GR 008/07

INVESTIGATION INTO ENERGY PRICES

A REPORT BY THE COUNCIL OF MINISTERS

1 February 2007

Price: £8.60

To: The Hon N. Q. Cringle, President of Tynwald, and the Honourable Council and Keys in Tynwald assembled.

Background

In September 2005 the Council of Ministers agreed that the Isle of Man Office of Fair Trading (OFT) should undertake an investigation under Section 19 of the 1996 Fair Trading Act into the prices being charged for energy.

The period of the investigation was set as from 2001 to 2005.

The relevant part of Section 19 of the Fair Trading Act states that:-

> *(3) On completion of an investigation under this section the Board shall make a report on the investigation to the Council of Ministers:-*
>
> *(a) stating its findings of fact which are material to the information which it provides; and*
> *(b) containing such additional observations (if any) as it considers should be brought to the attention of the Council of Ministers as a result of the investigation."*

Progress to date

Due to the extensive nature and complexity of the investigation it was necessary to engage consultancy assistance from Oxera Consulting Ltd ("Oxera") following a supplementary vote from Tynwald. This has been the largest investigation of its kind and due to the amount of information gained it has been decided to split the subsequent report into four Chapters, dealing separately with liquid fuels (petrol, diesel, kerosene and gas oil), gas, electricity and solid fuel respectively.

The Council of Ministers has now received two Chapters covering liquid fuels and gas, both of which are appended to this report. The remaining two chapters are presently being finalised and will be submitted to Tynwald in due course.

Whilst the Council of Ministers has yet to consider both Chapters in detail, the Fair Trading Act requires Section 19 reports to be laid before Tynwald and it is the view of Council that this should not be delayed.

In considering the Report and its findings the Council of Ministers has decided that the issue of gas prices merits further formal investigation, and has directed the Office of Fair Trading to commence a Section 19A investigation with the purpose of confirming whether or not Manx Gas has charged or charges an excessive price for gas and what, if anything, should be done to address the situation.

The Council of Ministers will be submitting a more detailed report to Tynwald on these Chapters once it has considered them fully, and in the process, will provide Tynwald Members with a formal presentation to help aid understanding of the issues raised.

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Chief Minister

Investigation into gas prices in the Isle of Man

Isle of Man Office of Fair Trading

November 2006

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1 Introduction

Oxera Consulting Ltd ("Oxera") has been commissioned by the Isle of Man Office of Fair Trading to investigate the level of energy prices in the Isle of Man. This report presents the analysis undertaken with respect to the gas supply market, covering both natural gas and liquefied petroleum gas (LPG) supplies.

This section of the report begins with a consideration of the scope of the investigation of the gas market. The methodological approach adopted by Oxera is then described, and the key trends in the industry outlined.

1.1 Scope of investigation

To undertake any price investigation, it is first important to define the scope of the analysis. This requires the relevant product market and time period to be identified.

This report takes the relevant market to be the retail gas supply market in the Isle of Man. According to this definition, the key player is Manx Gas, which is currently the sole supplier of gas to residential and industrial and commercial end-users in the Isle of Man.[1] Both LPG and natural gas are used in the Island, and each differs in its energy content, production characteristics, costs and the delivery infrastructure required.

Historically, LPG was the only source of gas available to the Island. However, with the completion of the spur connection to the Scotland–Ireland gas interconnector pipeline, natural gas has become available to approximately two-thirds of the mains gas-metered customers on the Island (those connected in the ex-Douglas Gas areas of Douglas, Onchan, Union Mills and Glen Vine). LPG/Air is still being supplied to customers through mains in Peel, Ramsey and Port St Mary, the area formerly served by Calor (ex-Calor). Other ex-Calor and Kosangas customers are still being supplied with LPG via community systems and cylinders.

Price increases have been experienced in both markets, and the purpose of this report is to consider whether the price rises observed in the natural gas and LPG markets reflect actual changes in the cost of supplying these products in the Island. Furthermore, it will look at whether the level of tariffs is reasonable, in the sense that they provide an appropriate return to the gas supply activity in the Isle of Man.

The approach taken in this study is to investigate the operations and profitability of Manx Gas, as this is the sole undertaking actively supplying gas to domestic and commercial consumers in the Island.[2] The charges levied by the Manx Electricity Authority on Manx Gas for access to its gas pipeline are considered separately and addressed in more detail in the accompanying Oxera report.[3] For the purposes of the investigation into gas prices, these are taken as exogenous costs that Manx Gas would be expected to pass through.

Focusing on Manx Gas will allow a clear picture of where the costs are incurred and the profits earned. With information on the profitability of the activities, the reasonableness of tariffs can be assessed.

[1] The Manx Electricity Authority purchases its own gas for use in the Pulrose power station and imports this gas, together with the gas it sells on to Manx Gas, through the natural gas import infrastructure that the Manx Electricity Authority has contracted for, or invested in, as part of a broader capital programme.

[2] It is Oxera's understanding that, under the conditions of the Gas and Electricity Act 2003, the Manx Electricity Authority is restricted in its ability to compete for supply to existing or new natural gas customers, requiring the DTI to authorise any such activity after consideration of the impact on existing public gas suppliers.

[3] Oxera (2006), 'Investigation into electricity prices in the Isle of Man', report prepared for the Isle of Man Office of Fair Trading, May.

The period of the investigation is from 2001 to 2005, although, where necessary and depending on data availability, this has been extended.

To identify whether prices in the relevant market over the relevant period were reasonable, Oxera adopted the methodological approach discussed below.

1.2 Methodological approach

In assessing whether gas prices are reasonable, it is first necessary to understand the underlying cost structure of gas supply, how changes in costs are reflected in final prices, and what the returns of the gas supply business are. The core of the investigation is therefore based on two self-contained, but interdependent, analytical approaches: assessment of the price–cost relationship through time, and profitability analysis.

– Having identified the main cost components of gas supply, their evolution can be analysed, together with the extent to which cost changes are passed on to consumers through retail gas tariffs (section 3).

– A profitability assessment can then be undertaken. The returns of the gas supplier at the overall company level and at the divisional and product levels can be calculated and compared against appropriate benchmarks should any be identified (section 4).

The first question is addressed through a top-down assessment of the relationship between tariff changes and underlying costs. This provides the background and thus assists in the investigation of whether prices are reasonable. Another important outcome of the top-down price–cost analysis is that it may aid in the specification of a gas price monitoring mechanism, if required.

In the second stage, the reasonableness of the price–cost relationship is examined by analysing profitability. An examination of Manx Gas's profitability over the last five years provides an understanding of whether the gas supplier is acting reasonably. This is examined by:

– assessing changes to margins over time;
– comparing the return the company was able to generate for its investors (ie, the return on capital employed and the internal rate of return) against the return that investors require for similar investments in a competitive market (ie, the cost of capital).

Returns in excess of any relevant competitive benchmark may require further investigation to assess whether there are justifiable reasons for the difference observed. In addition, returns are measured at the overall company level and at the divisional and product levels. This is because, even if overall returns are reasonable, this might not be the case for different parts of the Manx Gas business.

1.3 Key trends in the industry

Over the period 2001–05, the gas industry in the Isle of Man can be characterised by three major elements:

– stable consumption by domestic and industrial consumers (but with a shift from LPG to natural gas being imposed on a segment of the market);
– relatively stable gas tariffs between 2001 and 2004, followed by significant growth in gas tariffs;
– large-scale capital investment programmes undertaken by Manx Gas and the Manx Electricity Authority to enable natural gas to be delivered to customers.

Over the last five years, demand for gas in the Isle of Man by domestic and industrial consumers has remained fairly stable, with the most significant shift being the switch to consumption of natural gas, as a consequence of the conversion programme in the Douglas

area. However, total demand has increased due to the introduction of power generation demand for natural gas.

Over the period under investigation, gas tariffs have both risen and fallen, with little discernible trend until the end of 2004, when tariffs started to climb. From August 2004 to December 2005 (a 15-month period), unit natural gas charges (based on the Star Saver tariff) exhibited cumulative nominal growth of 59%. The LPG unit charges grew by 32% in the Kosangas area and 30% in the ex-Calor area over the same period.

The conversion to natural gas would not have been possible without the substantial capital investment programmes required of Manx Gas and the Manx Electricity Authority between 1999 and 2004. Key investments of relevance to the gas market were the natural gas conversion programme and the construction of a natural gas transportation pipeline system, which were undertaken to introduce and secure an independent source of natural gas for both power generation and residential and commercial use.

The remainder of the report is structured as follows:

– section 2 presents an overview of the structure of the industry;
– section 3 examines historical trends in prices and costs;
– section 4 assesses Manx Gas's profitability; and
– section 5 summarises the key findings and provides some recommendations.

2 Structure of the industry

To investigate the level of tariffs in the gas markets, it is necessary to understand the structure of the industry. The market structure may affect prices via the levels of competition in the market and the costs incurred by market participants, and would consequently affect their returns.

The rest of this section is structured as follows:

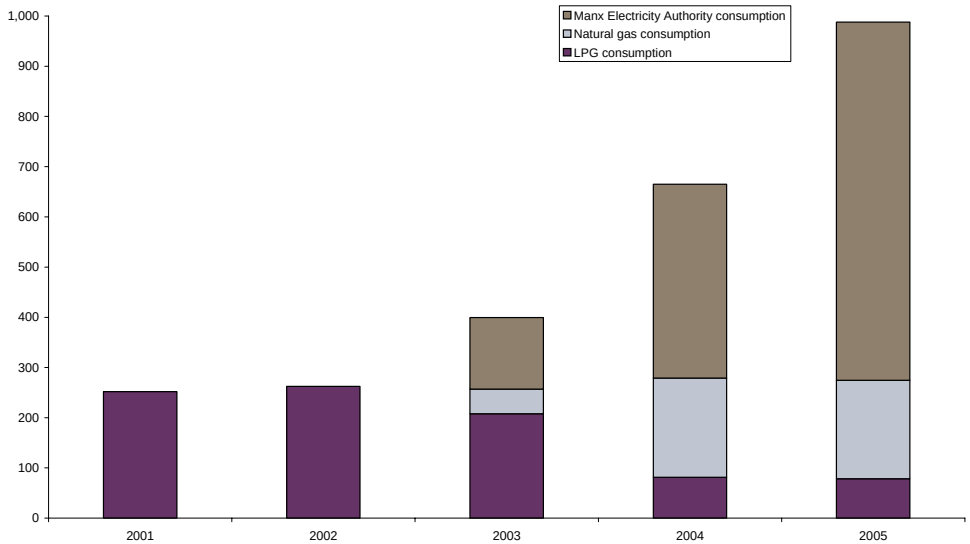
– section 2.1 describes the generic structure of the gas market;
– section 2.2 analyses the gas importation process, storage and distribution;
– section 2.3 describes the natural gas conversion; and
– section 2.4 looks at the non-gas activities of Manx Gas, in particular the sale of appliances.

2.1 Market description

The Isle of Man gas market has become more complex in the last few years due to the introduction of natural gas to the Island. Before 2003, consumers in the Island were only able to purchase LPG, which was imported, distributed and sold by Manx Gas. However, since the imposed natural gas conversion (discussed in more detail in section 2.3), a significant proportion of customers are now consuming natural gas, with two companies active at different stages of the supply chain: Manx Gas and the Manx Electricity Authority. The relationship between these two companies, and their activities in the gas market, are explored later in this section.

Figure 2.1 shows annual gas consumption in the Island, clearly demonstrating the shift in consumption from LPG to natural gas. In particular, natural gas consumption is divided into two parts: the consumption by end-consumers (domestic and industrial), which is supplied by Manx Gas, and the consumption by the Manx Electricity Authority for use in power generation. As the figure shows, the growth in volumes consumed is driven by the power generation demand, whereas domestic and industrial customers' consumption has remained stable over the five-year period, at around 270GWh.

Figure 2.1 Annual gas consumption (GWh)

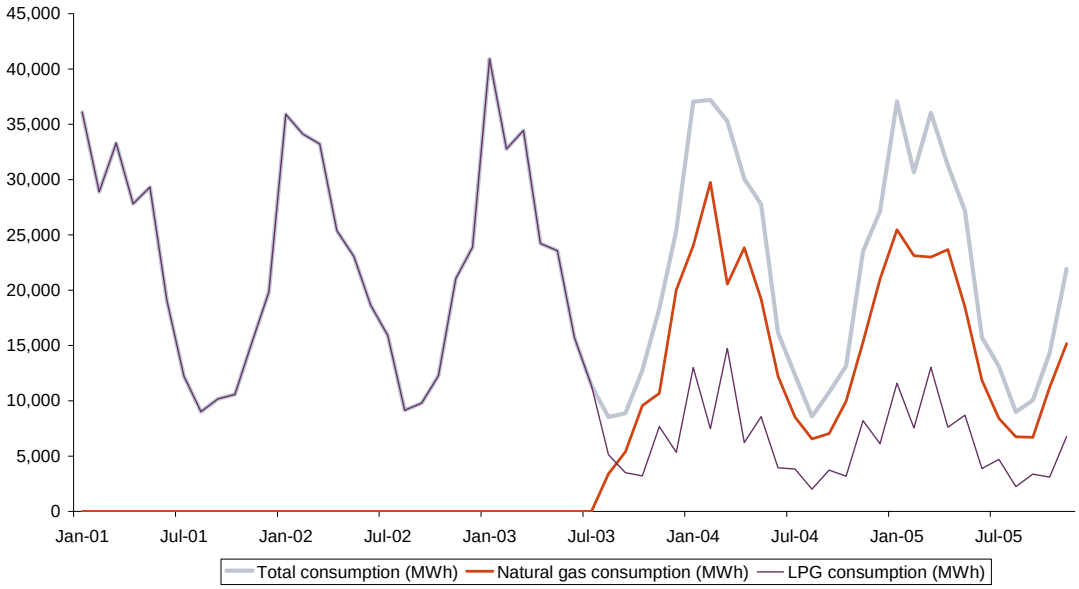


Note: The December 2005 figure was not provided for 'Manx Electricity Authority consumption', so it is assumed to be the same as the November 2005 figure.
Source: Manx Gas data, Manx Electricity Authority data and Oxera calculations.

The natural gas used in generation is purchased and consumed by the Manx Electricity Authority and therefore is not analysed in this report. However, the transfer price within the Manx Electricity Authority is reviewed in the accompanying report on electricity pricing.[4]

Figure 2.2 below presents monthly consumption of gas by end-users, broken down by natural gas and LPG. It shows strong seasonal variation, with consumption of around 9GWh in the warmest month of the year, and around 37GWh in the coldest month. Given that the primary use of gas is for heating, this variation is to be expected.

Figure 2.2 Gas consumption: natural gas, LPG and total (MWh)



Note: Natural gas used by the combined-cycle gas turbine (CCGT) for electricity generation is excluded from the figure.
Source: Manx Gas data and Oxera calculations.

2.2 Gas imports, storage and distribution

Both LPG and natural gas are imported to the Island, and delivered to Douglas. However, the import routes (by ship for LPG and by pipe for natural gas) have obviously different characteristics and embody substantially different vertical relationships. For LPG, Manx Gas is involved in the whole importation process, purchasing and transporting the gas to the Island. For natural gas, the Manx Electricity Authority purchases and delivers gas to the distribution network at Douglas, where it is bought by Manx Gas, at prices incorporating the physical purchase of the gas and a contribution to the costs of its delivery to Douglas, as per a Memorandum of Understanding with the Authority. The importation process is described below, separately for each type of gas, along with the distribution process.

2.2.1 Natural gas

Over the period 2001 to 2003, the Manx Electricity Authority undertook a significant amount of work to introduce natural gas to the Island, as part of a programme that included the construction of a gas-fired CCGT at Pulrose, which was completed in 2003.

From the end of 2003, when the gas transportation pipeline network was completed and commissioned, the Manx Electricity Authority started using an independent source of natural gas supply. Natural gas is bought at the UK National Balancing Point (NBP), and transported from Moffat in Scotland through a system of pipelines to Pulrose near Douglas. The transportation chain consists of three main elements:

[4] Oxera (2006), 'Investigation into electricity prices in the Isle of Man', report prepared for the Isle of Man Office of Fair Trading, May.

– the pipeline system (SIPS II) between Moffat in Scotland and Ballough in Ireland (the Moffat distribution system);
– the Moffat distribution system is connected with the west coast of the Isle of Man by a sub-sea spur (approximately 11km) which ends at Glen Mooar, where a pressure-reduction station is located;
– a cross-Island pipeline (approximately 20km) runs from the pressure-reduction station at Glen Mooar to the Pulrose power station.

The Manx Electricity Authority has obtained rights to use capacity on the first element of this transportation chain, the Moffat distribution system, until September 2023. The reserved capacity of the Authority increases over the contract period, but cannot exceed 15%[5] of the total capacity of the distribution system. As at the end of 2005, 6.29% of the capacity was being used (ie, 42% of the maximum capacity).[6]

Manx Electricity Authority's connection to the Moffat distribution system is via a spur pipeline, which runs to Glen Mooar on the west coast of the Isle of Man. It was designed, installed and commissioned by Bord Gais Eireann (BGE) in accordance with the Authority's requirements. The pressure-reduction station was built in Glen Mooar by the Authority to reduce pressure from the sub-sea transmission levels to those used to transport gas overland.

The final element in the gas transportation network is the cross-Island pipeline. A stylised illustration of the gas transportation system is shown in Appendix 1.

In August 2003 Manx Gas completed the conversion of the Douglas area from LPG to natural gas, at a total cost of around £10m, with another £2m spent in total in 2004 and 2005. Since then, Manx Gas has been buying natural gas from the Manx Electricity Authority. There is no natural gas storage in the Island.

2.2.2 LPG

The LPG for consumption in the Isle of Man (as well as Jersey and Guernsey) is purchased from Esso Petroleum by International Energy Group (IEG), which holds an 80% stake in Manx Gas. It is then shipped to the Island by Sigas Kosan, and delivered to Douglas. Once in the Island, the gas is stored mainly in the storage sites in Douglas, with smaller inventories kept at each of the operational locations. The LPG storage inventories of the Isle of Man are shown in Appendix 1, and total 1,975 tonnes. The gas for use in mains systems is manufactured before being distributed to consumers, whereas pure propane is used in community systems, cylinders and bulk deliveries.

LPG is delivered to consumers in a number of ways. Customers connected to the mains system, outside of the Douglas area, are supplied with LPG through this system. Customers not connected to the mains are supplied with LPG cylinders, as bulk LPG supplies to individual storage tanks, or via small community networks each supplied from a central storage tank.

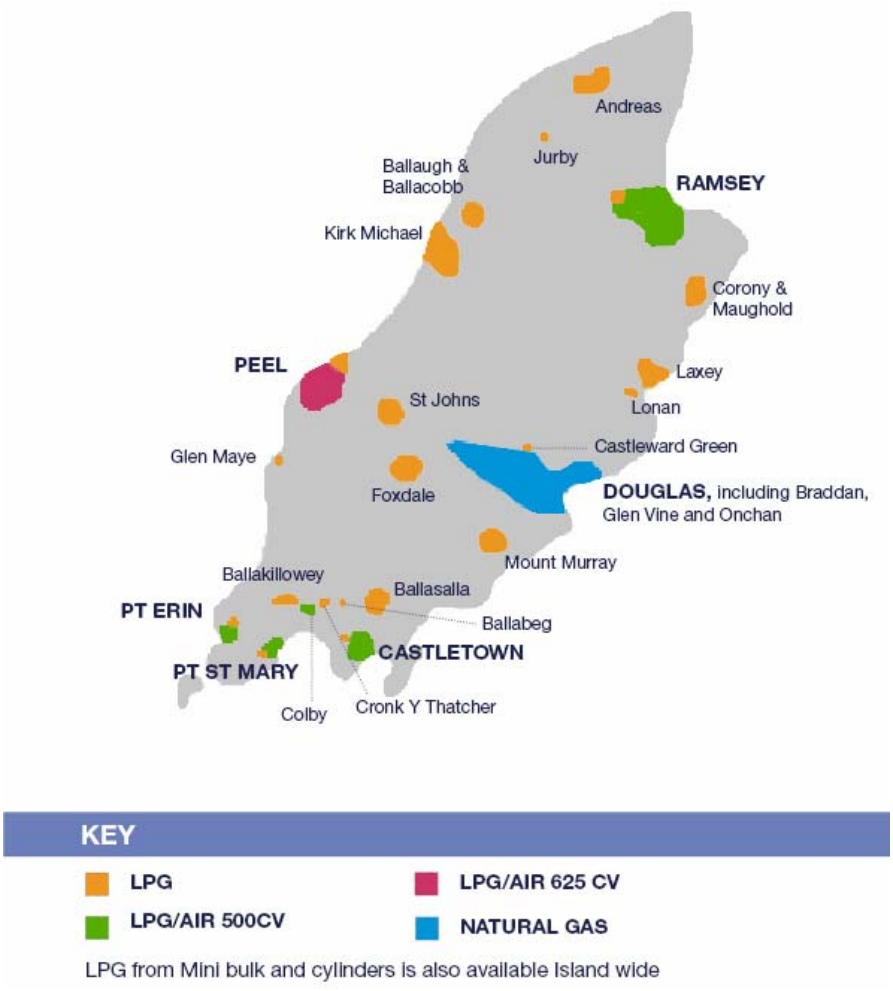
LPG distribution and supply in the Isle of Man is divided into two areas by Manx Gas: Kosangas and ex-Calor. Kosangas refers to customers on community systems in the ex-Douglas gas company area (ie, those customers who do not have access to natural gas as a result of the conversion of the mains system in Douglas). Ex-Calor covers all customers in the Ramsey, Peel and Port St Mary areas. A tariff differential between the two areas exists, as analysed in section 3.2.

Figure 2.3 delineates the areas serviced by natural gas and different categories of LPG. The Ramsey, Peel and Port St Mary areas are supplied an LPG/air mix, in addition to being supplied through LPG community systems.

[5] According to Manx Electricity Authority statutory accounts as at March 31st 2004.

[6] The proportion of volume contracted for on the pipeline rises over time through contractual agreements intended to reflect further volume growth from expansion of the conversion programme to cover other LPG consumers and the remaining power station capacity.

Figure 2.3 Areas of metered gas supply



Source: Manx Gas.

2.3 The introduction of natural gas

Natural gas to the Island was introduced to the Island in two ways:

– investment in infrastructure to bring natural gas to the Isle of Man, undertaken by the Manx Electricity Authority; and
– adaptation of the existing Isle of Man gas infrastructure, as well as appliances, from LPG to natural gas, undertaken by Manx Gas.

These are described in turn below.

2.3.1 The gas pipeline infrastructure

Over the period 2001 to 2003, the Manx Electricity Authority undertook a significant amount of work to introduce natural gas to the Island, in order to support the CCGT, which was completed in 2003. From the end of 2003, when the gas transportation pipeline network was completed and commissioned, the Authority began to use natural gas for electricity generation.

Key elements of the Manx Electricity Authority's natural gas introduction programme include the construction of:

– the 80MW CCGT, which can be run on natural gas and fuel-oil; and
– a pipeline system, partly by the Authority and partly by BGE, to introduce natural gas to the Island for the CCGT. Moreover, certain capacity was reserved on the existing gas distribution system.

To secure energy supply to the Island and allow for utilisation of natural gas in electricity generation, the Manx Electricity Authority undertook a series of projects, including:

– commissioning BGE to construct a spur interconnector between the Moffat distribution system and Glenn Mooar in the Isle of Man. The construction took place between February 2002 and November 2003. As at the end of 2004, the total amount of future payments to recover construction costs and for secured capacity was £106m in present value terms. These costs were not budgeted for;

– construction of the cross-Island pipeline, initiated in February 2002 and completed in December 2002. The total capital expenditure (CAPEX), originally budgeted at £20m, turned out to be £23.5m;

– construction of the pressure reduction station, which began in October 2002 and was completed in September 2003. Total CAPEX of approximately £15.1m was incurred. The station construction was not budgeted for, since it was originally supposed to be constructed by BGE as part of the spur interconnector pipeline.

2.3.2 Manx Gas's conversion programme

Manx Gas has invested around £12.6m to bring natural gas to consumers in the Douglas area of the Isle of Man. The natural gas conversion programme involved around 13,500 premises and over 25,000 gas appliances, with the major volume of work carried out over a six-month period, starting August 2003. Table 2.1 shows natural gas investment between 2002 and 2005.

Table 2.1 Annual CAPEX expenditure on natural gas (£)

2002	2003	2004	2005	Total
802,090	9,342,033	1,657,689	841,003	**12,642,815**

Source: Manx Gas data.

