remedy, mitigate and prevent the adverse effects on competition and the detrimental effect on customers, namely of higher prices for most customers for domestic bulk LPG, that have resulted from, and may be expected to result from them. For this purpose we will be issuing separately a notice of possible remedies.