The actual investment was higher than originally budgeted. The original budget was reported by Manx Gas to be £10.5m–£10.7m, with 60–70% of the overrun being accounted for by the need for second visits to properties, and the remaining cost arising from additional remedial work that Manx Gas had to carry out in order to comply with safety requirements. As reported by Manx Gas:

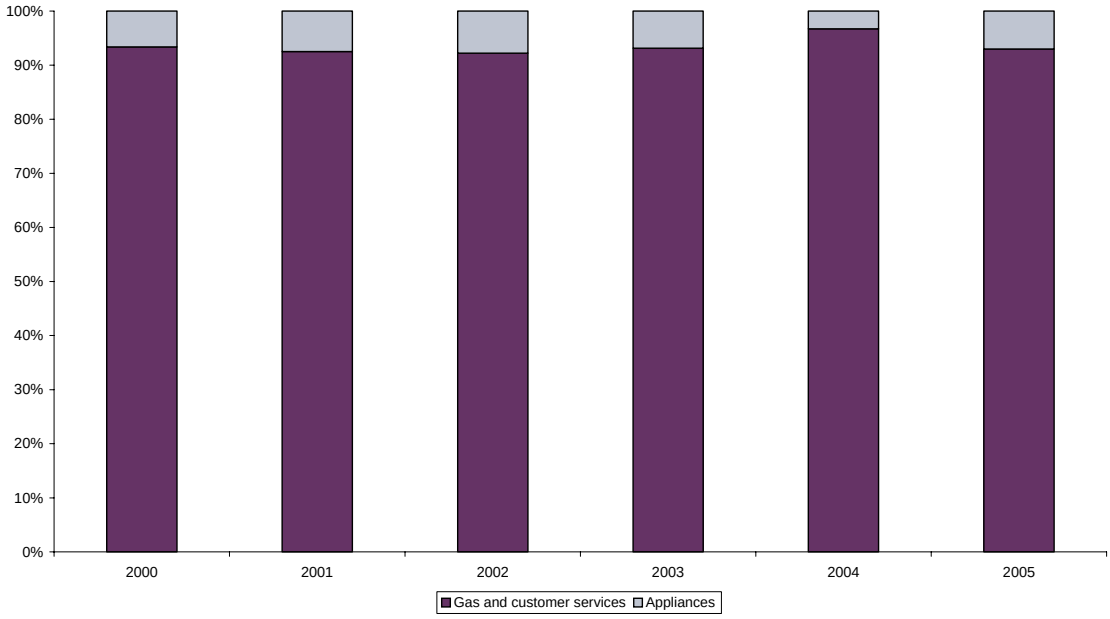
> The variation between the budgets (which did change as the project scope was developed) and actual costs are associated with the unknown entities involved in the conversion project. The conversion survey was carried out on a non-destructive and non-intrusive basis, whereby appliances were not dismantled or removed. This fact led to an unknown quantity expenditure in relation to possible installation improvements that may be required. This unknown element, plus changes in requirements from the HSWI and CORGI in relation to the conformance with the Gas Safety (Application) Order 1996, led to a need to complete the project with an audit to confirm the conformance.[7]

2.4 Other Manx Gas activities

Apart from the sale of gas in the Isle of Man, Manx Gas also sells and installs appliances. However, revenues from the appliances business represent a small proportion of Manx Gas's total revenue (see Figure 2.4). In each year, appliances sales make up less than 10% of total revenue, with the proportion in 2004 being just over 3%.

[7] Information provided to Oxera.

Figure 2.4 Proportion of annual sales derived from appliances versus gas and customer services (%)



Source: Manx Gas data and Oxera calculations.

3 Overview of price movements

This section looks at the evolution of gas tariffs in the Isle of Man, along with their underlying costs in the period up to the end of December 2005.[8] Domestic consumers in the Isle of Man are offered a range of tariffs, which differ according to the type of usage (eg, cooking only, cooking and gas fire, central heating, etc).[9] However, in both the Douglas and ex-Calor areas of the Island, and for both natural gas and LPG, the vast majority of consumers are on the Star Saver tariff, which is available to domestic and small commercial customers.

On the commercial side, there is similarly a choice of tariffs, with charges varying by consumption level and customer type. Most consumers are on the CX tariff, which was introduced towards the end of 2004, and Manx Gas has informed Oxera that these tariffs formalise existing discounts that were available to commercial customers previously on the Star Saver tariff.

The section looks in turn at natural gas (section 3.1) and LPG (section 3.2).

3.1 Natural gas

3.1.1 Evolution of tariffs

Currently, natural gas is only supplied in Douglas, Onchan, Union Mills and Glen Vine, via the mains system. As noted above, the vast majority of domestic and small commercial customers are on the Star Saver tariff—in 2005, 78.1% of all natural gas consumption in the Douglas area was through this tariff, as shown in Table 3.1 below. Of the remaining 2005 volume, 11.9% of consumption was under the CX tariff (available to large commercial users) and 6.5% under the C tariff.[10]

Table 3.1 Natural gas consumption under each of the tariffs, 2005 (%)

Tariff	Proportion
A	1.1
B	0.8
C	6.5
CX	11.9
D	1.3
E	0.1
F	0.1
S (Star Saver)	78.1
T	0.3

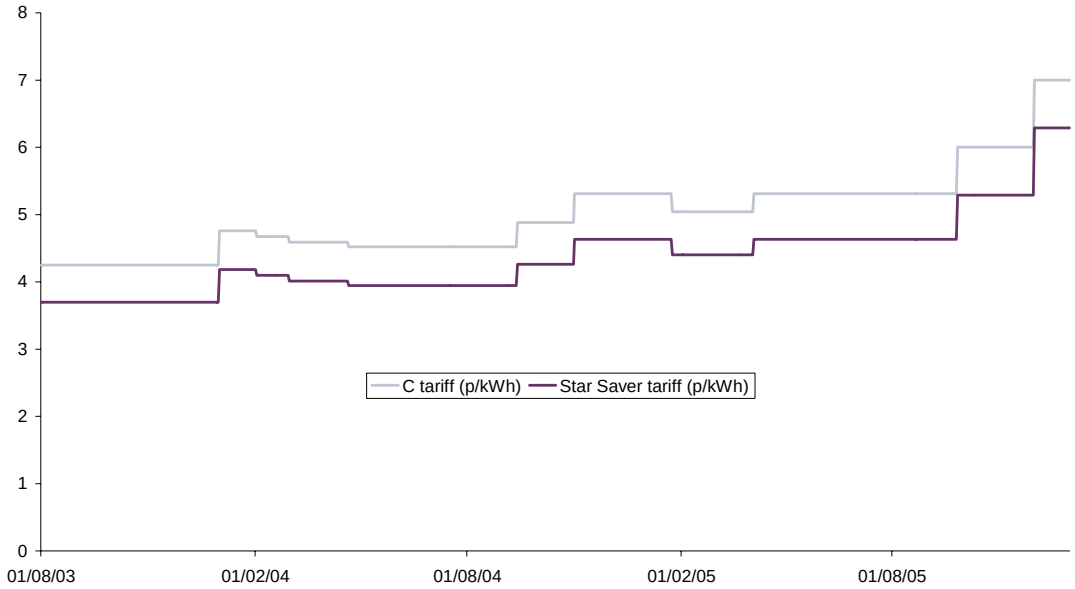
Note: Figures may not sum to 100% due to rounding.
Source: Manx Gas and Oxera calculations.

Figure 3.1 shows trends in the Star Saver and C tariffs since August 2003. Both tariffs increased significantly over the period in question. However, the price changes to both tariffs occurred simultaneously, with the main explanation given being changes in wholesale costs of gas. Both tariffs have a standing charge, which started at £0.1219/day (equivalent to

[8] The end-December 2005 cut-off point for the majority of analysis reflects the timing of the initial information request. Where tariff comparisons are undertaken, these have been extended to February 2006.
[9] These tariffs are reported in detail in Appendix 5.
[10] The C tariff is available to customers using gas for multiple appliances, and includes some commercial customers.

around £44.5 per year) in August 2003, reaching £0.1337/day (equivalent to around £48.8 per year) towards the end of 2005.

Figure 3.1 Natural gas Star Saver and C tariffs net of VAT, August 2003–December 2005 (p/kWh)



Source: Manx Gas and Oxera calculation.

Both the Star Saver and the C tariff are available to commercial users, along with domestic users. However, as noted above, many commercial customers on the Star Saver tariff do not face the reported unit charge, but receive volume discounts equivalent to those now available from the CX tariff.

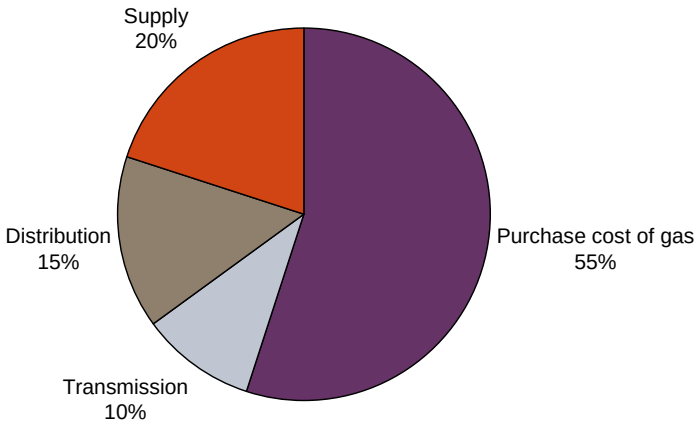
3.1.2 Relationship between tariffs and costs

In general, gas tariffs can be thought of as consisting of three major components: purchase costs of gas, network costs and supply costs. Network costs are incurred in transporting gas through the gas transmission and distribution networks. [11] Supply costs include metering costs and marketing and administration.

In Great Britain, around 55% of a representative natural gas tariff (excluding VAT) is taken up by the cost of gas; around 25% consists of transmission and distribution cost, and supply costs account for 20% of the tariff (see Figure 3.2).

[11] The transmission network is the high pressure network designed for bulk transportation of gas to the distribution network or to the premises of large gas consumers. The distribution network is a low pressure network that connects the transmission network to individual consumers' premises. In Great Britain, transmission and distribution tariffs to be paid by suppliers to the operators of the transmission and distribution networks are regulated by the energy regulator, Ofgem.

Figure 3.2 Illustrative cost breakdown in GB domestic natural gas supply tariffs

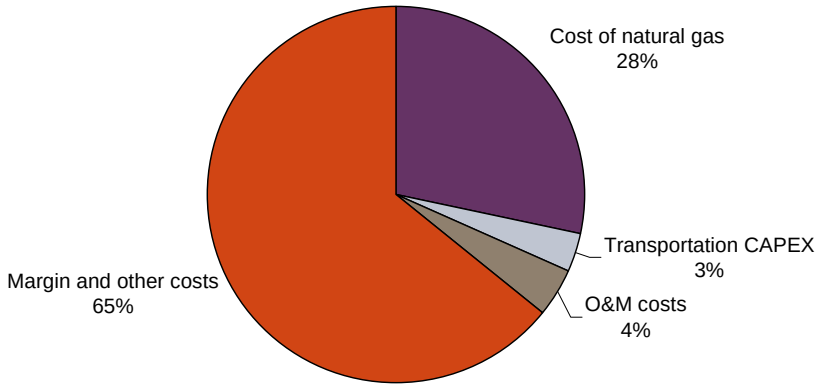


Source: Ofgem and Oxera calculations.

However, Manx Gas's accounts do not disaggregate costs in the same manner (see Figure 3.3 and Table 3.2). In particular, data was provided on the cost of natural gas, and the transportation and operational and maintenance (O&M) costs, which can be considered transmission costs. The remainder of the costs were then grouped into the 'margin and other costs' category, which includes the distribution costs, the supply costs and a margin on these activities.

In 2005, purchase costs of natural gas comprised around 28% of the Star Saver tariff, significantly lower than their contribution to the GB domestic natural gas supply tariffs (see Figure 3.3). Transportation CAPEX took up around 3% of the tariff, O&M costs around 4%, and margins and other costs around 65%.

Figure 3.3 Cost breakdown of Star Saver tariff (net of VAT), 2005 average



Source: Manx Gas and Oxera calculations.

Table 3.2 shows the average annual level of the Star Saver tariff, along with its components over the period 2003–05. While the majority of increases in tariffs have been justified in terms of the higher wholesale costs of gas, the average increase in the cost of gas over the period (76%) represents only 51% of the observed increase in the Star Saver tariff—a high proportion of the residual increase is accounted for by a 22% rise in the 'margin and other costs' reported. This may reflect increasing costs associated with retailing or operating a distribution network, or it may represent an increase in profit over the period. This will be reviewed in greater detail in section 4. Tariff and cost changes for the period 2004 to 2005 are also included for comparison. These may represent a more realistic trend because not only was the natural gas conversion completed in December 2003, but Manx Gas has indicated that its natural gas costs were artificially low as a consequence of contractual arrangements with the Manx Electricity Authority. Over this time period the cost of gas accounted for two-thirds of the observed tariff increase, with the remainder attributable to higher margins or other costs.

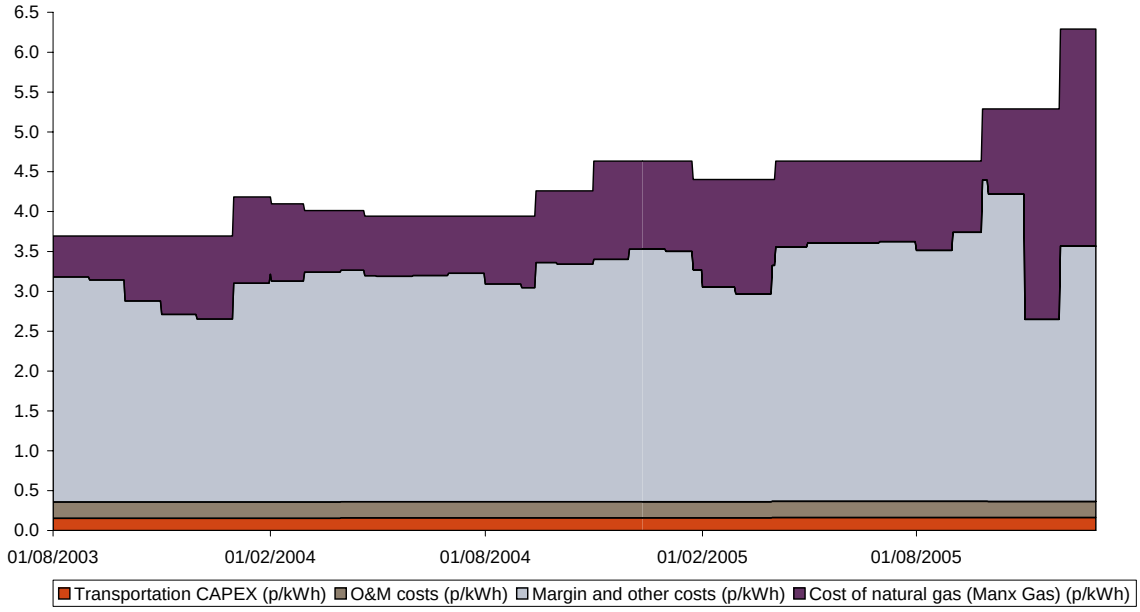
Table 3.2 Average annual level of Star Saver tariff for natural gas net of VAT, and its components (p/kWh)

Tariff/cost component	2003	2004	2005	Change 2003–05 (%)	Change 2004–05 (%)
Star Saver tariff	3.70	4.14	4.85	31.2	17.1
Cost of natural gas	0.78	0.90	1.37	75.6	52.2
Transportation CAPEX	0.15	0.16	0.16	5.1	0.0
O&M cost	0.20	0.20	0.20	–0.4	0.0
Margin and other costs	2.56	2.88	3.11	21.7	8.0
Retail prices index (RPI)	109.1	114.7	119.5	9.5	4.2

Note: The p/kWh figures were obtained by taking a weighted average from daily observations. Due to rounding issues, the 2003–05 percentage change in the tariff/cost component figures shown in this table may not equal the actual percentage changes listed. RPI figures are annual averages.
Source: Manx Gas, Isle of Man Treasury and Oxera calculations.

Figure 3.4 shows the monthly breakdown of the direct cost components of the Star Saver tariff, which illustrates wider variations in the underlying costs than seen in the annual averages reported in Table 3.2.

Figure 3.4 Star Saver tariff breakdown by direct cost, net of VAT (p/kWh)



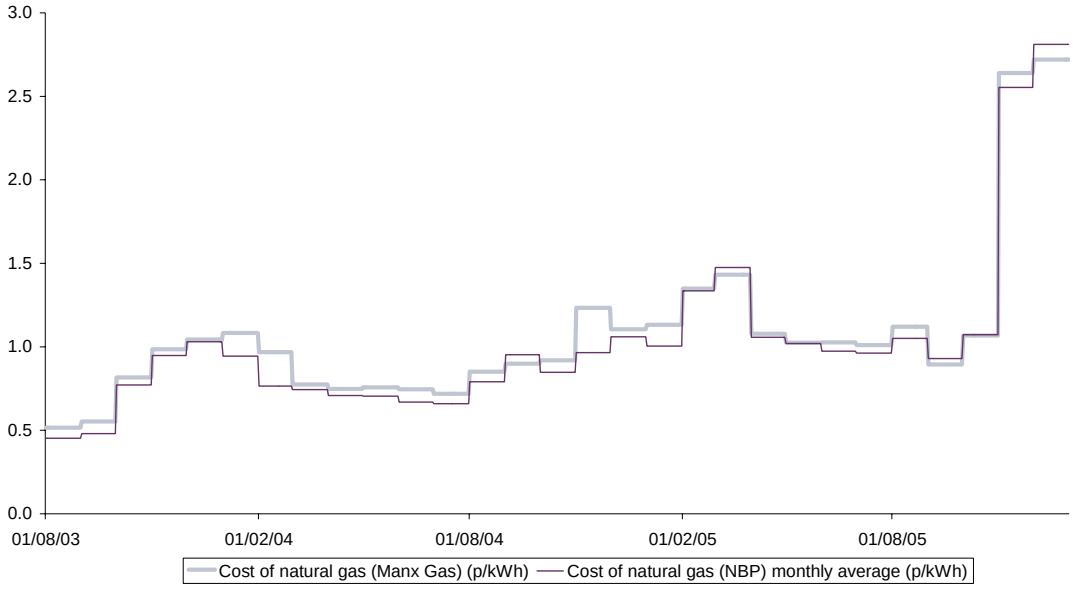
Source: Manx Gas and Oxera calculations.

From the figure it is apparent that the Transportation CAPEX and the O&M costs are not the drivers of the increases in the Star Saver tariff; rather the two main drivers are the wholesale cost of gas; and margin and other costs. These are examined in more detail below.

Figure 3.5 below shows the monthly cost of gas, as provided by Manx Gas, and the average monthly cost of gas if it is bought day-ahead at the NBP. Manx Gas buys its gas from the from the NBP, via the Manx Electricity Authority, and therefore the monthly series provided by Manx Gas is a good fit with the actual observed average price at the NBP.[12]

[12] There will be some differences reflecting 'imbalance charges' (ie, charges associated with costs imposed on the operation of the pipeline delivery infrastructure) as a consequence of changes in the consumption requirements of Manx Gas's customers and the company's portfolio of gas purchase contracts.

Figure 3.5 Wholesale price of natural gas, quoted by Manx Gas and at NBP (p/kWh)

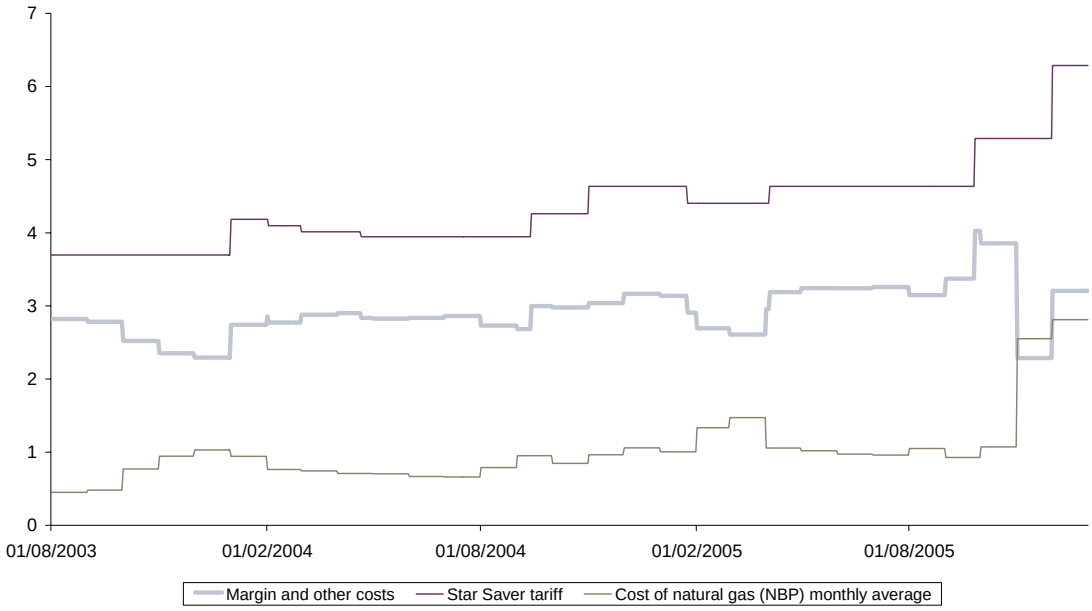


Note: The cost of natural gas (NBP) is the price quoted on the working day immediately preceding the day in question. For a weekday, the cost is the working day-ahead price quoted on the previous working day. For a weekend, the cost is the weekend price quoted on the preceding Friday. The monthly average is then obtained by taking a straightforward average across each month.
Source: Manx Gas, Heren and Oxera calculations.

The 'margin and other costs' is the second component driving the tariff changes seen in Figure 3.4, and is illustrated in Figure 3.6. The figure shows an upward trend in 'margin and other costs' between August 2003 and December 2005. However, using cost data provided by Manx Gas, it is not possible to separate the margin and other costs in order to determine whether 'other costs' or the margin component are driving this upward trend. Therefore, using management accounts provided by Manx Gas, section 4 looks in more detail at the level of the margin and considers whether it is excessive.

While there is a lag in transmitting changes in natural gas prices to the Star Saver tariff, changes in the tariff in general correspond to changes in the cost of natural gas. For instance, as natural gas costs increased from September to December 2003, Manx Gas's tariffs remained constant, leading to a decline in the 'margin and other costs'. Manx Gas, however, increased its tariffs in January 2004, resulting in an increase in the 'margin and other costs' component to a level comparable to that existing before the rise in natural gas costs. Furthermore, the rise in natural gas prices in February 2005, came with a fall in the 'margin and other costs' component and the natural gas tariff. When natural gas costs fell in April 2005, Manx Gas's tariffs and correspondingly 'margins and other costs' increased, possibly to enable recovery of margins lost during the period of increasing natural gas costs.

Figure 3.6 Natural gas margin and other costs (p/kWh)



Source: Manx Gas data and Oxera calculations.

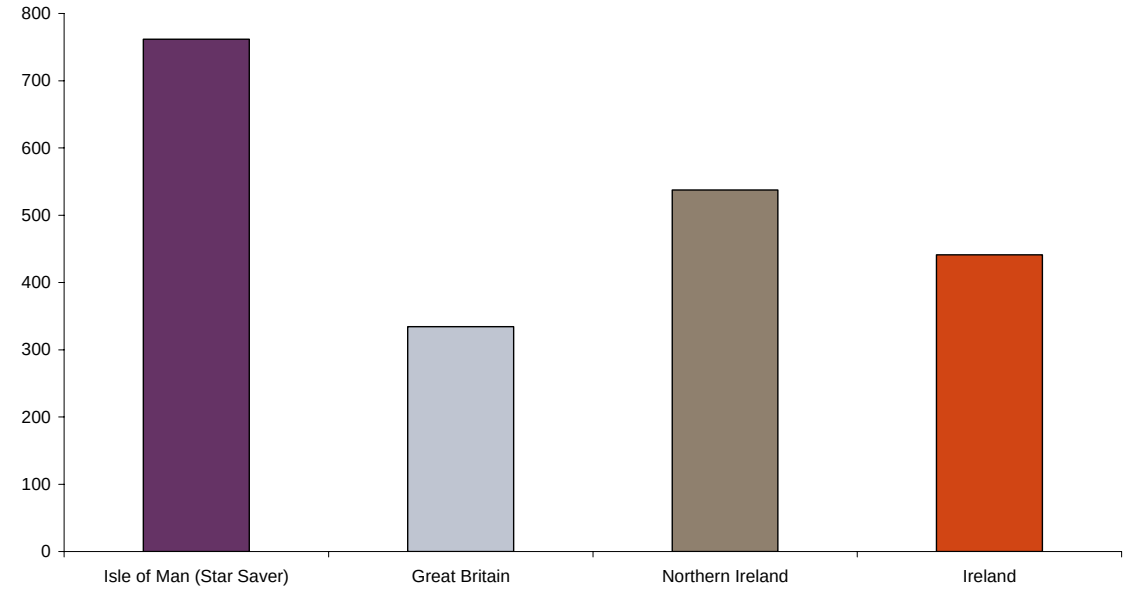
3.1.3 Comparison with other countries

The natural gas market in the Isle of Man is small in comparison with neighbouring markets. For example, total natural gas consumption in 2005 was in the order of 0.9TWh, compared with annual consumption of 1,100TWh in Great Britain and 47TWh in the Republic of Ireland. In Great Britain, there are over 20m households consuming natural gas, in Northern Ireland this figure stands at 93,000 and in the Isle of Man the natural gas network serves around 14,000. This makes straightforward comparisons of prices difficult, as it is hard to quantify the extent of any economies of scale or benefits associated with the underlying mix of customers that other companies or countries are facing.

Thus, Figure 3.7 shows the average annual domestic bill in the Isle of Man (at February 1st 2006), and in Great Britain, Northern Ireland and the Republic of Ireland on January 23rd 2006, for an assumed annual consumption of 14,400kWh (the annual average consumption in the Isle of Man for 2005).

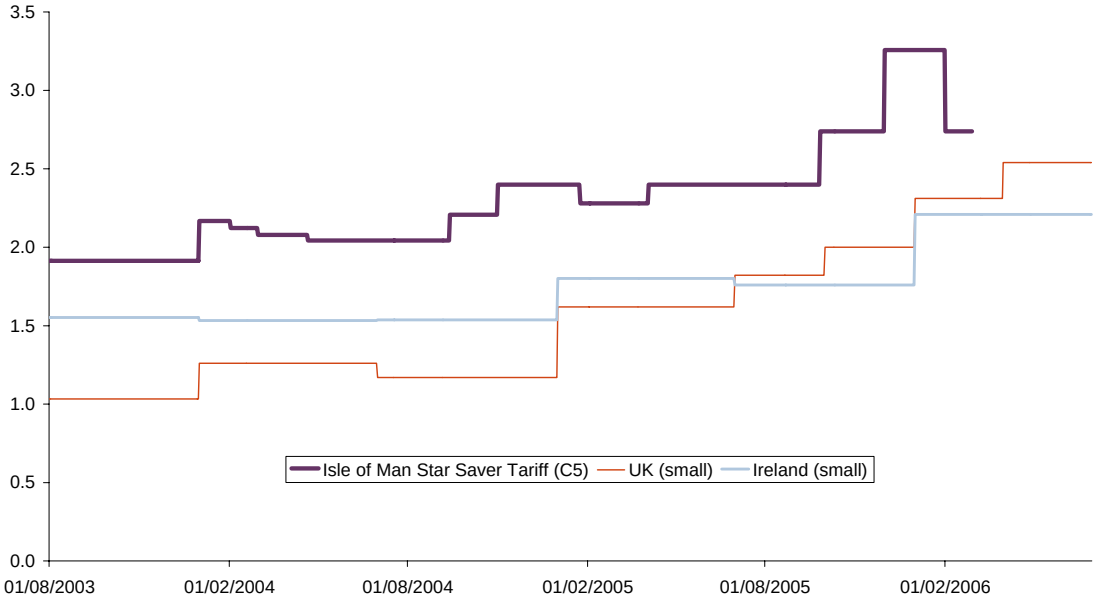
Similarly, Figure 3.8 shows industrial gas prices in the Isle of Man and in the UK and Republic of Ireland. The prices quoted are those categorised as ‘small’ industrial consumers in the UK (ie, with annual consumption of 1.1GWh), as this corresponds to the median commercial consumption group under the CX tariff. Moreover, it has been indicated to Oxera that there are relatively few consumers with consumption above this level and therefore the comparison is of little use.

Figure 3.7 Average annual domestic natural gas bills net of VAT in the Isle of Man and in comparator countries, as at February 1st 2006 prices (£)



Note: All figures use an average annual consumption of 14,400kWh. The data for the Isle of Man Star Saver tariff reflects February 1st 2006, when it was reduced by 1p/kWh, consequently lowering the average annual bill from £960 to £762. Data for the comparator countries refers to January 23rd 2006.
Source: GCCNI, Manx Gas and Oxera calculations.

Figure 3.8 Prices net of VAT paid by industrial and commercial customers in the Isle of Man and comparator countries, p/kWh



Note: National prices are not available for Ireland, so data for Dublin has been used. Consumption is assumed to be 1,163MWh, which corresponds to the small consumption tariff for the UK, and is equivalent to the C5 range for the CX tariff in the Isle of Man.
Source: Manx Gas, DTI and Oxera calculations.

Both Figures 3.7 and 3.8 show that the Isle of Man has significantly higher natural gas tariffs than the other countries. Because of the differences between the markets, it is reasonable to anticipate that some differential may exist, but it is not possible to assess whether the current differentials fully reflect the effect of the lack of economies of scale.

3.2 LPG

3.2.1 Evolution of tariffs

Prior to August 2003, the Douglas area was supplied with LPG via the mains. The tariffs available to customers were the same as those for natural gas, described in Appendix 4. The Douglas area is also supplied with LPG through community systems (Kosangas). The tariffs available to LPG customers are shown in Table A4.2 of Appendix 4. The vast majority of customers are on the Star Saver tariff, which is available to domestic and small commercial customers. In 2005, 88% of LPG consumption in the Kosangas area was under the Star Saver tariff (see Table 3.3). Therefore, the Star Saver tariff is analysed throughout this section.

Table 3.3 LPG consumption in the Kosangas area under each of the tariffs, 2005 (%)

Tariff	Proportion
AK	0.3
BK	0.5
CK	0.3
DK	5.4
FK	4.9
SK (Star Saver)	88.4
TK	0.1

Note: Figures may not add up due to rounding.
Source: Manx Gas and Oxera calculations.

LPG is also supplied in the ex-Calor area of the Isle of Man. The tariffs available to customers in this area are shown in Appendix 4. Most customers are on the Star Saver tariff, available to domestic and small commercial customers. In 2005, 91% of LPG consumption in the ex-Calor area was under the Star Saver tariff. Another 6% was under the CCX tariff, available to large commercial users (see Table 3.4). In 2004 an even greater proportion of consumption, 93%, was under the Star Saver tariff. Many commercial customers previously on the Star Saver tariff then moved to the CCX tariff when it was introduced in 2004. However, time-series data has not been provided on the CCX tariff by Manx Gas, and hence the Star Saver tariff is analysed throughout this section.

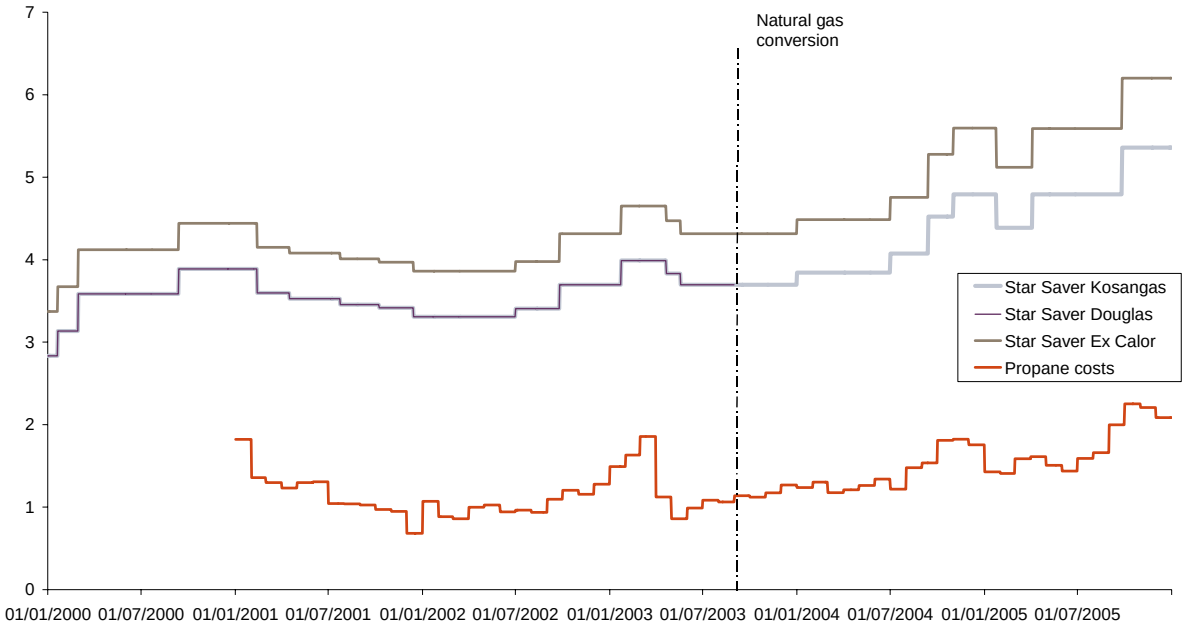
Table 3.4 LPG consumption in the ex-Calor area under each of the tariffs, 2005 (%)

Tariff	Proportion
CA	1.0
CB	0.9
CCX	5.9
CD	1.6
CS (Star Saver)	90.6

Note: Figures may not add up due to rounding.
Source: Manx Gas and Oxera calculations.

Figure 3.9 shows the trends in the Star Saver tariff for LPG in the Douglas and ex-Calor areas. The Douglas area covers customers connected to the mains (Star Saver Douglas) and those on community systems (Star Saver Kosangas). The price changes to the tariffs occurred simultaneously in both the Douglas and ex-Calor areas, with the main explanation given being changes in the wholesale costs of energy, and in particular oil.

Figure 3.9 LPG Star Saver tariff net of VAT, 2000–05 (p/kWh)



Note: Star Saver Douglas covers customers connected to the mains in the Douglas area, which were converted to natural gas in August 2003.
Source: Manx Gas and Oxera calculations.

In 2004 Manx Gas introduced a new tariff for large commercial users in the Calor area: the 'CCX tariff'. This tariff offers two benefits to commercial users: it has no standing charge; and the price charged per unit of gas consumed falls as more gas is consumed.

3.2.2 Relationship between tariffs and costs

The LPG tariff is made up of the following cost components:

– purchase cost of gas;
– shipping;
– storage;
– production costs involving processing of the raw product;
– distribution costs or costs of delivering LPG to end consumers;
– supply or administration, marketing and billing costs.

However, in response to the information request, Manx Gas provided tariff and cost data that is not broken down into the same components (see Tables 3.5 and 3.6). In particular, data was provided on the cost of LPG (propane and butane), the sea freight cost for each of the gases, and an Esso handling charge, which can be considered a part of the shipping costs. The remainder of the costs have been grouped into the 'margin and other costs' category. From Figure 3.12, it can then be inferred that the 'margin and other costs' category includes the storage, production, distribution and supply costs, along with relevant margins.

Table 3.5 shows the average annual level of the Star Saver tariff in the Kosangas area, along with its components over the period 2001–05. A percentage change between 2001 and 2005 is also displayed. The Star Saver tariff increased by 38% between 2001 and 2005, compared with an increase in the retail prices index (RPI) of 15.6%. The cost of propane, however, rose by 48% over the same period, accounting for less than half the increase observed. The remainder is captured, once again, in the 'margin and other costs'.

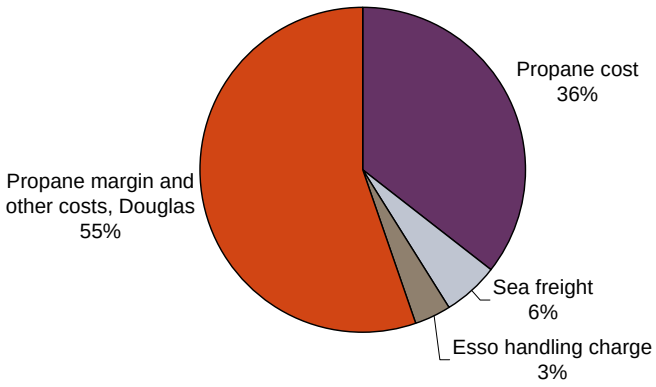
In 2005, the cost of propane constituted around 36% of the net of VAT tariff in the Kosangas area, with around 9% being made up of sea freight and Esso handling charges. The bulk of the tariff (around 55%) comprises margin and other costs (see Figure 3.10).

Table 3.5 Average annual level of Star Saver tariff net of VAT for LPG in the Kosangas area and its components (p/kWh)

Tariff/cost component	2001	2002	2003	2004	2005	Change 2001–05 (%)
Star Saver tariff	3.53	3.43	3.78	4.14	4.87	37.6
Cost of propane	1.17	1.04	1.23	1.43	1.73	48.4
Sea freight	0.24	0.24	0.25	0.26	0.27	12.0
Esso handling charge	0.16	0.16	0.17	0.17	0.17	1.7
Margin and other costs	1.96	1.99	2.12	2.28	2.69	37.4
RPI	103.4	105.8	109.1	114.7	119.5	15.6

Note: The p/kWh figures were obtained by taking the average of daily observations. Due to rounding issues, the 2001–2005 percentage change in the tariff/cost component figures shown in this table may not equal the actual percentage changes listed. RPI figures are annual averages.
Source: Manx Gas data, Isle of Man Treasury and Oxera calculations.

Figure 3.10 Cost breakdown of LPG Star Saver tariff net of VAT in the Kosangas area, 2005



Source: Manx Gas data and Oxera calculations

Table 3.6 shows the average annual level of the Star Saver tariff in the ex-Calor area, along with its components over the period 2001–05. The Star Saver tariff increased by 39% between 2001 and 2005. The cost of propane, on the other hand, rose by 48% over the same period. In absolute terms, the 'margin and other costs' in the ex-Calor area is higher than that in the Douglas area, although it also had a higher percentage increase over the period 2001–05.

Figure 3.11 breaks down the components of the LPG Star Saver tariff in the ex-Calor area. It indicates that because of the area's relatively higher 'margin and other costs' component in comparison to that in the Douglas area (around 61%), propane costs (around 31%) and sea freight and Esso handing charges (around 8%) are a lower proportion of the overall tariff.

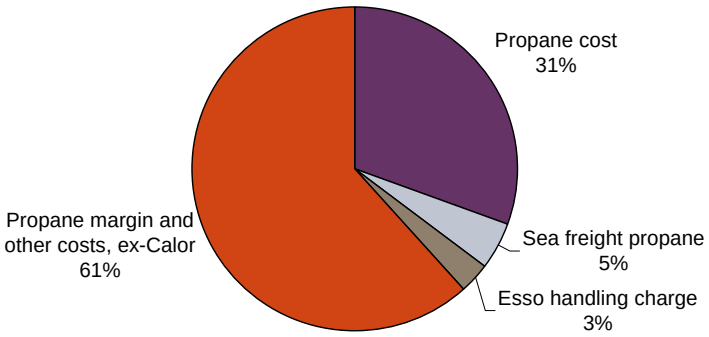
Table 3.6 Average annual level of Star Saver tariff net of VAT for LPG in the ex-Calor area and its components (p/kWh)

Tariff/cost component	2001	2002	2003	2004	2005	Change 2001–05 (%)
Star Saver tariff	4.09	4.01	4.41	4.83	5.66	38.5
Cost of propane	1.17	1.04	1.23	1.43	1.73	48.4
Sea freight	0.24	0.24	0.25	0.26	0.27	12.0
Esso handling charge	0.16	0.16	0.17	0.17	0.17	1.7
Margin and other costs	2.51	2.57	2.75	2.97	3.49	38.9

Note: The p/kWh figures were obtained by taking the average of daily observations. Due to rounding issues, the 2001–2005 percentage change in the tariff/cost component figures shown in this table may not equal the actual percentage changes listed.

Source: Manx Gas data and Oxera calculations.

Figure 3.11 Cost breakdown of LPG Star Saver tariff net of VAT in the ex-Calor area, 2005



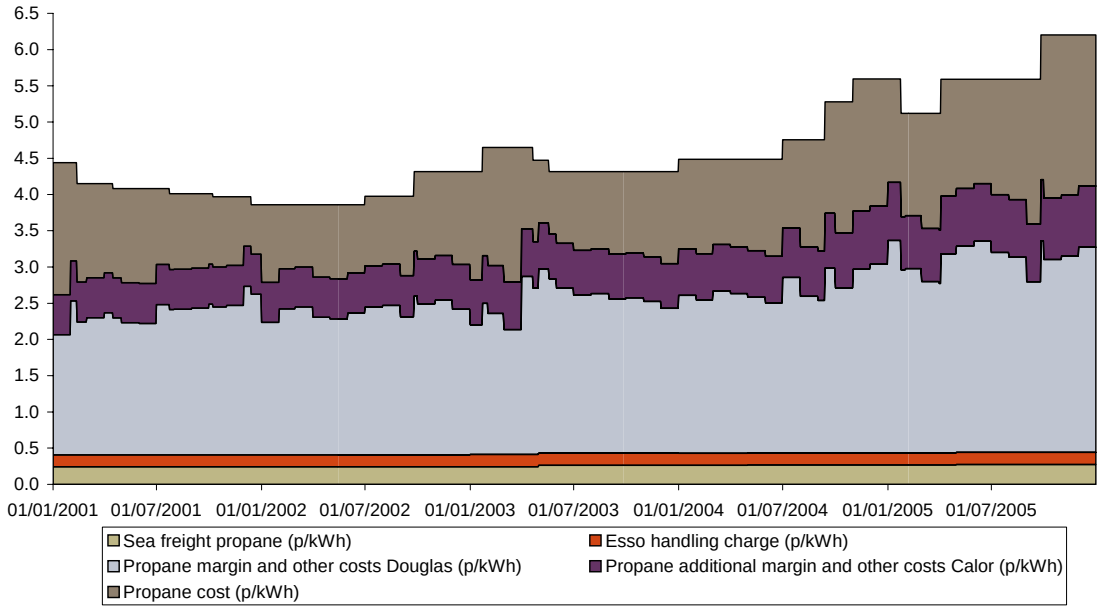
Source: Manx Gas data and Oxera calculations.

Figure 3.12 shows the variation in the Star Saver tariff in both the Kosangas and ex-Calor areas of the Isle of Man, along with the component costs. There is a significant difference between the tariff level in the Kosangas and that in the ex-Calor area, yet this distinction is not explained by differences in the cost of propane. According to the previous Isle of Man OFT report, the cost of supplying the ex-Calor area is higher, and it therefore needs a higher amount of capital investment.[13] At this stage, it is not possible to quantify what the tariff difference should be based on these differences. The tariff differential between the Kosangas and ex-Calor areas is explored in more detail in Figure 3.15.

As can be seen from Figure 3.12, the sea freight cost and the Esso handling charge remained relatively constant over time, and therefore did not cause any of the variation in the tariff. However, the cost of propane and 'margin and other costs' varied significantly, and lead to the observed changes in the tariff.

[13] Isle of Man OFT (2000), 'Report on the investigation of gas prices in the Isle of Man'.

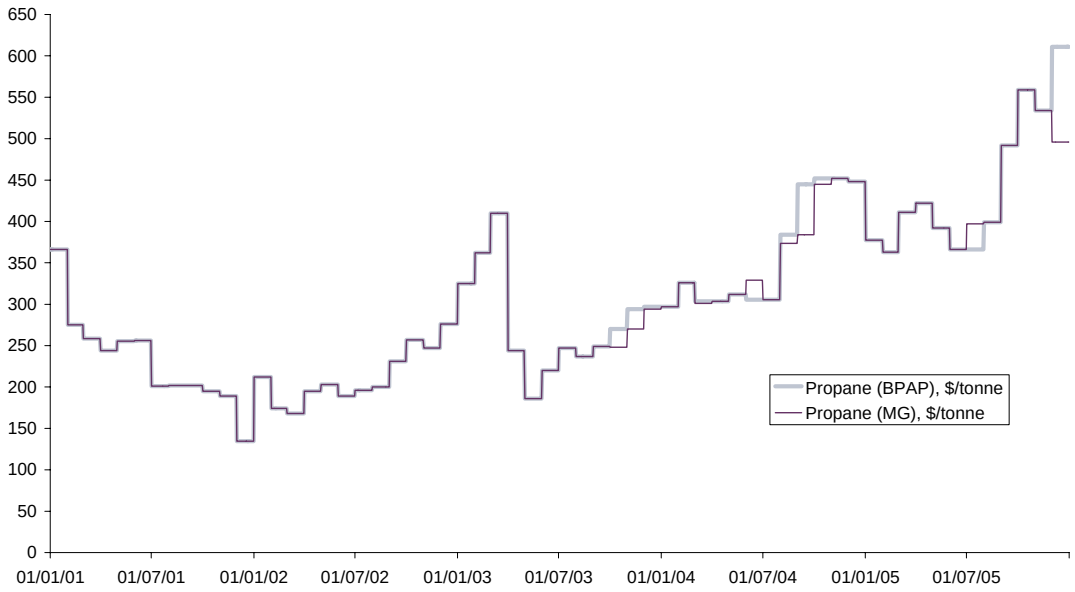
Figure 3.12 Star Saver tariff net of VAT breakdown by direct cost, p/kWh



Source: Manx Gas and Oxera calculations.

Figure 3.13 shows the cost of propane, as provided by Manx Gas and quoted at BP Agreed Price (BPAP). Since Manx Gas buys its propane (and butane) at BPAP, the two series would be expected to be identical. As can be seen from Figure 3.13, until October 2003 the price provided by Manx Gas and that published at BPAP were identical, and have remained a close match since then.[14]

Figure 3.13 Wholesale price of LPG as quoted by Manx Gas and at BPAP ($/tonne)



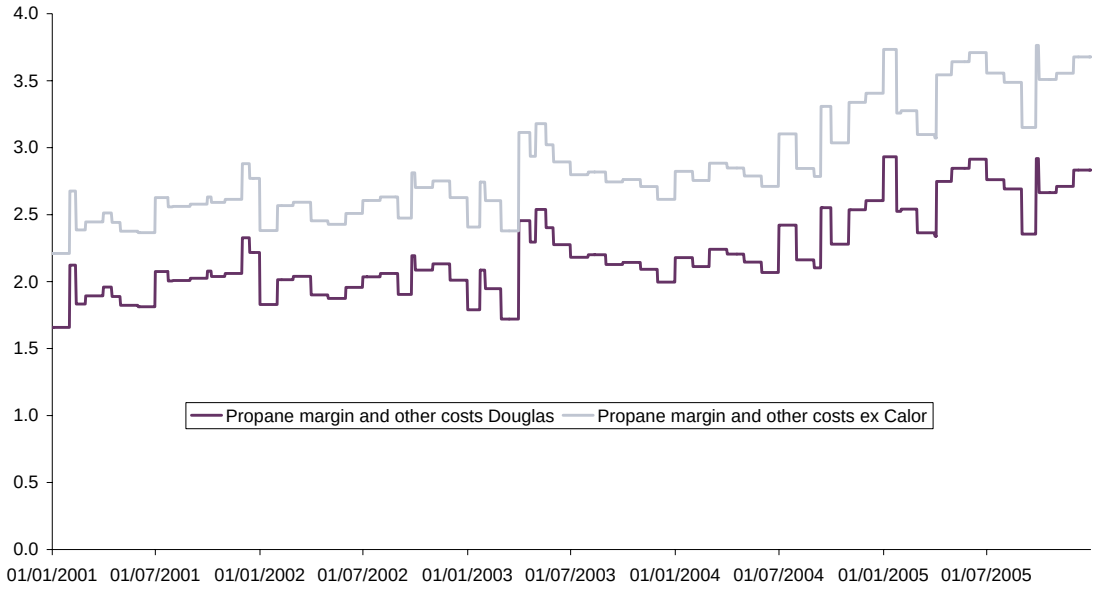
Note: The BPAP series is taken from Bloomberg, and is the price quoted on the last day of each month.
Source: Bloomberg, Manx Gas and Oxera calculations.

The 'margin and other costs' is the second component driving the tariff changes in Figure 3.12, and is illustrated in Figure 3.14 for the Kosangas and ex-Calor areas. From the chart, the 'margin and other costs' in both areas have an upward trend over the period 2001–05. However, using cost data provided by Manx Gas, it is not possible to separate the margin

[14] There should be little or no difference, with any deviation reflecting the timing of deliveries. There is no clear explanation for the difference emerging at the end of the data series.

and other costs in order to determine whether 'other costs' or the margin component are behind the upward trends in the two series. Therefore, using management accounts provided by Manx Gas, section 4 looks in more detail at the level of the margin and whether it is reasonable.

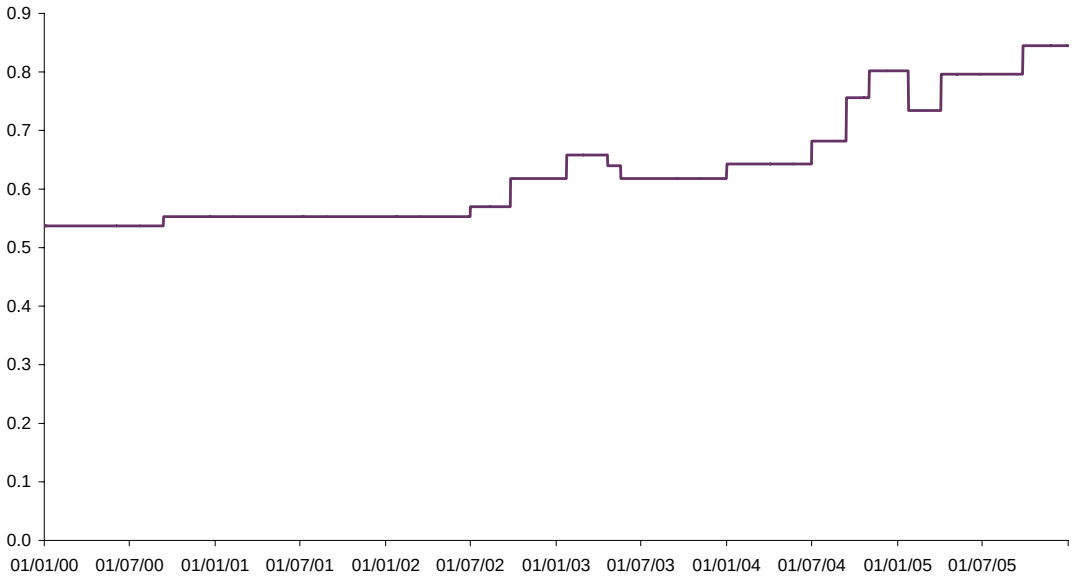
Figure 3.14 Propane margin and other costs (p/kWh)



Source: Manx Gas data and Oxera calculations.

As Figure 3.9 shows, there is a differential between the Star Saver tariff price in the Kosangas and that in the ex-Calor area (see Figure 3.15 also). There is a clear upward trend in the differential between the two areas over the period 2000–05. This is inconsistent with the recommendations of the previous Isle of Man OFT investigation of gas prices in the Isle of Man.[15] In particular, while the report found that there was justification for some price differential between the two areas, which could be maintained in the short term, Manx Gas was urged to 'consider bringing prices into line' over the period up to 2010, if not by 2005.

Figure 3.15 Difference in the Star Saver tariff net of VAT between ex-Calor and ex-Douglas (p/kWh)



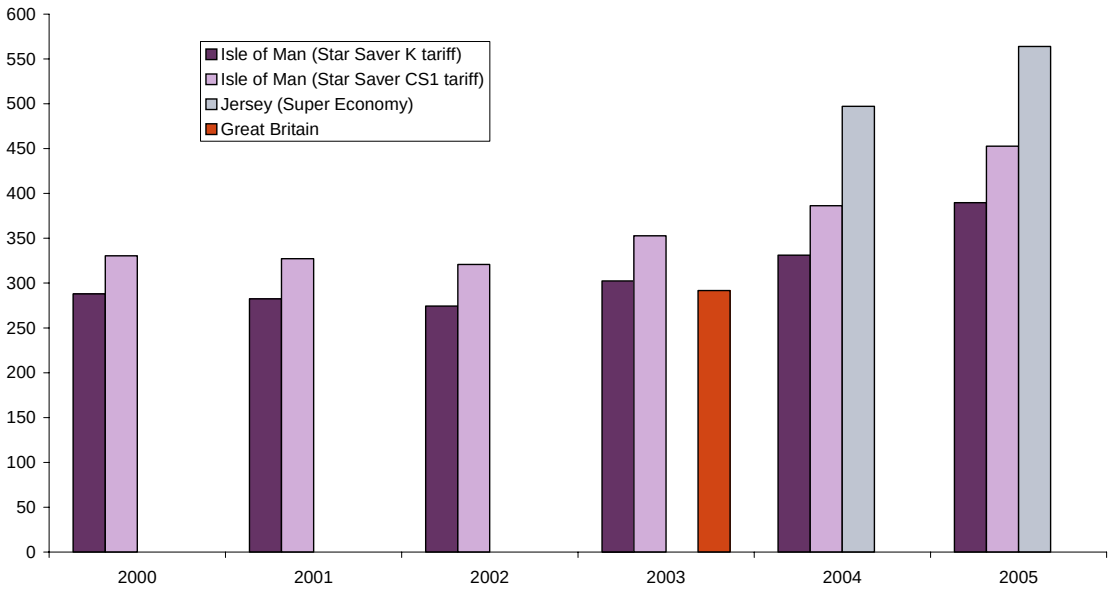
Source: Manx Gas data and Oxera calculations.

[15] Isle of Man OFT (2000) 'Report on the investigation of gas prices in the Isle of Man'.

3.2.3 Comparison with other countries

Figure 3.16 shows how the domestic average annual gas bill in the Isle of Man compares with that in Jersey and Great Britain for an average annual consumption of 8,000kWh, as assumed in the *Jersey Energy Trends*. Data for Jersey was only available for 2004 and 2005, although in both these years the average annual domestic bill for annual consumption of 8,000kWh was lower in both the Douglas and ex-Calor regions of the Isle of Man than in Jersey. Data for Great Britain was only available for 2003, although in this year the average bill in Great Britain was lower than the bills in both areas of the Isle of Man.[16]

Figure 3.16 Average annual domestic LPG bills in the Isle of Man and Jersey (£)



Note: The Jersey annual bill is calculated using the April tariff of the nominated year. The Isle of Man figures are based on the average tariff across the calendar year. The GB figure is from the Competition Commission inquiry into domestic supply of LPG, assumed to be for propane. Figures use an average annual consumption of 8,000kWh. The GB figure is assumed to be inclusive of VAT, hence VAT has been removed at a rate of 5%.
Source: Competition Commission (2006), 'Market investigation into supply of bulk liquefied petroleum gas for domestic use', Proposed Final Report, March 30th, *Jersey Energy Trends*, Manx Gas and Oxera calculations.

[16] A cost differential with Great Britain is to be expected, given the additional shipping costs incurred that have, on average, added around 0.4p/kWh (£32 at average consumption rates).

4 Profitability

One way of assessing whether Manx Gas's gas prices are reasonable is to examine its profitability.[17] Profitability being high (low), as measured against a competitive benchmark, may provide prima facie evidence that prices are unreasonably high (low). That said, even if profitability is low or normal, prices could still be unreasonably high if the company is inefficient, which suggests that a profitability analysis alone would not be sufficient in such a case. This section of the report presents an analysis of the profitability of Manx Gas, and its divisions and products (eg, natural gas), including the gas distribution business, and benchmarks this against the cost of capital and the returns achieved by other companies.

Profitability at the company level is the starting point of the analysis in this section because, ultimately, the profitability of the divisions and products of Manx Gas must in some way relate back to overall profitability. In addition, because measuring returns at the divisional and product level involves cost and asset allocation, which require certain assumptions to be made, profitability estimates at the Manx Gas level are more reliable.

Section 4 is structured as follows:

– section 4.1 analyses the profitability of Manx Gas overall;
– section 4.2 benchmarks Manx Gas's profitability against its cost of capital;
– section 4.3 analyses the profitability of Manx Gas at the divisional and product levels;
– section 4.4 summarises the key results.

4.1 Profitability at the Manx Gas level

Overall, return on asset measures of profitability, such as the return on capital employed (ROCE) and the internal rate of return (IRR), are likely to be the most appropriate basis to examine the profitability of Manx Gas (for further discussion, see section A2.2 in Appendix 2). The reasons for this include the fact that Manx Gas is a long-established company, with high levels of capital intensity and, most probably, relatively low intangible assets (which are difficult to value). The results of the profitability assessment of Manx Gas according to margin on turnover measures are presented in Appendix 2.[18]

4.1.1 Manx Gas's profitability according to return on capital employed

There is considerable use of return on capital measures in regulated utilities, such as water, electricity, gas, airports and rail, where economic regulators periodically set price caps to allow companies to make a normal return on their estimated regulatory asset base (RAB). The OFT also examined the return on capital in its inquiry of Manx Gas in 2001. Manx Gas's ROCE is therefore discussed next.

ROCE is the ratio of earnings before interest and tax (EBIT) to capital employed. Each of these elements therefore needs to be calculated. Table 4.1 presents details of Manx Gas's turnover, operating profit and EBIT over the period 2000–05. During this period, turnover increased, although the trend in operating profit is less clear. Manx Gas recognised a loss on disposal of fixed assets in relation to the conversion to natural gas in 2003.[19] With the exception of that year, operating profit and EBIT are the same.[20]

[17] The relevance of profitability for assessing the reasonableness of prices is discussed in Appendix 2, section A2.1.

[18] A return on turnover was used in the previous Office of Fair Trading investigation of gas prices, published in 2000, and thus the figures are presented for completeness.

[19] The loss reflected the closure of the production plant at South Quay, Douglas.

[20] Since the loss upon disposal of fixed assets also affects capital employed, the ROCE calculation should use EBIT rather than operating profit.

Table 4.1 Manx Gas financial performance, 2000–05 (£'000)

	2000	2001	2002	2003	2004	2005
Turnover	12,752.8	13,654.7	13,066.4	14,555.4	14,822.3	16,834.2
Operating profit	1,889.7	3,042.2	3,025.0	2,757.4	4,002.9	3,433.8
Loss on disposal of fixed assets	0.0	0.0	0.0	–987.0	0.0	0.0
EBIT	**1,889.7**	**3,042.2**	**3,025.0**	**1,770.4**	**4,002.9**	**3,433.8**

Source: Manx Gas data and Oxera calculations.

The ROCE provides a measure of the returns achieved against the investment (ie, debt and equity) made in a business or activity.[21] Table 4.2 shows the capital employed by Manx Gas, split by type of asset and liability. The most significant change apparent in the table is the increase in 'mains, plant and equipment' between 2002 and 2003, which corresponds with part of the investment in natural gas. This investment was largely based on the cost of converting appliances that Manx Gas treated as a capital rather than operating cost—ie, Manx Gas capitalised the natural gas investment. This led to a significant increase in total assets between 2002 and 2003. Manx Gas's capital employed more than doubles over the period 2000 to 2005.

Table 4.2 Manx Gas capital employed, 2000–05 (£'000)

	2000	2001	2002	2003	2004	2005
Land and buildings	2,645.4	2,627.6	3,860.0	3,845.9	4,792.5	4,969.9
Motor vehicles	92.2	68.8	164.9	206.5	232.6	234.2
Mains, plant and equipment	9,571.1	9,792.2	10,672.8	19,522.4	21,617.9	23,921.9
Investment property	1,345.0	1,345.0	800.0	800.0	950.0	950.0
Fixed assets	**13,653.7**	**13,833.6**	**15,497.7**	**24,374.8**	**27,593.1**	**30,076.0**
Current assets	**4,183.7**	**3,375.8**	**5,404.6**	**6,157.5**	**5,212.3**	**4,705.2**
Current liabilities	**–3,737.2**	**–1,987.0**	**–2,909.7**	**–4,760.5**	**–2,848.5**	**–3,338.0**
Capital employed	**14,100.2**	**15,222.4**	**17,992.7**	**25,771.7**	**29,956.9**	**31,443.2**

Note: Capital employed is total assets minus current liabilities. 'Total assets' is the sum of fixed and current assets.
Source: Manx Gas data and Oxera calculations.

Manx Gas has provided calculations of the ROCE for the period 2000–05 on a 'consistent basis', which assumes that the change to the depreciation policy for mains gas assets in 2004 did not occur. Table 4.3 reports these results, which suggest that the ROCE has fallen significantly over this period. The appropriateness of this assumption is discussed below.

Table 4.3 ROCE calculation provided by Manx Gas, 2001–05 (%)

2001	2002	2003	2004	2005
20.0	16.8	10.7	11.4	8.8

Source: Manx Gas data.

The profits and asset values in, Tables 4.2 and 4.3 respectively, are accounting values, and certain adjustments to these may therefore be appropriate before determining the actual

[21] Estimating the ROCE requires a judgement about what constitutes the actual capital employed by the business. This is because the traditional definition of capital employed (total assets less current liabilities) may exclude items of financing capital (eg, short-term borrowings for financing rather than operational purposes). If such items exist, they should be added back on to derive capital employed. Examination of Manx Gas's accounts has not indicated a significant presence of such financing items, and capital employed is measured here as total assets minus current liabilities.

level of economic profitability. In addition, the impact and the appropriate treatment of the change to depreciation policy that underlies the results in Table 4.3 should be assessed.

Examination of Manx Gas's accounts has highlighted the following set of issues that require further consideration.

– *Investment in property*—as shown in Table 4.2, Manx Gas owns investment property that it rents out, and on which it receives income, but this asset is not needed in order to supply gas to the Isle of Man. Therefore, investment in property and the associated revenues have been removed from capital employed for the purpose of the profitability assessment.[22]

– *Depreciation*—Manx Gas changed the depreciation policy of its gas distribution mains in 2004, increasing the estimated useful life of these assets from 20 to 40 years. This followed a review by IEG at a Group level into appropriate asset life assumptions for gas networks.[23] The ROCE is sensitive to the choice of depreciation method (for example, straight line or reducing balance) as well as to the estimated useful life assumptions. A judgement is therefore required as to whether the change to the useful life assumption for gas mains that Manx Gas undertook in 2004 should be applied retrospectively. This issue is analysed in greater detail below.

Accounting standards are clear that changes to useful life assumptions should be applied prospectively since 'changes in the useful economic life or residual value of a tangible fixed asset generally arise from new information or developments and therefore do not relate to past periods'.[24] However, it is unclear that either new information or developments occurred in this instance, as a number of companies have had asset life assumptions for gas networks above 20 years for a number of years.[25] Furthermore, the objective here is to measure actual economic profits earned, not to measure the accounting profitability of Manx Gas or comment on the validity of its economic life and depreciation assumptions. Making adjustments to accounting depreciation is therefore entirely consistent with moving from accounting to economic profits.

On balance, as the actual life of these assets has significantly exceeded 20 years, a 40-year assumption for mains assets for the whole period 2000 to 2005 seems appropriate. This requires certain adjustments to the accounting information provided by Manx Gas and can only be approximated. The technical aspects of these calculations are discussed in section A2.1 of Appendix 2.

Another issue that warrants discussion is the use of the historic cost of acquisition asset values in a ROCE calculation. An alternative approach would be to use replacement cost values, depreciated to take into account the proportion of the asset that has already been used. In the latter case, the holding gain from revaluing the assets should be posted to the profit and loss account.[26] Therefore, while capital employed would be higher with a depreciated replacement cost asset value, so would profits (including holding gains). As well as from the perspective of profitability analysis, asset valuation is also critical in determining the RAB. In many markets, monopoly suppliers of gas to domestic and commercial

[22] Profit from investment in property is calculated from the management accounts and subtracted from Manx Gas's overall profit. The management accounts detail 'rents achieved' for each year, but the expenses are only detailed for 2005. Therefore, the likely expenses in each of the other years is estimated by assuming the same share of expenses to rent income for other years.

[23] IEG noted that extending the useful life assumption for mains assets from 20 to 40 years brought such assumptions closer to those prevailing in the industry. IEG Annual Report and Accounts for 2004, p. 7.

[24] Accounting Standards Board (1999), 'Financial Reporting Standard 15: Tangible Fixed Assets', February, p. 93.

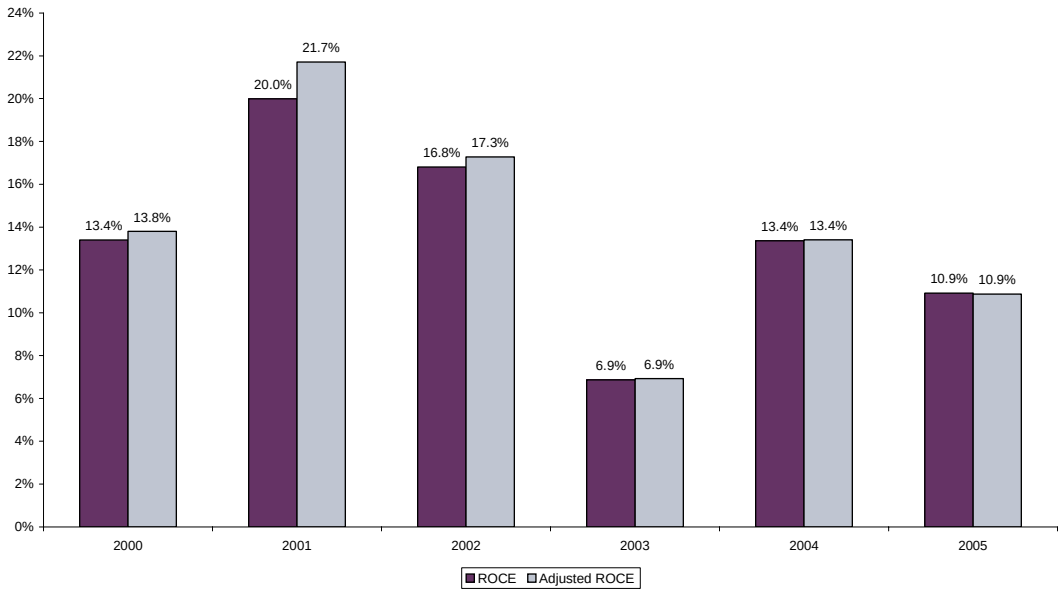
[25] For example, IEG noted that 'with our growing investment in gas networks throughout the Group we have been made increasingly aware that that our mains depreciation has been out of line with other companies in our sector'. (IEG 2004, p. 7). Manx Gas has also submitted evidence that the useful economic life, in an economic sense rather than necessarily from the perspective of meeting accounting standards, of these assets could be even higher than 40 years (see section 4.3.4).

[26] See, for example, Competition Commission (2006), 'Market investigation into supply of bulk liquefied petroleum gas for domestic use', Proposed Final Report, March 30th.

customers would be set a RAB and allowed a return on this (equal to the weighted average cost of capital, or WACC). Approaches to setting the RAB include using the privatisation value or estimates of the replacement cost. Manx Gas does, however, already seem to have recovered returns on its assets in terms of profit, as well as depreciation that may itself have been smaller if longer asset life assumptions had been used. On balance, examining returns based on the historic cost of acquisition still appears to be a useful, if not conclusive, basis to examine backward-looking levels of profitability in this instance.

Figure 4.1 presents the ROCE for Manx Gas calculated without adjustments to accounting information, as well as an adjusted ROCE which removes investment in property, interest forgone from operating costs and retrospectively applies a 40-year asset useful economic life assumption for gas mains assets. The adjusted ROCE is higher than the ROCE when no adjustments are made to the accounting information provided, and also higher than the ROCE provided by Manx Gas on a consistent basis for depreciation. Over the period 2000 to 2005, the average of the adjusted ROCE was 14.0%.[27]

Figure 4.1 ROCE measures for Manx Gas



Source: Manx Gas data and Oxera calculations.

However, as a measure of profitability, the ROCE is sensitive to accounting practices over time—in particular, EBIT is affected by accruals and depreciation policy.[28] Depreciation also affects the denominator of the ROCE (the capital employed). Therefore, accounting practices, other than those adjusted for above, may affect the estimated ROCE, even though the underlying performance of the activity may be largely unchanged. However, the IRR, which uses cash flow rather than profits, is not as sensitive to accruals and depreciation. Manx Gas's profitability according to the IRR is therefore discussed next.

4.1.2 Manx Gas's profitability according to the IRR

The IRR is the discount rate that makes the net present value (NPV) of a series of cash flows from a business or activity equal to zero. While most often used in investment appraisal, it is possible to measure profitability over a discrete period of time (eg, less than the whole economic life of the investment), by using a truncated IRR. This measures the IRR over a certain time period by taking the opening asset value (ie, capital employed in the first year of

[27] Weighted by capital employed. Simple average was 14.3%. As depreciation for different assets was only available from 2001 to 2005, no adjustment is made to profit or capital employed to account for the change in depreciation policy for mains being applied retrospectively.

[28] Accruals, which recognise revenues and costs as they are earned rather than when cash changes hands, can cause a significant wedge between actual cash inflows and outflows and revenue and costs, and thus profits, assigned to that period. The IRR, however, uses cash flows rather than EBIT.

the analysis) as a negative cash outflow, including all the cash flows generated by the asset during the period concerned, and then using the closing asset value as a cash inflow. The key steps in estimating the IRR comprise asset valuation and the calculation of cash flows.

With respect to tangible assets, Manx Gas has identified two leases with a potentially material impact, and provided details on the amount paid, which is assumed here to refer to annual payments. Both leases are with the Isle of Man Department for Transport and refer to the Battery Pier storage facility. However, the associated contract terms (eg, the contract length and the present value) have not been provided, so it is not possible to value these operating leases. They also appear to be relatively minor in amount. No adjustment to include these operating leases is possible because insufficient data has been provided.

Next, the fixed assets and working capital of Manx Gas need to be valued according to their modern equivalent asset value (MEAV), or the value of purchasing assets that provide the most efficient configuration of assets using current technology to deliver existing services at their lowest cost. This is because, when returns are excessive, the lowest cost of entry would be to replace the assets using modern technology. Manx Gas has provided estimated MEAVs for its various assets, including distribution mains, production and storage facilities, vehicles, and land and buildings (see Table 4.4). Manx Gas has noted that these MEAVs are based on an engineering estimate of what it would cost to replace the assets, allowing for technology and optimal configuration, and should be considered approximations. These valuations also represent a gross value, or the value when new. However, since Manx Gas's existing assets are already partly depreciated, Manx Gas has also provided estimates of a depreciated MEAV, using an estimated useful economic life that may differ from the assumptions used for this in statutory accounts.

Table 4.4 Modern equivalent asset values, 2005 (£'000s)

	MEAV	Useful economic life assumption	Average age of asset	Estimated depreciated MEAV
Distribution Mains	62,271.2	80	35	35,027.5
Services (natural gas conversion)	10,384.0	80	35	5,841.0
District Governors	700.0	20	8	420.0
Community Sites	977.3	50	15	684.1
Mini Bulk	2,293.3	30	15	1,146.7
Production	6,669.0	60	15–20	4,904.3
Storage	15,200.0	60	10–40	8,541.7
Land & Buildings	5,212.0	100	60	2,084.8
Vehicles	1,189.0	7	3.5	594.5
Office Equipment, Furniture and IT	2,500.0	10	5	1,250.0
Total	**107,395.8**	**–**	**–**	**60,494.6**

Source: Manx Gas data.

From the perspective of an IRR calculation, if MEAVs are overestimated (underestimated), the resulting IRR will generally be below (above) the true IRR. Therefore, it is important to assess how reasonable these asset values and useful economic life assumptions are. The estimated depreciated MEAV is £60.5m, which is more than double the existing historic accounting value of Manx Gas's total assets (£30.1m).[29] It is difficult to assess how reasonable these valuations are, as they reflect engineering estimates, while the detailed calculations supporting them have not been provided, although the approach adopted to the valuation has. The main assets are the mains distribution network, the investment in natural

[29] Manx Gas accounts for 2005.

gas conversion and storage facilities. It is useful to examine the sensitivity of the overall IRR to these MEAVs.

Tangible assets have therefore been identified and valued. In theory, assets can also be 'intangible' in nature, although this form of asset may be proportionately less significant in the gas industry than, for example, in the consumer goods sector. Overall, should Manx Gas have intangible assets in which it has invested and which have an identifiable value, these are likely to be reflected in its brand, IT systems and trained staff. This analysis therefore focuses on these possible intangible assets using the details on expenditure incurred by Manx Gas in these areas.

With respect to the appropriate lifetime of these assets, this can be conceptualised as either the time it takes to establish the asset, or for how long the asset would retain some value if there were no further investment in it. Determining this appropriate lifetime requires an element of judgement, but some of the factors discussed above suggest that a relatively low lifetime assumption may be appropriate. In the case of staff training, there is regulatory precedent for assuming a useful economic life assumption of around five years, which seems appropriate here. No conclusions are drawn on the overall merits of including the brand as an asset of Manx Gas; rather, for simplicity, a lifetime for the brand of five years is assumed, in line with staff training, and all marketing expenditure is treated as capital costs. Table 4.5 reports the valuations of these intangible assets for 2000 and 2005 (the opening and closing periods of an IRR calculation).

Table 4.5 Intangible assets of Manx Gas, 2000 and 2005 (£'000)

	2000	2005
Training	201.1	236.3
Marketing (brand)	1,427.5	1,676.9
Total	**1,628.7**	**1,913.2**

Note: Intangible asset values for 2000 were determined by deflating the 2005 valuation by Isle of Man Retail Prices Index (RPI) inflation. This is consistent with CAPEX being equal to depreciation plus the inflation uplift. These valuations are undertaken by capitalising the amount of expenditure in 2005 over a five-year period, which is consistent with the asset being established at that time. As Manx Gas is a well-established business, this assumption seems appropriate. Totals may not sum due to rounding.
Source: Manx Gas data and Oxera calculations.

Tangible and intangible assets have therefore been identified and valued, while cash-flow calculations are reported in Appendix 2. It is now possible to estimate the IRR.

Ranges for the IRR

Table 4.6 reports the depreciated MEAV of tangible fixed assets used in the IRR calculation.[30] The discussion above—in particular regarding the MEAVs —indicates that it might be appropriate to calculate a range for the IRR based on alternative MEAVs.

[30] Ideally, a depreciated MEA value for each asset would have been calculated by adding back on depreciation for this asset and deducting CAPEX. However, it has not been possible to relate CAPEX to individual assets. Therefore, a working assumption is made first to determine the backdated depreciated MEA value by adding depreciation back on, and then deducting total CAPEX from this. This means that total depreciation is assumed to be constant, when, as the asset base is growing over time, it is likely to have increased from 2000 to 2005 in these calculations. Assuming that a constant depreciation rate as per the MEA valuation in 2005 is likely to overestimate deprecation, and hence overvalue the opening asset value in 2000, Other things equal, the effect of this would be to underestimate the IRR. This problem can be circumvented by assuming that depreciation grows every year by 5%, which is consistent with a modest growth in the asset value. As Manx Gas's net book value (in historic cost accounting, or HCA, terms) for fixed assets more than doubles between 2000 and 2005, this is a very conservative assumption.. The IRR results presented in Table 4.7 are not particularly sensitive to this working assumption. The main sensitivity is what proportion of the MEA value that Manx Gas estimated reflects the real MEA value. This is because, as mentioned above, it is only possible to estimate the MEA value and therefore there is considerable uncertainty surrounding its actual value. Historical cost accounting is a convention where items are valued in the accounts according to what was paid for them.

Table 4.6 Depreciated MEAV (£'000)

2000	2001	2002	2003	2004	2005
47,374.3	47,045.5	47,497.5	55,998.2	58,557.0	60,494.6

Note: Manx Gas estimated its depreciated MEAV for 2005. Values for previous years are derived by adding back on depreciation and deducting CAPEX.
Source: Manx Gas data and Oxera calculations.

Table 4.7 shows the IRR for Manx Gas over the period 2000–05, calculated using the depreciated MEAV of tangible assets, as provided by Manx Gas, intangible assets (see Table 4.5), net current assets (see Table 4.2) and cash-flow calculations .[31] In addition, IRR based on depreciated MEAVs 10–50% lower than those provided by Manx Gas is also shown.[32] The IRR ranges from 6.1% to 15.0% under these assumptions. The next section discusses how these returns can be benchmarked to assess how reasonable they are.

Table 4.7 IRR sensitivity analysis, 2000–05 (%)

Depreciated MEAV	IRR
Provided by Manx Gas	6.1
less 10%	7.0
less 20%	8.1
less 30%	9.5
less 40%	11.6
less 50%	15.0

Source: Manx Gas data and Oxera calculations.

4.2 Benchmarking Manx Gas's profitability

It is possible to benchmark Manx Gas's ROCE and IRR against its cost of capital, and more generally its profitability against those of companies with similar business characteristics. Manx Gas's cost of capital is estimated and then compared with its ROCE and IRR.

4.2.1 Manx Gas's cost of capital

Economic regulators often compare the ROCE, and, when they measure it, the IRR, with a company's or activity's cost of capital, which is the weighted average cost of debt and equity.[33] The cost of debt is the sum of the risk-free rate and the debt premium associated with lending to the company, while the cost of equity (according to the capital asset pricing model) is equal to the risk-free interest rate plus the equity beta multiplied by the equity risk premium. As Manx Gas was unable to provide an estimate of its cost of capital, this has had to be estimated, and the following main assumptions have been used to do this.

– *Real interest rate*—economic regulators in the UK have adopted a range of around 2.25–3% for the real interest rate for the period 2000 to 2005. The regulators have relied on market evidence as well as judgement as to exceptional events that might have

[31] The only exception concerns vehicles, office equipment and furniture, which has been valued here at the historic cost accounting book value.
[32] This broad range of adjustment corresponds to the difference between the Manx Gas-provided MEAV and the existing historic accounting value of assets.
[33] See, for example, Competition Commission (2005), 'Provisional Findings Report', Appendix J, August 23rd.

temporarily reduced the real interest rate.[34] On balance, taking on board this and other evidence, a 2.5% real interest rate assumption seems reasonable and appropriate.

– *Inflation expectations*—in theory, the nominal interest rate comprises the real interest rate plus inflation expectations. While financial-market-derived estimates of inflation expectations are available for the UK, similar estimates do not exist for the Isle of Man. In addition, as the Isle of Man's inflation rate has differed from that in the UK in recent years, it would be inappropriate to use UK-derived inflation expectations. Another approach to estimating the nominal risk-free rate is to use actual inflation, which is the approach adopted here.[35] Therefore, the nominal risk-free rate is estimated as the sum of the real interest rate and actual Isle of Man RPI inflation.

– *Debt premium*—two broad approaches exist to determining the cost of debt: the actual cost of debt could be used, which can be estimated by dividing interest paid by outstanding debt; or a debt premium could be added to the nominal risk-free rate. In the case of Manx Gas, examination of financial accounts has indicated that its debt is interest-free. Therefore, the second approach to estimating the cost of debt is adopted here. UK energy regulator, Ofgem, suggested a high of range for the debt premium of 2.5% in its review of independent gas transporters (IGTs). This compares with the debt premium on sterling BBB rated bond and a UK gilt between 1999 and 2004 ranges between 1.1% and 2.1%. A debt premium assumption of 2.5% for Manx Gas therefore seems appropriate, although there is inevitably some uncertainty about this figure.[36]

– *Asset and equity beta*—the asset beta represents the inherent systematic risk of a company's operations, before allowing for the financial risks associated with borrowing or gearing. The equity beta is the asset beta adjusted upwards to reflect the additional risks associated with a geared firm.[37] A number of factors can explain the inherent systematic risk of a company's operations, including the extent of volume and price risk, whether the industry is regulated, and the degree of operational leverage.[38] Although gas distribution and supply may differ from water or electricity distribution, the most recent determinations for the asset beta in the UK for these sectors have been around 0.4–0.5.[39] A similar asset beta for Manx Gas seems appropriate. The asset beta is therefore assumed to be 0.5.

– *Gearing*—with respect to gearing, the key regulatory distinction is whether actual or 'optimal' level of gearing should be adopted.[40] While most economic regulators in the UK seem to adopt an optimal capital structure, which varies with the industry concerned, the UK Competition Commission has generally preferred to use actual company gearing.[41] Both approaches to measuring gearing are adopted here to determine the cost of capital.[42] The 'optimal' approach assumes a gearing of 50% for Manx Gas.

[34] Ofgem, for example, used a range of 2.25–3% in its March 2004 electricity distribution network review (Ofgem, 2004, 'Electricity distribution price control review: background information on the cost of capital', March). Ofwat used a range of 2.5–3% (Ofwat, 2004, 'Future water and sewerage charges 2005–10: draft determinations', September).

[35] Using the actual inflation rate would be consistent with the actual inflation rate being equal to expected inflation plus the inflation risk premium.

[36] This is also the top end of the 1.5–2.5% range that Ofgem allowed for independent gas transporters in March 2003.

[37] The asset beta is equal to the equity beta times (1 – g), where g represents gearing, assuming no debt beta and according to the 'Miller' approach.

[38] Operational leverage is defined as the share of fixed to total costs, and measures the change in operating costs as revenues change.

[39] Ofgem (2004), op. cit., and Ofwat (2004), op. cit.

[40] Gearing is defined as net debt divided by net debt plus equity. Net debt is defined as total debt minus cash at bank and in hand.

[41] Oxera (2002), 'The capital structure of water companies', report prepared for Ofwat, October 11th.

[42] Gearing for Manx Gas is calculated by reclassifying its shareholder loans as debt. As Manx Gas had no outstanding debt until 2003, gearing is negative before then. Where gearing is estimated to be negative, it is instead set to zero. This is consistent with the approach adopted for examining other companies in the OFT's investigation into energy prices. With respect to the 'optimal' gearing approach, the assumption here is that the companies could sustain a gearing level of around 50%, again the same as Ofgem assumed for IGT in 2003.

– *Equity risk premium*—the equity risk premium (ERP) is the additional return required to invest in risky equity rather than risk-free debt. Academic, market and survey evidence are often used to determine the appropriate ERP, which can be an ex ante or ex post measure of the ERP. One of the most comprehensive studies summarising historical ERP estimates is by Dimson, Marsh and Staunton (2002), whose evidence suggests that the ERP for the UK is in the range of 4–6%.[43] Forward-looking estimates for the ERP (eg, based on surveys) are generally lower.[44] Regulatory determinations have also tended to be lower than the 4–6% range. In the UK, for example, Ofgem indicated that an ERP range of 2.5–4.5% was appropriate, while the Office of Water Services for England and Wales (Ofwat) used a range of 3.5–5.0%.[45] A range of 3–5% for the ERP therefore seems appropriate for Manx Gas. Taking the midpoint of this, the calculations reported here assume a 4% ERP.

Table 4.8 reports the estimated cost of capital for Manx Gas, with a small cap premium for equity of 0.8% added to the cost of equity. This is equal to the 0.8% small cap premium allowed by Ofgem for the IGTs in 2003. The range for the equity beta, post- and pre-tax cost of equity and cost of capital are based on whether actual or 'optimal' gearing is assumed. As Manx Gas's actual capital structure is a decision of how its parent company chooses to finance its investment in the business, an optimal capital structure approach seems more appropriate. This also produces a cost of capital slightly higher than if actual gearing were used.

Table 4.8 Manx Gas cost of capital, 2000–05

	2000	2001	2002	2003	2004	2005
Nominal risk-free rate (%)	5.6	4.5	5.1	5.9	8.0	7.1
Debt premium (%)	2.5	2.5	2.5	2.5	2.5	2.5
Pre-tax cost of debt (%)	8.1	7.0	7.6	8.4	10.5	9.6
Asset beta	0.5	0.5	0.5	0.5	0.5	0.5
Gearing: 'optimal' gearing (%)	50	50	50	50	50	50
Gearing: actual gearing (%)	–4	–4	–13	18	14	10
Equity beta: 'optimal' gearing (%)	1.0	1.0	1.0	1.0	1.0	1.0
Equity beta: actual gearing (%)	0.5	0.5	0.5	0.6	0.6	0.6
Small cap premium (%)	0.8	0.8	0.8	0.8	0.8	0.8
Post-tax cost of equity: 'optimal' gearing (%)	10.4	9.3	9.9	10.7	12.8	11.9
Post-tax cost of equity: actual gearing (%)	8.4	7.3	7.9	9.2	11.1	10.1
Pre-tax cost of equity: 'optimal' gearing (%)	12.1	10.6	11.0	11.9	14.2	13.2
Pre-tax cost of equity: actual gearing (%)	9.8	8.3	8.8	10.2	12.4	11.2
Cost of capital (with 'optimal' gearing) (%)	10.1	8.8	9.3	10.2	12.4	11.4
Cost of capital (with actual gearing) (%)	9.8	8.3	8.8	9.9	12.1	11.0

Note: Asset beta is derived as equity beta multiplied by (1–g), where g is gearing. This is also referred to as the 'Miller' equation. The calculations assume a gearing of zero when actual gearing is negative.
Source: Manx Gas and Oxera calculations.

Manx Gas's average cost of capital (optimal gearing approach) between 2000 and 2005 was 10.4%. This compares with an average adjusted ROCE of 14.0% and a range for the IRR of 6.1–15.0%.

[43] These estimates depend upon whether the ERP is measured relative to bills or bonds, and whether the mean is arithmetic or geometric.
[44] For example, Welch (2001) found that the consensus forecast in a survey of 510 finance academics was 3 to 3.5%. for the 1–year equity premium was
[45] Ofgem (2004) and Ofwat (2004).

4.3 Segmental profitability analysis

This section looks at profitability at the divisional and product (eg, natural gas versus overall LPG) levels. This analysis is useful because even if Manx Gas's overall profitability was reasonable, this might not be the case for each of the company's divisions or products. Therefore, the analysis can help in an assessment of whether gas prices are unreasonable for certain gas customers (eg, those who consume natural gas). In addition, while Manx Gas is a vertically integrated gas company, regulators often distinguish between the distribution and supply activities of a gas (or electricity) company. The profitability of the distribution and supply activities of Manx Gas is therefore also estimated below. However, Manx Gas does not necessarily report or record financial information for the different products and distribution and supply aspects of its business. Consequently various assumptions have had to be made to undertake the analysis reported here. This should be recalled when interpreting the results of this analysis.

According to the management accounts, Manx Gas has three business divisions: the gas business, customer services, and retail appliances. There are also common or shared costs between these divisions. Within gas, Manx Gas sells mains natural gas, and LPG via mains, as well as via its Kosangas business. The OFT questionnaire requested that Manx Gas provide separate profit and loss accounts for natural gas and the two LPG businesses. However, Manx Gas informed the OFT that it does not prepare its internal management accounts on this basis and was therefore unable to provide this breakdown. To estimate divisional and product profitability, therefore, a cost and, where necessary, asset allocation exercise has been undertaken for the purposes of this study, using the data available and a judgement as to the appropriate allocation of the cost and assets.

Common costs can be allocated in a number of ways;[46] for example, on the basis of the share of direct costs or according to a detailed activity costing exercise. Given that activity-based cost information for Manx Gas was not provided and may not even be available, the most practical alternative in the current context would be to identify a series of possible cost drivers and to apply the most appropriate one directly to the cost that needs to be allocated.[47] The main cost drivers used were share of volume, share of customers and number of full-time equivalents (FTEs). Divisional profitability is discussed first, and then the profitability of natural gas and LPG is detailed.

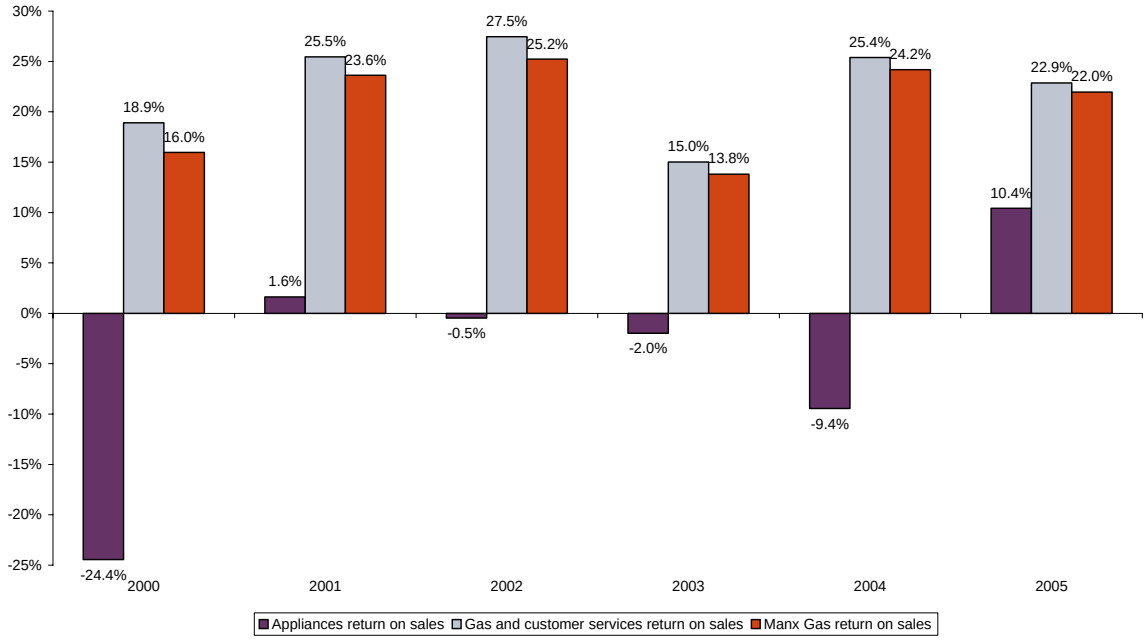
4.3.1 Profitability at the gas and customer sales, and appliances levels

The gas division makes up the vast majority of the revenues of Manx Gas. Therefore, the profitability of customer services and appliances is unlikely to have a significant impact on Manx Gas's total profitability, and to the extent that these divisions also account for a low share of costs, the main issue that they raise is how to remove them from the common costs of Manx Gas. Figure 4.2 shows the estimated return on sales (ROS) at the gas and appliances levels after common costs have been allocated using the most appropriate cost driver. Reporting return on sales results here does not imply that these are the most appropriate measures of profitability for Manx Gas, rather it helps provide background information of the different divisions of the company. The costs of customer services have been allocated to the gas business because part of these services can be considered an essential aspect of a gas supply business. Manx Gas's overall ROS is also shown.

[46] See Oxera (2003), 'Assessing profitability in competition policy analysis', report prepared for the OFT, section 6.

[47] Cost drivers can be segmented into input and output drivers. Examples of input drivers are FTE, while examples of output drivers include volume and customer numbers. Value-based drivers, such as revenue, also exist, but are generally avoided in this type of analysis, as using these could be circular.

Figure 4.2 Return on sales at the gas and retail appliances levels, 2000–05



Source: Manx Gas data and Oxera calculations.

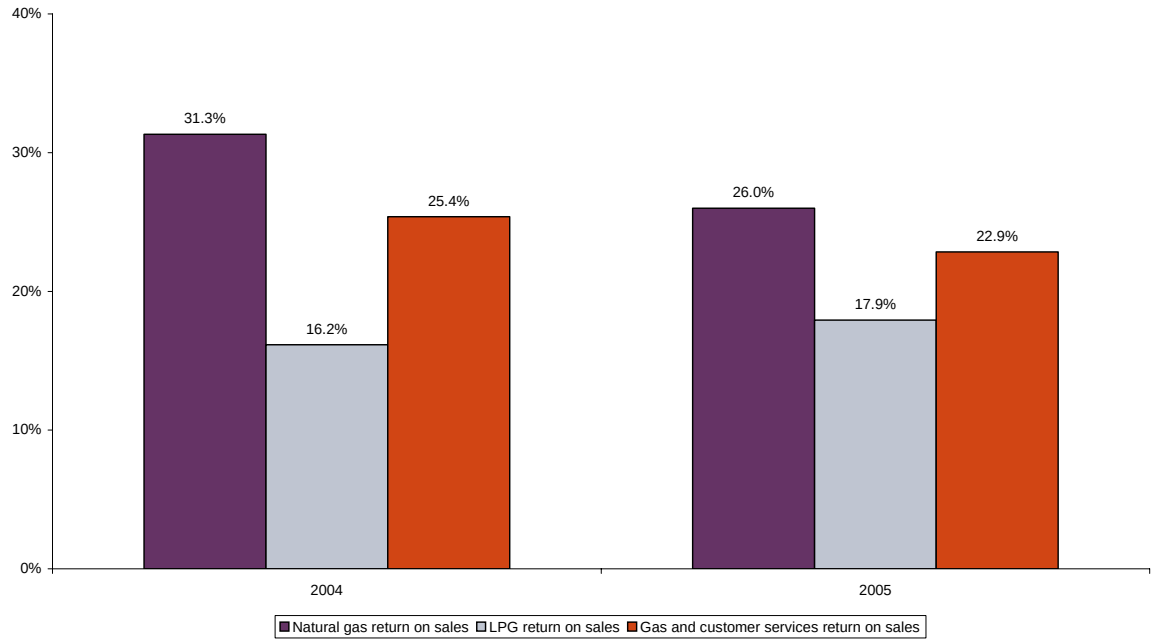
The ROS to the gas division appears to be higher than that at the Manx Gas level, while the ROS at the appliances level is negative over most of the period, recovering in 2005. Most of the indirect costs have been allocated to retail appliances according to the share of FTE staff, or 1.5 to 91. Even with this relatively low cost allocation of indirect costs, the retail appliances business seems to have been a loss-making business for most of the time period in question.

4.3.2 Profitability at the natural gas and LPG levels

Profitability can also be estimated for the natural gas and LPG businesses, although, again, this depends on the allocation of common overhead costs as well as the costs of distributing mains gas. Before 2003 the only form of gas available in the Isle of Man was LPG; therefore, profitability at the natural gas and LPG levels is examined only from 2003 onwards.

Costs have been allocated at the natural gas and LPG levels using the most appropriate cost driver available. Figure 4.3 shows the ROS at the natural gas and LPG levels, as well as at the overall gas business level. There are not enough observations for a trend across time to be apparent. However, in 2004 and 2005, the ROS of natural gas was higher than that of LPG. The weighted average ROS at the natural gas level was 23.6%, while at the LPG level it was 19.5% over the period 2003–05.

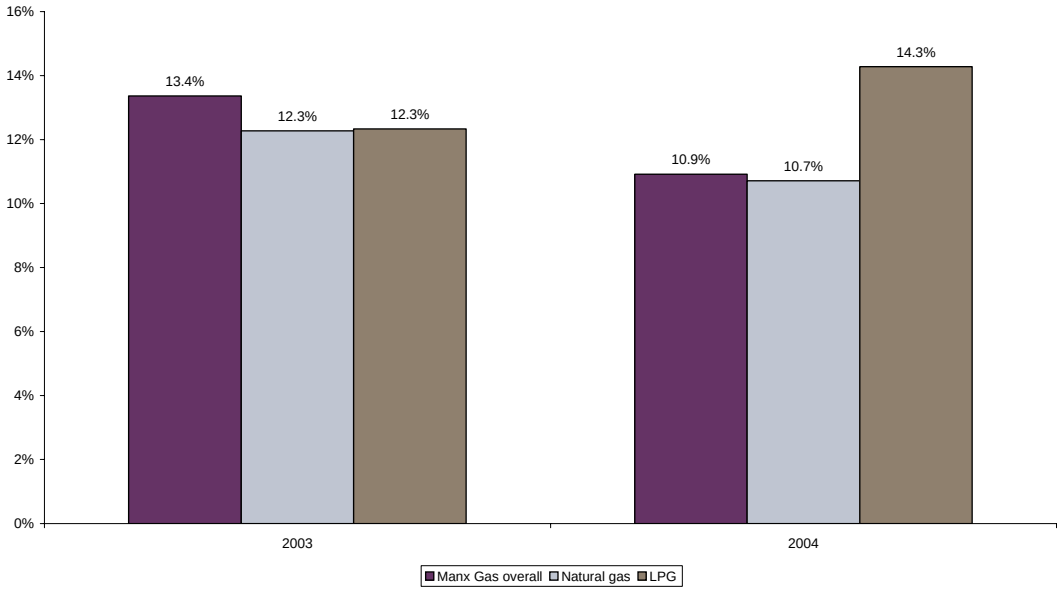
Figure 4.3 Return on sales at the natural gas and LPG levels (%)



Source: Manx Gas data and Oxera calculation.

It is also possible to estimate the ROCE for the natural gas and LPG business (see Figure 4.4). The ROCE has been estimated by allocating the fixed assets of Manx Gas to the separate businesses. Most of these assets can be directly related to either the natural gas business (eg, natural gas conversion) or to the LPG business (eg storage, production, community systems). The remaining assets that are utilised by both natural gas and LPG, such as mains, land and buildings and office equipment, have been allocated using what was considered the most reasonable asset driver available—in particular, share of volume. Data is only available for two years, which limits the possibility of reaching definitive conclusions on relative profitability. However, it is important to continue to assess the relative profitability of these gas businesses going forward.

Figure 4.4 Return on capital employed at the natural gas and LPG levels, 2003 and 2004 (%)



Source: Manx Gas data and Oxera calculation.

4.3.3 Profitability at the distribution level

The above analysis has separated Manx Gas into natural gas and LPG businesses in order to assess the relative profitability of each, and the likelihood of significant cross-subsidisation between the two. However, in terms of the return achieved by Manx Gas, it is unclear whether this accrues to its gas distribution activities or its gas supply activities.[48] Manx Gas is, after all, a vertically integrated company. There is also regulatory precedent from the UK for what a gas distribution and supply business should be allowed to earn. For example, Ofgem allowed a real cost of capital of 7.7% for the IGTs, which, in terms of size, might be thought to resemble the distribution activities of Manx Gas.[49]

In this section, the gas and customer services division is split into two: a Manx Gas supply business and a Manx Gas distribution business. The latter is assumed to include production, storage and the purchase of gas in terms of assets, as well as revenue and costs. Analysing the returns of gas supply and distribution separately can help determine whether the overall gas business ROS and ROCE are appropriate. In particular, the assets and costs of the supply business are estimated and removed from the overall gas business (which has already deducted the direct costs and an estimate of the indirect costs associated with the retail appliances business). Table 4.9 reports the estimated cost base and capital employed of the supply business. The underlying calculations and assumptions are detailed in Appendix 2 (section A2.3).

Table 4.9 Manx Gas hypothetical supply business, 2000–05

	2000	2001	2002	2003	2004	2005
Costs	1,016.6	979.6	963.7	1,108.6	1,128.7	1,361.7
Capital employed	**2,009.3**	**1,994.1**	**2,236.4**	**2,407.5**	**2,714.1**	**2,803.2**

Source: Manx Gas data and Oxera calculation.

The supply business is assumed to earn a revenue equal to costs plus a profit based on a margin on turnover allowance. There, once costs have been estimated, the critical question is how to set the margin on turnover for a Manx Gas supply business. For example, Ofgas[50] allowed a margin on turnover of 1.5% for British Gas Trading (BGT) in its 1997 price control review, while the Commission of Energy Regulation in Ireland allows a margin on turnover of 1.3% for Bord Gais. These two companies are significantly larger than Manx Gas, with greater potential economies of scale. Alternative scenarios where the margin on turnover is in the range of 1.5–9% are therefore examined. The ROCE for the distribution business can then be calculated by removing the capital employed and profits of the supply business from those of the overall gas business. Table 4.10 shows the estimated average ROCE for the hypothetical Manx Gas distribution business between 2000 and 2005 with difference assumptions for margin on turnover.

Table 4.10 Return on capital employed of the hypothetical Manx Gas distribution business, 2000–05 (%)

Margin on turnover	1.5%	3%	4.5%	6%	7.5%	9%
Average ROCE	16.2	15.0	13.9	12.8	11.7	10.6

Source: Manx Gas data and Oxera calculation.

These ROCE can be benchmarked against the cost of capital allowed by Ofgem for the IGTs, while taking into account certain Isle of Man differences such as corporation tax rate and inflation. IGTs may be considered similar to a hypothetical Manx Gas distribution company, for example in terms of size. While Ofgem presented a low-to-high range for each

[48] Gas supply includes costs such as metering and billing.

[49] Small cap premium included. Ofgem (2003), 'Definition of reasonable profit for SLC transportation charges—final proposals'.

[50] The Office of Gas Supply (Ofgas) was the gas regulator in Great Britain until it was merged with the electricity regulator in 2000 to form the Office of Gas and Electricity Markets (Ofgem).

cost of capital parameter (eg, debt premium), the calculations here follow the same approach, assuming the high end of the range for each parameter. Table 4.11 presents preliminary estimates of the cost of capital of the distribution business based on actual and 'optimal' gearing (where optimal gearing is 50%, as in the Ofgem's determinations). Overall, the difference between the two estimates of the cost of capital is relatively small, averaging around 0.3%.

Table 4.11 WACC of the distribution and other business, %

	2000	2001	2002	2003	2004	2005	Average
Nominal pre-tax WACC with small cap premium and							
assumed 50% gearing	9.8	8.5	9.0	9.9	12.1	11.1	10.0
actual gearing	9.5	8.0	8.4	9.6	11.8	10.8	9.7

Source: Ofgem, Isle of Man Treasury Department and Oxera calculations.

The margin on turnover required by the hypothetical Manx Gas business such that the ROCE of the Manx Gas distribution business is broadly in line with its estimated cost of capital is around 9%. This is significantly above the 1.5% allowed by the Ofgem's predecessors, Ofgas and Offer, in their 1997 and 1998 price control reviews. This 1.5% margin was based on a 0.5% ROCE and a 1% allowance for volume or turnover risk in the case of Ofgas. In addition, Ofgas recognised that the book value of BGT's assets might not reflect the full capital at risk and made an allowance for this. The main types of risk identified were as follows.

– *Price risk*—this arises from volatility in gas purchase costs. This would be influenced by the extent to which these risks can be hedged.

– *Volume risk*—this refers to the risk of reductions in market shares as new entrants come into the market. However, Manx Gas is the only supplier of natural gas and LPG to domestic and commercial customers in the Isle of Man and, in terms of number of customers lost compared to total numbers of customers, volume risk does not appear to be significant.[51]

Overall, these factors suggest that a relatively low margin on turnover for the supply business, of around 3%, would be appropriate. With a 3% margin on turnover on supply, the ROCE for the distribution business would be 15%.

4.4 Summary

This section has examined the profitability of Manx Gas and its divisions and products. The following conclusions emerge.

– The returns on capital and IRR have been assessed as the most appropriate measures of profitability for Manx Gas.

– Measured on a historic cost of acquisition basis, there is some evidence of returns above the WACC (10.4% between 2000 and 2005), with average adjusted ROCE of 14% and IRR in the 6.1–15.0% range. If Manx Gas were a regulated utility company, its allowed return would be equal to its cost of capital multiplied by its RAB. While there is no RAB in this case, in theory it could be higher than the historic cost (for example, the replacement cost or privatisation value). If the RAB were higher than the Historical Cost Accounting (HCA) value, the ROCE would tend to be lower.

– Manx Gas's HCA results also include a profile of depreciation which, as the actual economic life of its assets has proved to be longer than that assumed for accounting

[51] Churn rates are in the order of 3–5%.

purposes, has depreciated assets relatively quickly. Thus, Manx Gas has been able to recover its HCA investment in terms of both returns and depreciation.

– While the IRR is the conceptually correct measure of profitability, estimating this in practice raises a number of practical difficulties—in particular, in relation to what is the correct asset value and how to determine the deprival or MEAV. This suggests that a range of potential asset values would be useful. According to the range assessed here, Manx Gas's profitability could vary from below its cost of capital to above it. A degree of uncertainty therefore exists as to whether the company has made excessive returns.

– However, profitability is only one indicator of the presence of market power, with others including the level of concentration, evidence of switching and entry barriers. These other measures generally indicate that Manx Gas has market power, particularly in supply to domestic customers, because it is the only supplier of gas to domestic and commercial customers on the Island. Moreover, the level of customers switching to other fuels appears to be low, while entry barriers appear high.

5 Conclusions and recommendations

Conclusions

The gas supply market in the Island has undergone a major upheaval over the last three years with the introduction of natural gas supply requiring a major capital conversion programme.

The wholesale prices of both natural gas and LPG have been driven upwards by the continuing increase in the price of crude oil, the tight UK gas supply position and the growing import dependence, and hence the influence of Continental European gas prices on UK prices. For LPG this is due to the derivative nature of the product, whereas for natural gas this is a function of the indexation between the two fuel prices that exists in many contractual arrangements, particularly in Continental Europe.[52] As a consequence, end-user tariffs have risen, not only in the Isle of Man, but also in Ireland and the UK.

Changes in the wholesale price, both increases and decreases, have been identified by Manx Gas as the main factor contributing to the movements in tariffs over the period under investigation. However, analysis of the cost drivers within Manx Gas has indicated that the wholesale commodity cost rises have accounted for around 50% of the observed tariff increases, with other costs, covering the distribution activities of Manx Gas and their profit margin, accounting for a similar proportion of the increased cost for the company.[53]

Thus, the focus of the analysis has been on the returns that Manx Gas has earned over the period of the investigation. The initial conclusions of the profitability analysis are that returns have been volatile over the period and appear to be above the estimated cost of capital (or appropriate return) for Manx Gas. Furthermore, a hypothetical segmentation of the distribution business (between network services and retail services) illustrates that, for the capital-intensive network activities to be earning a return comparable to the cost of capital, the profit margin for the supply business would need to be in the order of 9%.

This margin is significantly higher than that previously awarded to other monopoly providers of gas in other jurisdictions—where a margin on turnover of around 1.5% has been awarded. Although the small scale of operations may imply a higher return than in these cases, there is little evidence that Manx Gas faces substantial price or volume risk:

– the company is able to, and has regularly, passed through increases in wholesale purchase costs into customer tariffs;

– there has been limited churn of customers to other fuels. Since there is a high correlation between the movements in the main fuel prices in the medium term due to the common driver of oil price rises, there is no obvious suggestion that fuel price relativities have altered substantially.

Recommendations

The evidence does not suggest that Manx Gas needs the level of return it is earning in order to adequately reward it for the risk it is taking in the market. Meaningful changes may be made to two aspects of the tariff regime in order to increase transparency, reduce volatility,

[52] Moreover, for natural gas, the UK price has recently been subject to a substantial increase in volatility as supply–demand margins tighten and the market price responds more strongly to small changes in demand or supply conditions on a day-to-day basis.

[53] It is not clear from the reporting information how much of this is due to the mainly network infrastructure costs and how much to the additional profit margins.

impose additional incentives for cost efficiencies by Manx Gas, and thus better align customer and company interests:

- a reduction in the number of tariffs offered—there are a number of legacy tariffs that are offered to different customer groups according to their use of gas. However, most customers are on one of two tariffs (Star Saver or CX). It would be beneficial to review the scope for reducing the number of tariffs on offer and the potential implications of this for different customer types. Such rationalisation may make the tariff regime easier to understand and to monitor;

- the introduction of some form of incentive to minimise the cost of gas purchases—Manx Gas has no controls on its tariff structure and is thus free to pass through changes in costs to customers. As such, Manx Gas has no formal incentives to minimise its purchase costs or to hedge against the risks of taking a short position in the gas market. Higher costs can, over time, be recovered through increases in tariffs to recoup the losses, due to the largely monopoly position in the market. Essentially, in the long run, this means that the consumer bears the risks of volatile gas prices (as evidenced through recent price changes). The company, however, may be better placed to bear this risk through an appropriate contracting strategy for gas purchase. This may be achieved by:

    - limiting the frequency with which tariffs can be changed (eg, only every six months or annually). This will then introduce stability into prices and allow Manx Gas to plan its purchases in advance;

    - introducing a more formal commodity cost adjustment mechanism (similar to that faced by the Manx Electricity Authority but adjusted in order to improve incentives) that would define a baseline allowed purchase cost and the flexibility available to the company to alter prices in response to deviations from this base cost. Such a fuel cost adjustment regime needs to incorporate adequate incentives. This can be achieved, for example, by including deadbands within the regime, whereby Manx Gas is not allowed to increase tariffs unless wholesale costs increase by more than a given percentage. Given the current profit margins, the regime could be designed to be asymmetric such that reductions in wholesale costs feed through into price reductions more immediately. Such a regime may work better for Manx Gas than for the Manx Electricity Authority due to the beneficial impact on profitability of outperforming budget targets

Appendix 1 Structure of the industry

Figure A1.1 The gas transportation system

Source: Bord Gais website (http://www.bordgais.ie).

Table A1.1 LPG storage inventories of the Isle of Man

Storage	Tonnes	Storage	Tonnes
Princess Alexandra Pier		**Port St Mary**	
Vessel 10	600	Vessel 1	12
Vessel 11	600	Vessel 2	12
Battery Pier		Vessel 3	55
Vessel 2	106*	**Peel**	
Vessel 3	65*	Vessel 1	20
Vessel 6	100	Vessel 2	20
Vessel 7	50	**Ramsey**	
Vessel 8	65	Vessel 1	10
Vessel 9	65	Vessel 2	30
Braddan		Vessel 3	30
Vessel 1	25*	**Balthane**	
Vessel 2	25*	Vessel 1	25
Vessel 3	10	Vessel 2	25
Vessel 4	25		
		TOTAL	**1,975**

Note: *This is butane only.
Source: Manx Gas data.

Appendix 2 Technical appendix on profitability

This technical appendix supports the analysis in section 4, examining the following areas in greater detail:

– the relevance of profitability to assessing the reasonableness of prices (section A2.1);
– the methodological approach adopted, including a discussion of what is the most appropriate measure of profitability for Manx Gas (section A2.2);
– profitability according to the margin on turnover (section A2.3);
– assumptions and calculations related to applying retrospectively the change to depreciation of mains assets (section A2.4);
– cash-flow calculations for the IRR (section A2.5);
– details on how the profitability of the natural gas and LPG activities has been estimated, including assumptions (section A2.6);
– assumptions made in estimating the profitability of a Manx Gas distribution business (section A2.7).

A2.1 Relevance of profitability to assessing reasonableness of prices

The profitability of Manx Gas provides an indicator of the extent of competition in the market and helps determine whether prices are excessively high. There is significant precedent for competition authorities to examine the profitability of companies in a market investigation, in both the UK and elsewhere. Other indicators of the extent of competition, and potential market power, such as market share and entry barriers (see section 2), and the pattern of price changes over time and how they compare internationally also exist (see section 3). Therefore, in a market inquiry, profitability should be considered in the context of the overall assessment and not in isolation.[54] The profitability of Manx Gas overall, and its divisions and products, may therefore have an important role in the overall assessment of whether prices are unreasonably high.

It is also important to discuss what can and cannot be concluded from a profitability analysis in terms of an inquiry into excessive pricing. In a competitive market, which is ultimately the benchmark against which profitability should be compared, profitability may vary significantly between firms and across time. Indeed, in theory, it is the presence of 'high' profits that 'signal' to other firms to enter the market, a process that will continue until the marginal firm achieves 'normal' profits. High profitability can also be explained by factors other than excessive pricing, including problems with measuring the true profitability of a business or activity, cyclical or transitory factors, some firms being more efficient than others or benefiting from past innovation.[55]

However, over the medium term, profitability might be expected to move towards the competitive benchmark—for example, a firm's cost of capital. If returns are shown to be persistently and substantially above the competitive benchmark for a firm that constitutes a substantial part of the market, this provides evidence of limitations in the competitive process. An element of judgement may be required to assess what time period constitutes 'persistent' and by how much returns need to exceed the competitive benchmark before they can be considered 'substantial'. Some of the factors for consideration here include the length of the 'life cycle' of investment in the industry, as well as how volatile profitability returns have been.

In addition, even if profitability is found to be low or normal, this might reflect inefficiency rather than prices being set at a reasonable level. An assessment of whether the firm in

[54] Competition Commission (2003), 'Market Investigation References: Competition Commission guidelines', CC3, June.
[55] Ibid., p.35.

question is inefficient may also be useful; otherwise, consumers may in effect pay for the inefficiency of the firm.[56] Even if profitability is found to be persistently and substantially above the competitive benchmark, this does not attribute the excess profitability.[57] Where possible, it would therefore be useful to be able to attribute profits above the competitive benchmark.

With respect to which measure of profitability should be used, competition authorities have adopted a number of measures (eg, ROS and ROCE) based on the circumstances prevailing in the particular inquiry (eg, are intangible assets likely to be significant?). For example, the UK Competition Commission examined ROCE for different companies in its inquiry into the supply of bulk liquefied petroleum gas for domestic use, an industry that might be expected to have reasonably high levels of capital intensity, implying that the ROCE may be an appropriate measure of profitability.[58] This suggests that the most relevant measure of profitability should be selected.

A2.2 Methodological approach

The methodological approach adopted in measuring Manx Gas's profitability is discussed below, looking in particular at the following questions.

– What are the appropriate measures of profitability?
– How should the appropriate benchmark be identified?
– How should intangible assets be valued?
– What is the impact of the ownership structure of Manx Gas?

A2.2.1 The appropriate measures of profitability

From a competition policy perspective, economic measures of profitability—not accounting measures—are the most appropriate for assessing the returns on a company's investments. The academic literature suggests that the IRR and NPV are the conceptually correct measures of profitability. The NPV measures the economic profit of an investment and is calculated by discounting the stream of revenues generated by the investment less the (present value) cost of the investment. A similar concept of economic profit is that of the IRR, which is usually defined as the discount rate that equates the present value of the investment's expected cash-flow stream to its initial outlay. Both the IRR and NPV take into account the inflows and outflow of an activity over time, and reflect the economic principle of time preference of money.

The IRR and NPV are based on the same cash-flow figures, and will often—but not always—lead to the same investment decision. The NPV has certain advantages over the IRR for investment-appraisal purposes, where different investment projects are ranked. However, from the perspective of competition authorities, where the objective is to compare the rate of return of a project against an appropriate benchmark, the IRR has an advantage in that it is expressed as a percentage, which makes it easier to interpret and to compare against benchmarks such as the cost of capital, which is also a percentage. In contrast, the NPV gives an absolute amount. Therefore, while both the NPV and the IRR are the relevant economic measures of profitability, for the purposes of competition policy analysis, the IRR is a more practical methodology and, as such, this report places more emphasis on it. While both the IRR and the NPV are based on the investment appraisal framework, which requires that profitability is measured over the lifetime of a business or activity, the academic literature has also shown that is possible to estimate the IRR over a segment or a truncated part of this lifetime. [59]

[56] For example, the UK Competition Commission adjusted the cost to income ratio for one bank downwards to 50% in the inquiry 'The Supply of Banking Services by Clearing Banks to Small and Medium-sized Enterprises', 2002.
[57] Geroski (2005), *Profitability Analysis and Competition Policy,* Competition Commission, February 8th 2005.
[58] Competition Commission (2005), Provisional Findings Report, Appendix J, August 23rd 2005.
[59] Kay, J.A. (1976), 'Accountants Too Could be Happy in a Golden Age: The Accountant's Rate of Profit and the Internal Rate of Return', *Oxford Economic Papers,* **28,** 447-60.

However, applying the IRR methodology raises measurement issues, in particular over cash flows and asset valuation.[60] The key principle for asset valuation from an economic profitability standpoint is that of 'value to the owner' or what the UK Competition Commission refers to as 'deprival value'.[61] This principle values the assets in terms of the opportunities available to the business from the ownership of a set of assets, with three options being available at any one point in time.

– *Replace the assets*—the company could replace the assets, such that one valuation base is the replacement cost or, more accurately, the modern equivalent asset value (MEAV) of purchasing assets that provide the 'most efficient configuration of assets using current technology to deliver existing services at their lowest cost'.[62]

– *Sell the assets*—this option provides a valuation base referred to as the net realisable value (NRV).

– *Continue to use the assets*—with the value from this option given by the NPV of future cash flows associated with the continued use of these assets.

When undertaking a profitability assessment, it could be argued that it is sufficient to undertake the assessment using a maximum of two asset valuation methodologies. Initially, the assessment can be undertaken using MEAVs, as this is the cost of new entry where returns are excessive. This will be sufficient in all situations except where the IRR estimated from this approach is lower than the estimated cost of capital. Here, in principle, there is a possibility that a company could be found to be making excessively low profits. A second stage of the analysis would then be necessary—valuing the assets according to an estimate of the NRV of the assets. Provided that this did not continue to reveal excessively low profits then, by elimination, it should be possible to conclude that normal returns are being made.

Where poor cash flow or MEAV data exists, other measures of the profitability, including the gross margin, the return on sales (ROS) and the return on capital employed (ROCE), may also be measured. Indeed, measurement problems associated with the IRR methodology help explain why competition authorities in the UK have frequently undertaken profitability assessments using the ROCE and ROS. If profitability estimates require asset or cost allocation, the ROS and gross margins may be particularly useful as the extent to which they rely on asset and cost allocation may be less than for a ROCE.

However, overall, it is return on asset measures such as the ROCE and the IRR that are most appropriate in assessing whether gas prices are reasonable. This is because Manx Gas is a well established business with high levels of capital intensity and likely to possess relatively low levels of intangible assets. In addition, it is possible to benchmark these return on asset measures against the cost of capital while no such direct benchmark exists for margin on turnover measures of profitability.

A2.1.2 How should the appropriate competitive benchmark be identified?

Next, the appropriate competitive benchmark needs to be identified. This depends upon the particular measure of profitability that is adopted. For example, the IRR (and the ROCE) can be compared to a firm's cost of capital, which is discussed in Section 4.3.4, but no such obvious and clear cut benchmark exists for margin on turnover measures (such as the ROS). In practice, competition authorities sometimes compare margin on turnover measures against those for 'comparator companies' operating in the same of similar industries or who share similar characteristics, such as size and capital intensity. This clearly makes it important that the correct comparators are chosen because they should be companies that

[60] For a practical framework to overcome these measurement issues, see Oxera (2003), 'Assessing profitability in competition policy analysis', report prepared for the OFT.

[61] Edwards, J., Kay, J. and Mayer, C. (1987), *The Economic Analysis of Accounting Profitability*, Claringdon Press: Oxford.

[62] Mayer, C. (2005), *The Valuation of the Royal Mail: A Statement by Professor Colin Mayer on the Note Written by Professor Martin Cave*, Annex 11, Royal Mail consultation response to June 2005 initial proposals, as published on the Postcomm website, page 2.

are operating in competitive conditions or those that clearly do not possess significant market power. Identifying such firms is not entirely straightforward. Therefore, this report benchmarks returns against comparator companies operating in the same industry only where considered relevant

A2.1.3 How should intangible assets be valued?

If significant costs have been incurred in establishing intangible assets, but are ignored in terms of measuring the capital base, returns may be overestimated. Accounting standards generally adopt a cautious approach to the measurement of assets and traditionally, in UK accounting standards, it is only rights such as licences and patents and recoverable research and development costs that are included as intangible assets. The failure to include intangibles in the balance sheet under accounting rules is not always satisfactory from an economic perspective. A profitability assessment therefore needs to consider the scope of intangible assets, beyond that which is provided in accounting reports. [63]

With respect to the criteria by which operating costs should be capitalised, the UK Competition Commission noted the following in the inquiry into banking services to small and medium-sized enterprises in the UK[64]:

- whether the expenditure on any given intangible should be capitalised will depend on the nature of the specific intangible asset identified and the context; and
- if the revenue cost of a specific identified intangible is to be capitalised, it must meet three conditions:
  - it must comprise a cost incurred now, primarily to obtain earnings in the future;
  - this cost must be additional to those necessarily incurred at the time in running the business; and
  - it must be identifiable as creating such an asset separate from any that arises from the general running of the business.

These are not necessarily the criteria by which this analysis makes an assessment as to the merits of valuing intangible assets. However, they do highlight some of the considerations that might be taken into account. The main types of intangible assets that have been considered by competition authorities concern the brand, investment in acquiring customers, IT systems and staff training.[65]

A2.1.4 The impact of the ownership structure of Manx Gas

As Manx Gas is not an independent company, the way in which it interacts with its parent companies, for example in terms of how the company is financed, may have certain implications for a profitability and benchmarking analysis of the company. Indeed, analysis of the company's financial and management accounts has indicated a number of issues that require further consideration before the profitability of the company can be estimated. These issues are as follows:

- the level of management charges paid by Manx Gas to IEG;
- inter-company charges and balances;
  shareholder loans and the interest rate that applies to them.

[63] Three methods to determine the lifetime of an asset have been outlined in the academic literature. First, assets may have definite lifetime (such as patent or a contract). Second, qualitative analysis, such as life–cycle analysis, can be used to determinate asset lifetimes. This may require judgments as to future technological or marketplace developments. Finally, quantitative analysis, such as use of customer retention data, can be used. A number of approaches to valuing intangible assets also exist, including market based valuations. The focus here is on capitalising expenditures associated with the identified intangible assets. In theory, it is what a new entrant would expend on establishing intangible assets that is the relevant asset value, rather than what an *established* company may have spent in the past. However, it may be possible to infer what a new entrant would spend by examining actual expenditures of the company under investigation.

[64] The Competition Commission has already distinguished between firm specific and general skills training, for example, in 'The Supply of Banking Services by Clearing Banks to Small and Medium-sized Enterprises', p. 66.

[65] See, for example, Competition Commission (2002a), 'The Supply of Banking Services by Clearing Banks to Small and Medium–sized Enterprises: A report on the Supply of Banking Services to Small and Medium–sized Enterprises within the UK', Cm 5319, March 14th.

Manx Gas's management accounts reveal annual management charges payments to IEG who are the majority shareholder of Manx Gas (see Table 4.1). Table 4.1 details the payments made by Manx Gas to IEG for management charges. If these charges are too high, reported profits would be underestimated. Manx Gas has indicated that the annual increase in these management charges is capped to the level of the increase in the Isle of Man Retail Prices Index. It is difficult to assess how reasonable or otherwise the level of these management charges is, although it should be noted that Calor Gas Limited has a commercial incentive to ensure that they are not too high. Therefore, this report assumes that the level of management charges is reasonable and does not require adjustment.

Table A2.1 Manx Gas management charges, 2001–05 (£'000s)

2000	2001	2002	2003	2004	2005
143.1	146.8	147.3	153.2	157.9	168.5

Source: Manx Gas Limited Financial Statements.

Manx Gas also has certain related party balances to IEG and subsidiary companies of IEG.[66] Manx Gas note that these related party balances refer to amounts owed by Manx Gas for insurance services purchased at the IEG level and are arms length transactions. No adjustment to these would seem to be necessary.

Finally, IEG and Calor Gas Limited lent Manx Gas £5.8m in 2003 to help finance the investment in the conversion to natural gas. Manx Gas accounted for this item as a shareholder loan, within total equity shareholder funds, as it represents advanced capital. Furthermore, Manx Gas has not been required to pay dividends since the shareholder loan. However, Manx Gas is still obligated to repay this shareholder loan and by financial year 2005 has already repaid around £2.8m of it. In practice, as the ROCE is measured using total capital employed, the composition of debt and equity does not affect how profitability is measured in this instance. Therefore, no adjustment is made to shareholder loans.[67] The shareholder loans are also interest free. If the loans were on a commercial basis, Manx Gas would be obliged to pay interest, which would reduce profit before tax (but not affect earnings before interest and tax). However, as all the measures of profitability examined in this report are before financing costs, the interest free nature of these loans would not seem to affect the profitability results.[68,69] No adjustment to impute an interest cost of debt is therefore made in this analysis as profitability is measured before financing costs.

A2.3 Profitability according to margin on turnover measures

Profitability can be measured by margin on turnover measures, such as the gross margin. While it is return on asset measures such as the ROCE and the IRR that are most appropriate when examining the profitability of Manx Gas, margin on turnover measures may still provide useful information about the trends in overall profitability.

Changes to gross profits help indicate the extent to which changes to the price of underlying fuel have been passed through to final consumers. When the price of underlying fuel is rising, maintaining a stable gross margin requires revenue to increase by more than the cost of fuel.[70] Figure A2.1 presents the gross margin for Manx Gas, defined as the ratio of the

[66] In particular, Guernsey Gas Limited, Kosangas (Guernsey) Limited and Jersey Gas Company.

[67] This affects how gearing is calculated, which is used in the measurement of the cost of capital. See Section 4.3.5.

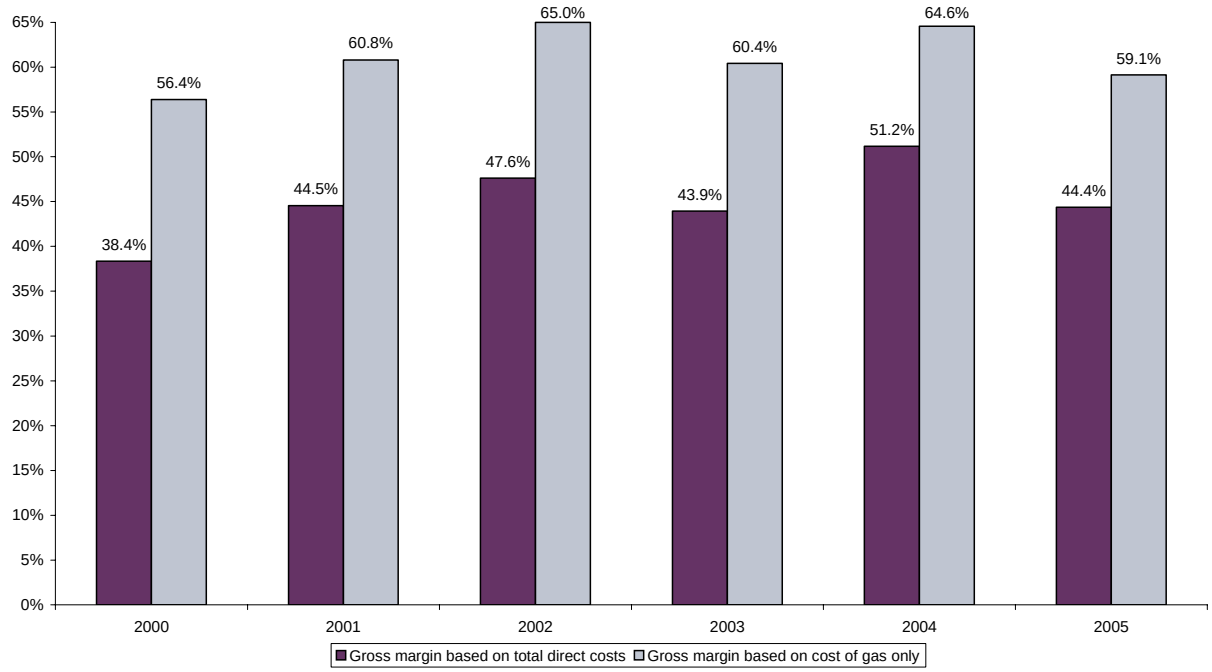
[68] The return on equity is not measured here. One of the cash flow measures reported here includes interest paid. Clearly, if interest were paid on Manx Gas's loans, this item would be higher. However, that cash flow measure also deducts the net increase in cash, which would have been lower by an equivalent amount. So, the overall cash flow of the company, as measured here, would also be unaffected by the loans being interest free. The impact on interest free loans on the cost of capital is discussed in detail in section 4.3.5.

[69] In practice, not requiring Manx Gas to pay interest on its loans means that IEG and Calor Gas Limited have deferred the receipt of this interest until the company resumes paying dividends.

[70] For example, if revenue is £100 and the cost of fuel £40, gross profits are £60 and the gross margin is 60%. If the cost of fuel increases to £50 and revenue increased to £110 (e.g. a similar increase of £10), while gross profits would remain £60, the gross margin would fall to 54.5%. The revenue increase required to maintain a constant gross margin can be calculated as the change

difference between turnover and direct costs, and turnover. The direct costs of Manx Gas overall include not only the cost of gas, but direct production and distribution costs, as well as the direct cost of appliances sales as well as the direct cost of customer services, such as installation and maintenance costs. To highlight the impact of the cost of gas only, also shown is a margin on the cost of gas, which only deducts the cost of gas from turnover, rather than all direct costs. It is difficult to discern a trend in either series, although Manx Gas does seem to have found it more difficult to pass on increases in wholesale gas costs in 2005. Overall, Manx Gas's gross margin follows trends in the margin on the cost of gas, indicating that changes to the cost of gas probably drive changes to the gross margin.[71]

Figure A2.1 Gross margin of Manx Gas (%)



Source: Manx Gas data and Oxera calculations.

However, Manx Gas has overhead costs, and it is profit after these costs have been included that corresponds to the profit Manx Gas has earned. Figure 4.2 presents the return on sales for Manx Gas along with the EBITDA margin.[72] The average return on sales over the six-year period was 20.0%, while the average EBITDA margin over the six-year period was 27.5%. It is difficult to discern a clear trend in either series, although both do appear to be relatively volatile. Furthermore, the return on sales follows a similar pattern to the margin on the cost of gas indicating that changes to the cost of gas have a significant affect on the overall return. In 2004, Manx Gas changed the depreciation policy for its mains assets, increasing the asset life from 20 to 40 years to bring its depreciation policy in line with industry peers.[73] As depreciation would then be lower, this change in depreciation policy would tend to increase the ROS, other things equal, and contributed to a slight narrowing in the difference between

in the cost of fuel divided by 1 minus the gross margin. So, in the above example, the revenue increase that would be required is £10 (the increase in the cost of fuel) divided by 0.4 (e.g. 1 minus the gross margin of 60%), or £25: therefore, the higher the initial gross margin, the proportionately higher increase in revenue compared to the cost of fuel that would be required.

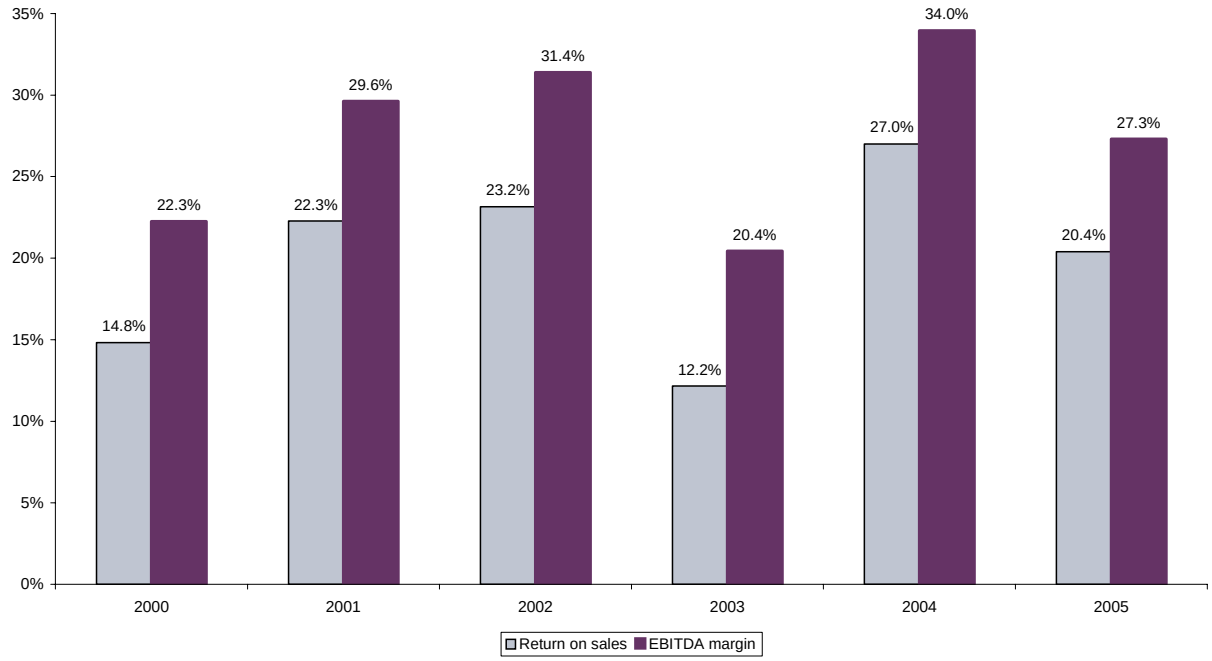
[71] There also seems to have been a narrowing of the difference, which is consistent with the share of cost of gas in direct costs increasing.

[72] The ROS is defined as the ratio of earnings before interest and tax (EBIT) and turnover. It measures how profitable sales are from an operating perspective as profit is measured before financing costs (e.g. interest expense) and taxation. The EBITDA margin is the ratio of profit before interest, tax, depreciation and amortisation (EBITDA) and turnover. While depreciation can be considered a true cost of operating a business (it is in effect the current cost of long term investments), it is a non–cash item. Therefore, it is informative to examine a measure of margin on turnover before depreciation costs, such as the EBITDA margin

[73] IEG financial accounts. This in effect means that the depreciation charge is 2.5% per annum, on a straight-line basis, rather than 5%.

the ROS and the EBITDA margin.[74] Manx Gas's deprecation policy is discussed in greater detail in Section 4.3.4.

Figure A2.2 Return on sales and EBITDA margin of Manx Gas (%)



Source: Manx Gas data and Oxera calculations.

Figure A2.2 does not however, apart from the impact of depreciation, attribute the change in the return on sales or profits of Manx Gas. Analysis of accounting information suggests that, in general, the change in turnover for Manx Gas has exceeded the change in the cost of gas in each year examined here (or fallen by less as in 2002), although not necessarily also the change in other costs.

A2.4 Impact of change of depreciation policy

Manx Gas changed its depreciation policy for its gas mains assets in 2004 from assuming a 20-year economic life assumption to a 40–year economic life assumption. This sub–section details the assumptions and calculations undertaken to retrospectively apply a 40–year life assumption for mains assets. The main source of information for these calculations is Manx Gas's fixed asset register between 2001 and 2004. Table A2.1 reports the mains asset values between 2000 and 2005, as reported in Manx Gas's fixed asset register.

Table A2.2 Mains asset values, 2001–05

	2000	2001	2002	2003	2004	2005
Manx Gas Mains & Services	3,633,308	3,616,628	4,077,171	5,090,897	5,835,315	6,871,486
Mains & Services transferred from CMG	1,677,157	1,527,566	1,377,976	1,228,386	1,186,294	1,144,171
Hp Main	170,172	170,172	158,592	147,012	142,429	137,853

Source: Manx Gas.

The fixed asset register also details the depreciation of these assets (see Table A2.2) between 2001 and 2005. As can be clearly seen from comparing the two tables, while the annual depreciation charge (before the revision to depreciation policy) was 2.5%,

[74] For example, while the difference between the ROS and the EBITDA margin averaged 8.2% points in 2002 and 2003, the averaged difference in 2004 and 2005 was 7.0% points.

depreciation compared to asset values has generally been around 7–10%. To retrospectively apply a 40-year useful economic life assumption, we assume that the depreciation recorded in Table A2.2 for years 2001 to 2004 would have been half the actual recorded amount. While this is a working assumption and cannot be entirely accurate, it is not clear that any inadvertent error would have a material impact on the results. Indeed, the depreciation in 2005 for most mains assets is around a half of the level the previous year.

Table A2.3 Depreciation, 2001–05

	2001	2002	2003	2004	2005
Manx Gas Mains & Services	275,602	292,840	333,418	391,271	186,914
Mains & Services transferred from CMG	149,590	149,590	149,590	142,254	42,123
Hp Main	11,580	11,580	11,580	11,580	4,576

Source: Manx Gas.

Based on this assumption, it is possible to calculate the accumulated depreciation that could have been 'saved' if a 40–year life assumption had been adopted. As depreciation in 2005 is already on the basis of a 40–year life assumption there is no need to adjust the depreciation for that year and so the cumulative saving in 2004 is the same as in 2005.

Table A2.4 Cumulative depreciation saving, 2001–05

	2001	2002	2003	2004	2005
Manx Gas Mains & Services	137,801	284,221	450,930	646,566	646,566
Mains & Services transferred from CMG	74,795	149,590	224,385	295,512	295,512
Hp Main	5,790	11,580	17,370	23,160	23,160

Source: Manx Gas, Oxera calculations.

The annual saving to depreciation (which is the half the level of depreciation reported in Table A2.2) can be added back on to EBIT to derive an adjusted EBIT. In terms of re-estimating capital employed, it is possible to add the cumulative depreciation saving to actual capital employed to derive an adjusted capital employed (see Table A2.4). Table A2.4 therefore simply adds the data in Table A2.1 and A2.3. The change to asset values between Table A2.4 and A2.1 represents an increase to capital employed. Therefore, when the adjusted capital employed is calculated, capital employed is increased by this addition to the value of mains assets (e.g. the difference between the data in Table A2.4 and A2.1).

Table A2.5 Adjusted asset values, 2001–05

	2001	2002	2003	2004	2005
Manx Gas Mains & Services	3,754,429	4,361,392	5,541,827	6,481,881	7,518,052
Mains & Services transferred from CMG	1,602,361	1,527,566	1,452,771	1,481,806	1,439,683
Hp Main	175,962	170,172	164,382	165,589	161,013

Source: Manx Gas, Oxera calculations.

A2.5 Cash-flow calculations

The truncated IRR requires cash flow data for the activity in question over a reasonable length of time. This section discusses the measure of cash flow used in this report.

A company generates cash inflows from its operating activities. This cash from operating activities (CI) can be put to different uses—paying dividends (D), interest (I) and taxes (T); financing capital expenditure (CAPEX) and acquisitions, net of disposals (A); and investing in financial assets (FA)—ie, current investments. In addition, a company may receive new

financing (either through new share issues or loans) or reduce its financing by repaying some of its loans and repurchasing shares. The net new financing (NNF) is the difference between new share issues and loans, less loan repayments and share repurchases. At the end of the financial year, therefore, the net increase in cash balances (NIC) held by the company is the difference between the sum of:

– cash inflows from operating activities and net new financing;
– outflows of dividends, interest and taxes paid; net additions to fixed assets through CAPEX and acquisitions (net of disposals); and net additions to current investments.

In other words:

$$NIC = CI–CAPEX–A–FA–D–I–T + NNF \quad \text{Equation A3.1}$$

The pre-tax net cash flow (CF) to investors (share- and bondholders) and government is therefore:

$$CF = D + I + T–NNF \quad \text{Equation A3.2}$$

Rearranging equations 4.1 and 4.2 it can be shown that CF to the firm can be calculated as follows:

$$CF = CI–CAPEX–A–(FA + NIC) \quad \text{Equation A3.3}$$

Equations A3.2 and A3.3 are equivalent. Table A2.6 shows the calculations of cash flow to the investor. Manx Gas received new financing from IEG and Calor Gas in 2003, and since 2003 has also not paid dividends.

Table A2.6 Pre-tax cash flow to the investor (£)

	2000	2001	2002	2003	2004	2005
Dividends paid (a)	1,562,500	3,329,250	850,000	0	0	0
Interest received (b)	-36,058	-65,519	-64,205	-41,738	-55,598	-52,494
Taxation refunded/(paid) (c)	60,119	14,309	132,204	143,965	-120,042	103,460
Net new financing (d)	-277,812	-362,656	-312,392	5,800,000	-750,000	-2,000,000
Pre-tax cash flow = a+b+c-d	**1,864,373**	**3,640,696**	**1,230,391**	**-5,697,773**	**574,360**	**2,050,966**

Source: Manx Gas data and Oxera calculations.

Table A2.7 shows the calculations for cash flow to the firm. Manx Gas has generated reasonably stable levels of operating cash flow, while its capital expenditure commitments have increased. With the exception of 2003, when the significant investment in natural gas occurred, cash flows to the firm (investor) have been positive throughout the period.

Table A2.7 Pre-tax cash flow calculation to the firm (£)

	2000	2001	2002	2003	2004	2005
Operating cash flow (a)	2,470,120	4,883,423	4,593,590	4,319,467	4,355,377	4,797,157
Capital expenditure and financial investment (b)	1,294,971	1,175,696	2,042,286	10,188,700	4,340,716	3,813,240
Net increase in cash balances (c)	–689,224	67,031	1,320,913	–171,460	–559,699	–1,067,049
Pre-tax cash flow = a–b-c	**1,864,373**	**3,640,696**	**1,230,391**	**–5,697,773**	**574,360**	**2,050,966**

Source: Manx Gas data and Oxera calculations.

A2.6 Estimating the profitability of natural gas and LPG

Section 4.4.2 discusses estimates of the profitability (according to the return on sales and ROCE) for natural gas and LPG. This analysis has involved certain assumptions to be made as to how common costs and assets should be allocated. Appliance costs were removed first, and then the remaining costs (including customer services) were allocated to the natural gas and LPG businesses. These assumptions are detailed in Table A2.8.

Table A2.8 Cost allocation between natural gas and LPG

Cost item	To appliances	Then allocation between natural gas and LPG
Storage costs	None	All to LPG
Production mains	None	All to LPG
Distribution mains	None	Share of volume
Sundry income	None	Share of volume
Customer services—sales	None	Share of customers
Customer services—cost of sales	None	Share of customers
Customer services—overheads	None	Share of customers
Meter department	None	Share of customers
Commercial overheads	Share of direct costs (except specific application, stores indirect)	Share of volume
Office services (salaries, bank charges)	Share of indirect costs	Share of volume
Office services (all others)	Share of indirect costs	Share of customers
Employment overheads	Share of indirect costs	Share of volume
Emergency services	None	Share of customers
General overheads (travel and entertainment, sundries, rates and taxes, property, management services and charges)	Share of indirect costs	Share of volume
General overheads (others)	Share of indirect costs	Share of customers
Depreciation	Modelled separately using fixed asset register	Modelled separately using fixed asset register

Source: Manx Gas, Oxera calculations.

In addition, the fixed asset register can be used to allocate depreciation and asset values between natural gas and LPG. The following assumptions have been used to allocate assets between the separate businesses.

Table A2.9 Asset allocation between natural gas and LPG

	To Retail appliances	Between natural gas and LPG
Manx Gas Land and Buildings	£297,000 for each year until and inclusive 2004, then £371,000 in 2005.	Share of customers
Land & Buildings transferred from CMG	None	All to LPG
Manx Gas Motor Vehicles	None	Share of customers
Motor vehicles transferred from CMG	None	All to LPG
Manx Gas Mains & Services	None	All natural gas from 2004
Mains & Services transferred from CMG	None	All LPG
HP MAIN	None	Share of volume
Manx Gas Meters	None	Share of customers
Meters transferred from CMG	None	All to LPG
Plant and machinery	None	Share of tanks and equipment according to volumes, rest to LPG
Storage	None	LPG
Community systems	None	LPG
Office and furniture	Share of sales, all showroom fittings	Share of customers
Natural gas conversion	None	All to natural gas
Stock	As per Manx Gas Limited stock breakdown (including WIP)	All remaining stock to LPG
Hire purchase	All	None
Conditional sale debtors	All	None
Debtors	Share of sales	Share of gas sales
Cash at bank and in hand	Share of sales	Share of gas sales
Creditors	Share of sales	Share of gas sales
Related party balances	Share of sales	Share of gas sales
Proposed dividend	None	LPG
Income tax payable	None	Share of volumes

Source: Manx Gas, Oxera calculations.

These assumptions are also used to allocate depreciation to the different parts of the business.

A2.7 Estimating the return on a Manx Gas distribution business

The hypothetical distribution business is defined as Manx Gas with investment in property, retail appliances and a hypothetical supply business removed from costs and assets. The costs of a hypothetical supply business were estimated as follows. The main cost drivers is the estimated employment of a hypothetical supply business, largely based on Manx Gas's existing credit control and billing team, and finance support.

Table A2.10 Cost allocation to the supply business

	Supply
Customer services	All
Meter	All
Commercial overheads	Proportion of supply in total staff (estimated as 24 out of 91)
Office services	Proportion of supply in total staff (estimated as 24 out of 91)
Employment overheads	Proportion of supply in total staff (estimated as 24 out of 91)
Emergency services	Proportion of supply in total staff (estimated as 24 out of 91)
General overheads	Proportion of supply in total staff (estimated as 24 out of 91)

Source: Manx Gas, Oxera calculations.

In addition, Table A2.11 sets out the allocation of assets.

Table A2.11 Asset allocation to the supply business

	Supply
Land and buildings	Proportion of supply in total staff (estimated as 24 out of 91)
Vehicles	Proportion of supply in total staff (estimated as 24 out of 91)
Meters	All to supply
Office furniture and equipment	Proportion of supply (24) to non distribution staff
Debtors	All non retail appliances debtors
Cash at bank	25% of total cash at bank
Creditors	Set such that the sum of debtors and cash minus creditors (e.g. working capital) is £0.5m.

Source: Manx Gas, Oxera calculations.

Appendix 3 Gas tariffs in the Isle of Man

Table A3.1 Natural gas tariffs in the Douglas area

Tariff	Description
A	Applies to gas customers using gas for cookers only. No standing charge applies.
B	Applies to customers using gas for cookers and fire. A standing charge applies.
C	Applies to customers using gas for cooker, fire and other appliances. Used by some commercial customers. A standing charge applies.
CX	Applies to large commercial users. No standing charge applies.
D	Commercial catering tariff which is banded according to consumption. A standing charge applies.
Band 1	Applies to first 27,000 cubic foot.
Band 2	Applies to second 80,000 cubic foot. This band also applies to total consumption exceeding 162,000 cubic foot.
Band 3	Applies to third 55,000 cubic foot.
E	Applies to commercial customers, such as accommodation (e.g. guest houses). No standing charge applies.
F	Applies to pensioners using gas for cookers only. No standing charge applies.
S (Star Saver)	Applies to customers using gas for central heating and other appliances. A standing charge applies.
T	Applies to pensioners using gas for cookers and fire. A standing charge applies.

Source: Manx Gas and Isle of Man OFT 2000.

Table A3.2 Tariffs in the Douglas area for LPG supplied through community systems

Tariff	Description
AK	Applies to gas customers using gas for cookers only. No standing charge applies.
BK	Applies to customers using gas for cookers and fire. A standing charge applies.
CK	Applies to commercial users. No standing charge applies.
DK	Commercial catering tariff which is banded according to consumption. A standing charge applies.
FK	Applies to customers on metered cylinders using gas for central heating. No standing charge applies.
S (Star Saver)	Applies to customers using gas for central heating and other appliances. A standing charge applies.
TK	Applies to pensioners using gas for cookers and fire. A standing charge applies.

Source: Isle of Man OFT 2000.

Table A3.3 LPG tariffs in the ex-Calor area

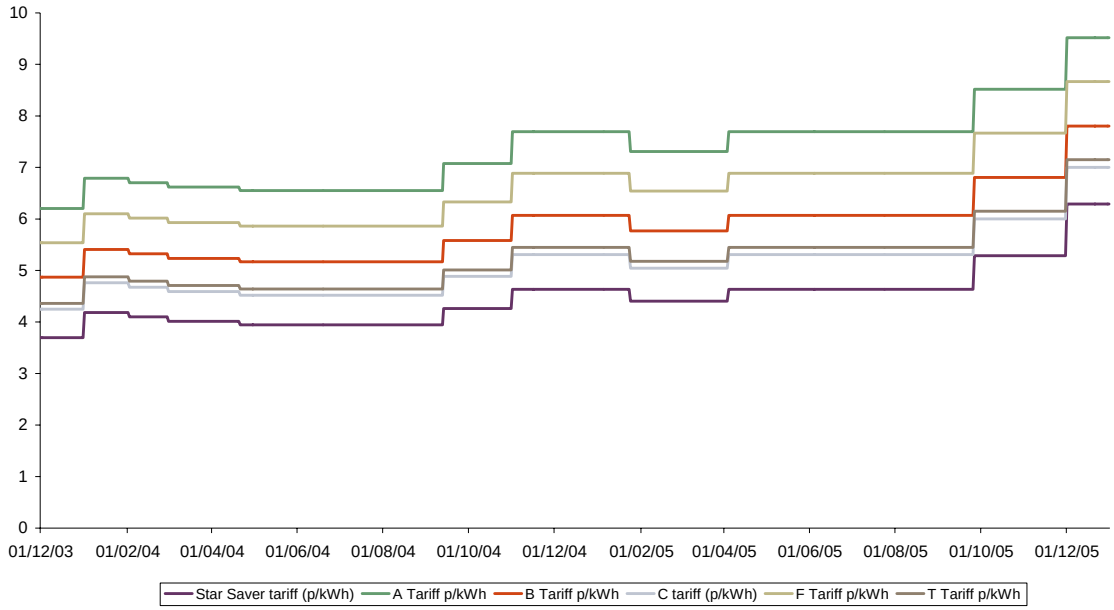
Tariff	Description
CA	Applies to gas customers using gas for cookers only. Pensioners receive additional discount. No standing charge applies.
CB	Applies to customers using gas for cookers and fire. Pensioners receive additional discount. A standing charge applies.
Band 1	–
Band 2	–
CCX	Applies to large commercial users. No standing charge applies.
CD	Commercial catering tariff which is banded according to consumption. A standing charge applies.
Band 1	Applies to first 27,000 cubic foot.
Band 2	Applies to second 80,000 cubic foot. This band also applies to total consumption exceeding 162,000 cubic foot.
Band 3	Applies to third 55,000 cubic foot.
CS (Star Saver)	Applies to customers using gas for central heating and other appliances. A standing charge applies.
UE	–
MZ	–

Source: Manx Gas data and Isle of Man OFT 2000.

Appendix 4 Tariff changes

Figure A4.1 shows the trends in the domestic tariffs for natural gas since August 2003. The price changes to all of the tariffs occurred simultaneously, with the main explanation given being changes in wholesale costs of gas.

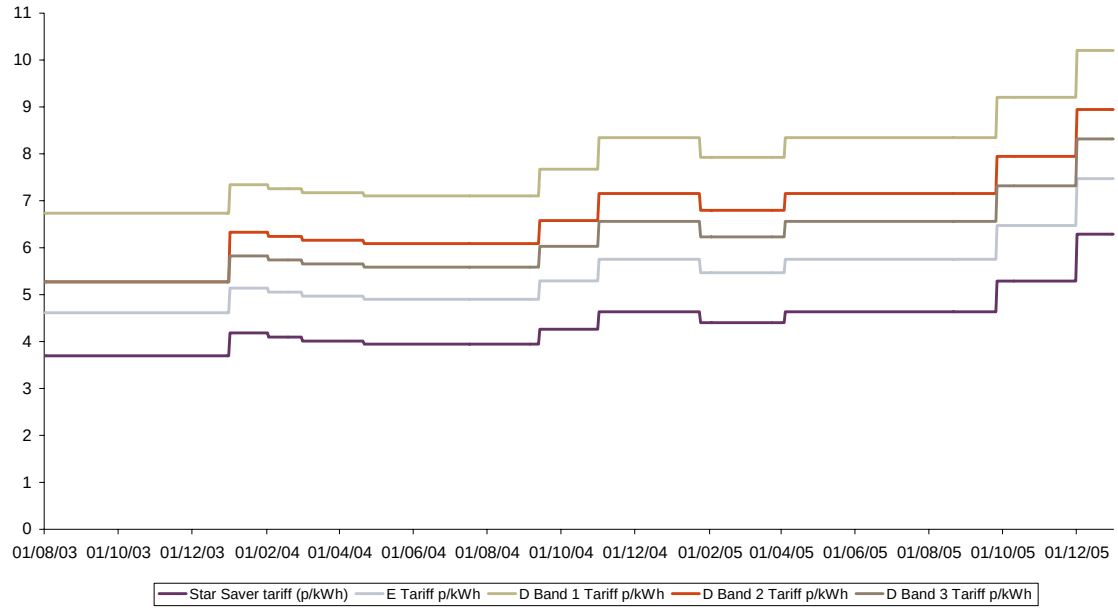
Figure A4.1 Natural gas tariffs net of VAT to domestic customers, August 2003–December 2005 (p/kWh)



Source: Manx Gas and Oxera calculation.

Figure A4.2 shows the trends in the commercial tariffs for natural gas since August 2003. The price changes to all of the commercial tariffs occurred simultaneously, and at the same time as the changes to domestic tariffs, mainly due to changes in wholesale costs of gas.

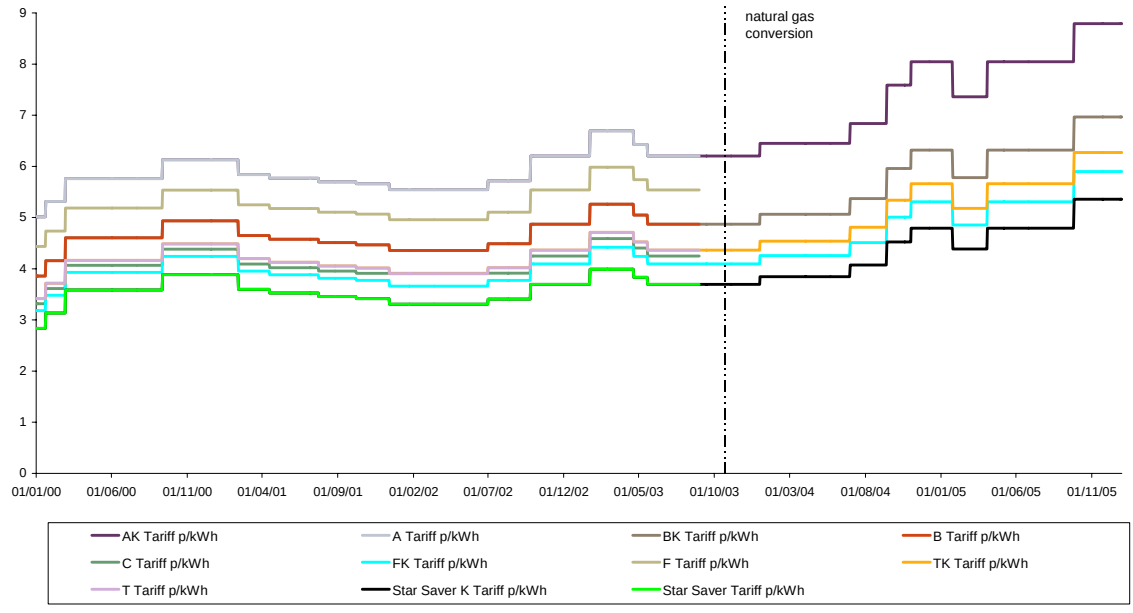
Figure A4.2 Natural gas tariffs net of VAT to commercial customers, August 2003–December 2005 (p/kWh)



Source: Manx Gas and Oxera calculations.

Figure A4.3 shows the trends in the domestic tariffs for LPG in the Douglas area. The price changes to all of the tariffs occurred simultaneously, with the main explanation given being changes in wholesale costs of energy, and in particular oil.

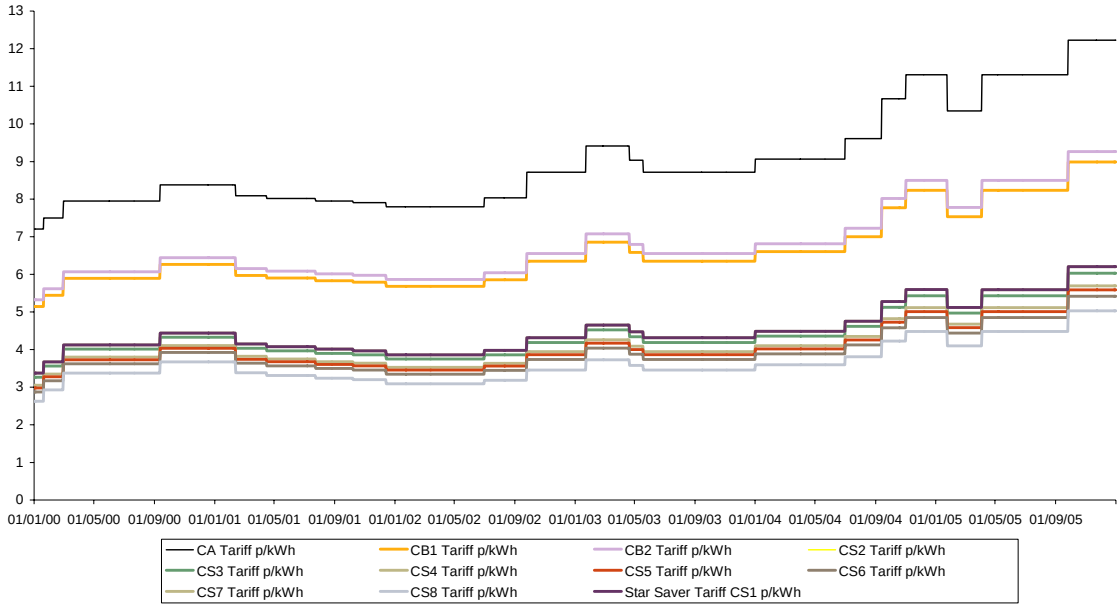
Figure A4.3 LPG tariffs net of VAT to domestic customers in the Douglas area, January 2000—December 2005 (p/kWh)



Source: Manx Gas and Oxera calculations.

Figure A4.4 shows the trends in the domestic tariffs in the ex-Calor area of the Island. The price changes to all of the tariffs occurred simultaneously, and at the same time as those in the Douglas area, with the main explanation given being changes in wholesale costs of energy.

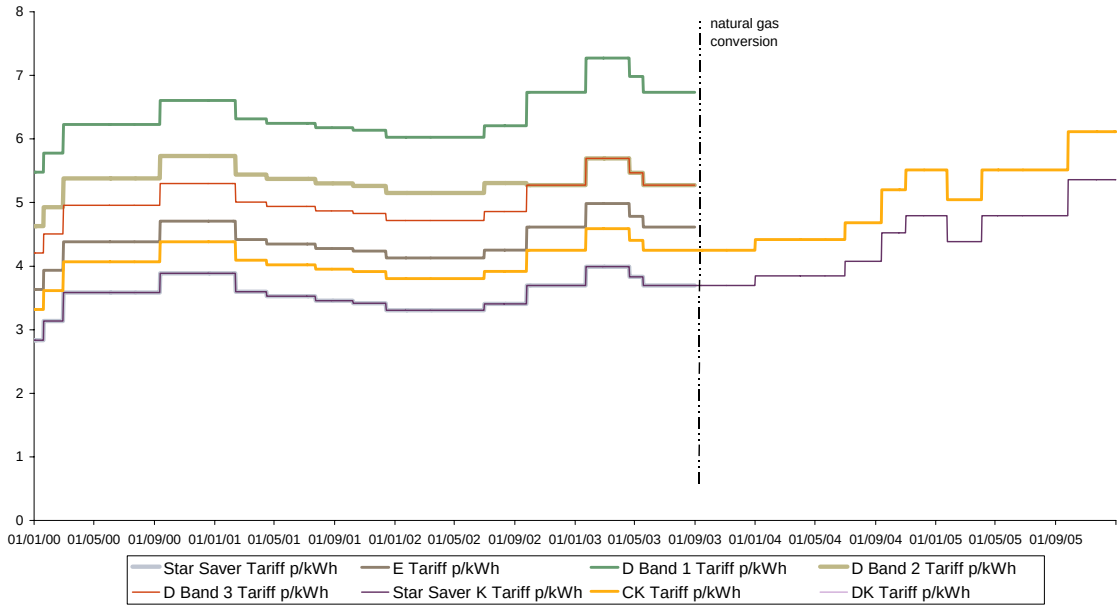
Figure A4.4 LPG tariffs net of VAT to domestic customers in the ex-Calor area, January 2000–December 2005 (p/kWh)



Source: Manx Gas and Oxera calculations.

Figure A4.5 shows the trends in the commercial tariffs in the Douglas area. The tariff increases occurred simultaneously for all tariffs but Band 2 of tariff D.

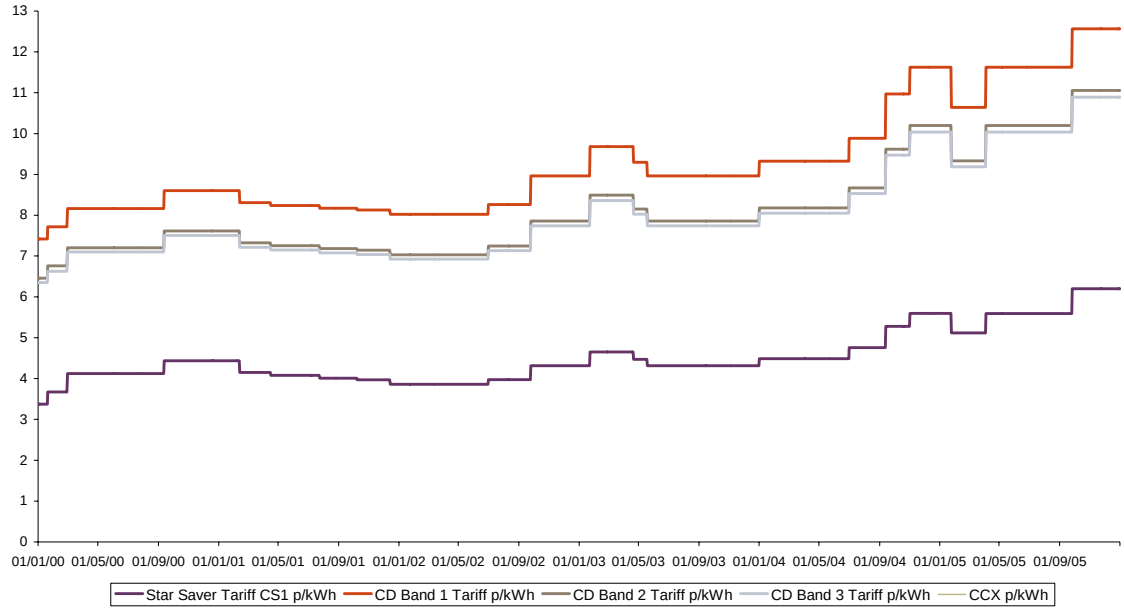
Figure A4.5 LPG tariffs net of VAT to commercial customers in the Douglas area, January 2000–December 2005 (p/kWh)



Source: Manx Gas and Oxera calculations.

Figure A4.6 shows the trends in the commercial tariffs in the ex-Calor area.

Figure A4.6 LPG tariffs net of VAT to commercial customers in the ex-Calor area, January 2000–December 2005 (p/kWh)



Source: Manx Gas and Oxera calculations

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Investigation into liquid fuel prices in the Isle of Man

Isle of Man Office of Fair Trading

30th October 2006

Contents

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List of figures

1 Introduction

Oxera Consulting Ltd ("Oxera") was commissioned by the Isle of Man Office of Fair Trading to investigate the level of energy prices in the Isle of Man. This report presents the analysis undertaken with respect to the road fuels (petrol and diesel) and heating oil (kerosene and gas oil) markets.

In October 2005 and again in July 2006, the price of a litre of unleaded petrol in the Isle of Man rose to over £1, the culmination of a steady increase that has seen prices rise by over 25% from the level at the beginning of 2004. Over the same period, the price of domestic heating oil rose by over 60%.

This report considers whether the price rises observed in the road fuels and heating oil markets reflect actual changes in the cost of supplying these products in the Isle of Man. In addition, further analysis is carried out to determine whether the price differential that exists with the UK market is justified by acceptable cost differences associated with supplying the fuels in the Island.

These price rises have coincided with a global oil price shock that has seen the price of the raw products double on the commodity markets, but it has also occurred against a background of restructuring in the petrol and diesel market in the Isle of Man, and one of the major fuel suppliers, Esso, exiting the Isle of Man market.

The approach taken in this study is to understand the structure of the industry and the costs associated with the activities required to deliver the products to the markets. This will allow a clear picture of where the costs are incurred and where the profits are earned. With information on the profitability of the activities of the different companies and the different activities, the reasonableness of prices can be assessed.

In these markets, comparison is often made with the price of the product in the UK. While acknowledging that there will be differences in the costs of supply in the two markets, these are quantifiable and any unexplained differential will need to be justified as an efficiently incurred cost.

The market for the supply of liquid fuels in the Isle of Man can be divided into the road fuels (petrol and diesel) market and the heating fuels (kerosene and gas oil) market:

– the **road fuels market** involves the supply of petrol and diesel at filling stations. Premium unleaded is the main grade of petrol being supplied, with a smaller proportion of super unleaded also in supply[1];

– the **heating fuels market** refers to the supply of heating oil to domestic and non-domestic customers, with kerosene being the predominant fuel used for domestic heating, and gas oil being the primary fuel in the non-domestic market.

[1] Super unleaded has accounted for 10-15% of the petrol market over the period of this study

These two market segments are reviewed separately in the report, following the approach taken by other competition authorities. However, since the assets used to distribute road fuel are the same as those used to distribute heating fuels, the distributors and suppliers may see the markets as a whole. This is recognised in the following analysis.

The detailed analysis of price–cost movements and profitability has used data covering the period 2002–05, as provided by the fuel companies through a comprehensive information request. High-level discussion of price trends, however, has been extended to cover the period to June 2006.

2 Structure of the liquid fuels industry

The competitiveness of an industry, and hence the efficiency of the prices charged to consumers in the market, depends on the structure of the industry and the nature of the interactions between companies operating at various stages of the supply chain. In order to investigate the level of prices in the fuel markets, it is necessary to understand that structure and how it has evolved over time.

2.1 The supply chain

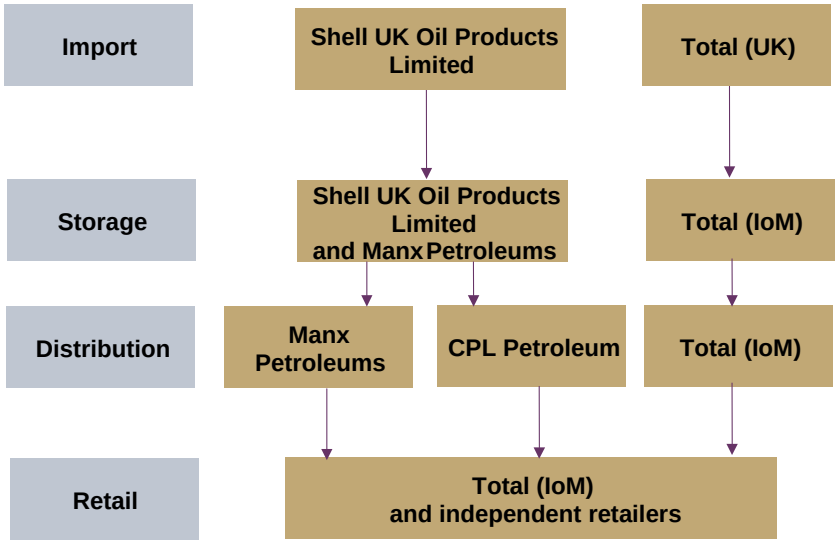
The supply chain that results in the purchase of petrol from a filling station, or the delivery of heating oil to domestic and commercial premises, comprises several stages:

- importation of the relevant fuel to the Isle of Man—this is usually shipped from refineries in South Wales;
- storage at the facilities at Battery Pier, Douglas, or Mill Road, Peel;
- distribution from the storage facilities to filling stations (petrol and diesel) and customers (domestic and non-domestic heating oil); and
- retailing to the final customer.

This supply chain is summarised in Figures 2.1 and 2.2 below. The structure of the market at each stage of the chain (i.e., the number and nature of competitors), together with the vertical links between the activities (whether contractual or ownership) can have an important influence on the form and extent of competition, and hence on the prices observed and profit (margin) earned. Figure 2.1 refers to the supply of petrol and diesel, and Figure 2.2 to the supply of heating oil. In heating oil, the distribution companies sell directly to the customers, whereas in road fuels, the two major distribution companies are essentially agents of the importing companies. The importing companies normally have direct long-term contractual relationships (solus arrangements[2]) with the filling station owner. Total (IoM) is active in the storage, distribution and retailing of both road fuels and heating oils.

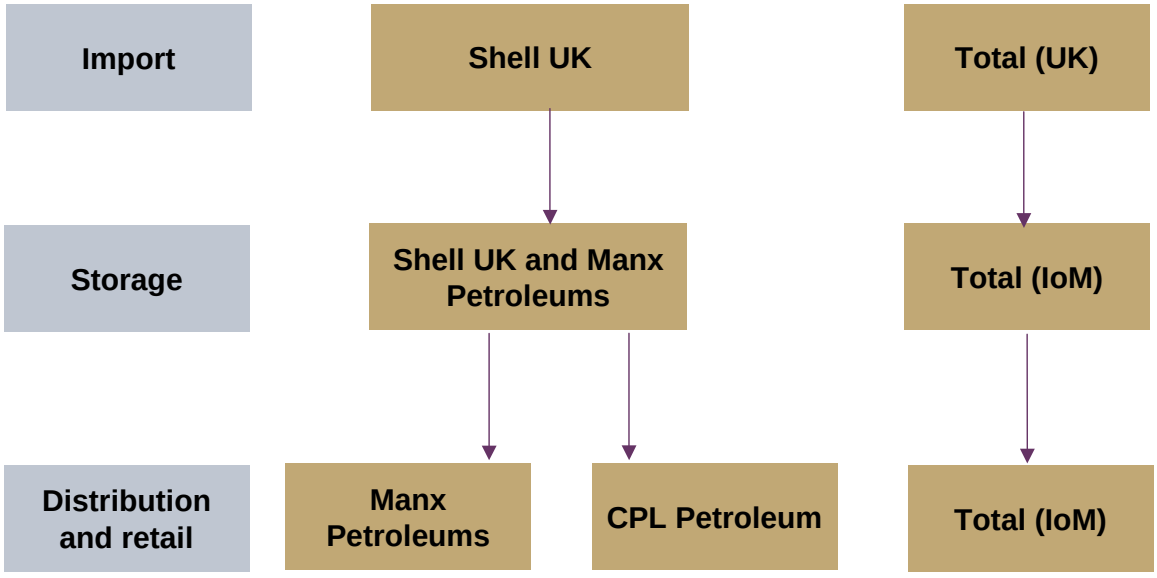
[2] Solus deals for the purchase of fuel are exclusive agreements between filling stations and the ultimate owners of the fuels. Unlike in the UK, where solus deals are legally required to be of a maximum of five years' duration, solus deals in the Isle of Man cover up to a ten-year period. At the end of a solus contract, filling stations are free to negotiate contracts with other fuel suppliers.

Figure 2.1 Companies active in the road fuels supply chain in the Isle of Man



Note: In this figure and in the remainder of the report, Total Oil Great Britain Limited is referred to as Total UK, Shell UK Oil Products Limited as Shell UK, Manx Petroleums Limited as Manx Petroleums, CPL Petroleums Limited as CPL Petroleum and Total Isle of Man Limited as Total IoM.
Source: Oxera.

Figure 2.2 Companies active in the heating fuels supply chain in the Isle of Man



Source: Oxera.

2.2 Importation

Fuel is imported by ship from refineries in the UK to one of two harbours—Battery Pier in Douglas, and Peel—where the cargo is unloaded and transferred to storage tanks. The cargoes usually carry a mixture of road fuels and heating oils, depending on the supply commitments, prices of fuel, physical storage capacity available and

current stocks. Two companies are involved in importing: Shell (UK) and Total.[3] Shell imports liquid fuels into Douglas harbour, from where it is piped to the premises of Manx Petroleums at Battery Pier, Douglas and Total (UK) imports to Peel harbour from where it is piped to the premises of Total (IoM) at Mill Road, Peel. Both use 2,500 tonne ships, a limit imposed by the characteristics of the harbours.[4]

In the late 1980s, after the introduction of Total to the Island, two companies were importing fuel. Although Esso had been active in the road fuels market, in the mid 1980s it stopped importing and entered into an exchange deal with Shell (UK), where Shell (UK) imported the fuel on Esso's behalf.[5] Esso made a commercial decision to exit the market at the end of 2004.

2.3 Storage

Once fuel has been shipped to the Isle of Man, it is transferred to storage facilities. Total (IoM) and Manx Petroleums operate separate storage assets. Total (IoM) has undertaken a large capital programme over the last five years to improve efficiency and safety, including new bottom-loading racks that improve safety and reduce loss from evaporation and a new fire defence system. Manx Petroleums has also undertaken considerable improvements to its storage facilities in recent years including bottom loading for motor spirit, elaborate fire fighting systems and other health and safety measures.

2.4 Distribution

There are three wholesale fuel distributors operating in the Isle of Man:[6]

- Manx Petroleums—an independent distributor, affiliated with Shell for the delivery of petrol and diesel in the Island;
- Total (IoM)—a subsidiary of Total (UK);
- CPL Petroleum—a subsidiary of CPL (UK).

Each has its own fleet of road tankers for distribution of petrol, diesel or heating oils, and its own staff. CPL Petroleum contracts with Shell (UK) for the supply of fuel via the Manx Petroleums' terminal and pays Manx Petroleums for access to the storage and loading facilities.

These distributors deliver petrol and diesel to the filling stations in accordance with their contracts with the fuel supplier—Shell or Total. However, they also sell heating oil directly to the domestic and non-domestic market. Manx Petroleums is an authorised distributor of heating fuels for Shell (UK) and pays a brand fee to Shell. CPL ceased supplying road fuels from July 2006.

An associated company of Manx Petroleums, Manx Petroleums Services Ltd, provides oil-fired heating services to domestic and commercial users, including boiler maintenance and replacement, and polyethylene oil storage tank sales and

[3] One of the conditions for Total entering the market in 1987/88 was the establishment of a separate harbourage, thereby increasing security of supply as well as potentially enhancing competition in fuel supply.

[4] For comparison, Jersey has the capacity to use ships of around 3,000 tonnes, whereas the Shetland Isles are supplied using 400 tonne tankers.

[5] This type of swap arrangement is common practice in the global fuel markets.

[6] Prior to the introduction of Total to the Island, there were additional smaller mini-distributors of heating fuels. From July 2006 CPL ceased distribution of road fuels.

replacement. Total (IoM) also offers these services, but they are contracted out to independent service providers.

2.5 Retailing of petrol and diesel

As of 1st July 2006 there were 20 licensed retail filling stations supplying petrol and diesel in the Isle of Man. Of these, five are owned by Total (four of which are operated by the company and one is leased), one is owned by Retail Services Ltd, a Manx Petroleums associate company, and the remaining 14 are owned by independent dealers.

Independent retailers have "solus" agreements with either Shell or Total. These are exclusive, time-limited, agreements to buy petrol and diesel from the particular local distributor. Retailers are offered petrol at a pre-notified Schedule Price, with a suggested retail margin added. Although it is not a condition of contract that retailers set their price to include the suggested margin, there appears to be little incentive to price lower (the price elasticity of demand is too low). It has also been suggested that pricing above the suggested margin would result in adjustments to the Schedule Price, thereby ensuring that the additional margin is transitory. There has been no evidence that this has occurred in the Island.

In some cases, the margin allowed is directly related to volume targets over the course of the contract. The contractual arrangements may also include additional grants (often through higher allowed retail margins) to improve the sites and to ensure that they meet requisite safety standards and reflect the brand they are offering.

Both Shell and Total operate loyalty schemes (Plus Points and TOPS Cards, respectively) that affect the margin earned by the retailer. For example, retailers on solus ties with Shell are normally charged for Plus Points on every litre of petrol delivered, although they are only able to recoup on those points that are redeemed by customers. Some estimates are that only 15–20% of payments in lieu of Plus Points are ultimately recovered by the retailer,[7] although retailers can opt out of the Plus Points scheme.

There is competition between the distributors (on behalf of Shell and Total) when contracts expire, but the long-term nature of the solus agreements means that only a few contracts are out to tender at a time. Furthermore, since five sites are owned by Total, there is, in effect, competition for only around three-quarters of the current retail sites.

Moreover, some of the recent changes in market shares have been brought about by some of the smaller players exiting the market. Since 1999, the number of petrol stations operating in the Island has fallen from 33[8] to 20 at the end of June 2006, and no new sites have been developed in recent years.

This trend towards consolidation has been experienced in other markets—for example, in the UK, between 1992 and 2003, the number of petrol stations fell from around 18,000 to 10,300.[9] However, this has usually been due to increasing

[7] Information provided to Oxera.

[8] Isle of Man Government (1995), 'Report of the Commission of Inquiry into the prices of petrol and diesel fuels', February.

[9] United Kingdom Petroleum Industry Association (http://www.ukpia.com/industry_information/industry_overview.aspx).

competition, particularly linked to the emergence of the supermarkets as major petrol retailers, forcing smaller and more remote stations to close. There is no real scope for supermarket competition models to develop in the Isle of Man, due to both the small size of the market and the problems of access to the import delivery infrastructure.

In the Isle of Man, rationalisation of widely varying station throughputs has been a key driver of change, although differences persist. While Total (IoM) supplies the largest overall volume of fuel, the average throughput of its sites is lower than that of the sites supplied by Manx Petroleums (see Table 2.1). The largest of the filling stations in the Isle of Man had throughput of nearly 7m litres in 2005, whereas the smallest had a throughput of 200,000 litres. This suggests that there may be further station closures if current market conditions prevail.[10]

Table 2.1 Throughputs of filling stations in the Isle of Man in 2005

Filling station	Throughput (thousand litres)
Average annual throughput of filling stations supplied by	
CPL Petroleum	525
Manx Petroleums	2,687
Total (IoM)	1,992
Average annual throughput of all filling stations	2,080

Source: CPL Petroleum, Manx Petroleums, Total (IoM) data, Oxera calculations.

2.6 Consumer demand

2.6.1 Road fuels market

It was not possible to obtain data from previous years relating to fuel supplied by ESSO due to their departure from the Isle of Man market. Despite this it is calculated that the overall markets have not seen substantive growth over the last five years.

In 2005, 32m litres of petrol[11] were sold in the Isle of Man, alongside 16.8m litres of diesel.[12]

2.6.2 Heating Fuels market

In 2005 nearly 70m litres in total of gas oil and kerosene were sold to the domestic and commercial sectors (30m and 40m litres, respectively). Sales of gas oil and kerosene to the domestic market have grown by 13.8% since 2000, whereas those in the non-domestic market have grown by 7.9%.

Manx Petroleums has the highest market share in the kerosene market and this has remained relatively stable at around 50%, although there has been a fall in the last few years.

[10] A Shell-branded station is now likely to be in close competition with a Total-branded station in the immediate geographic area, and therefore the competing wholesaler would have an interest in closing the rival site rather than developing it as a going concern.

[11] The petrol volumes include both premium unleaded and super unleaded.

A proportion of these diesel sales were to the heating fuels market, rather than the road fuels market.

Conversely, Total (IoM) has a significantly higher market share in the supply of gas oil, although this figure has varied more over the same period than that of kerosene, potentially reflecting the more competitive nature of commercial and industrial consumer markets. [13] Thus, in the heating fuels market, Total appears to focus more on the non-domestic sector and Manx Petroleums and CPL both have the majority (70% and 80% respectively) of their business in the domestic markets.

[13] CPL Petroleum has provided data on sales of fuels in the domestic and non-domestic markets, as against sales of kerosene and gas oil. Estimates of CPL Petroleum's kerosene and gas oil sales have been made by assuming that the proportions of its kerosene and gas oil sales in the domestic and non-domestic markets respectively are the same as those of Manx Petroleums.

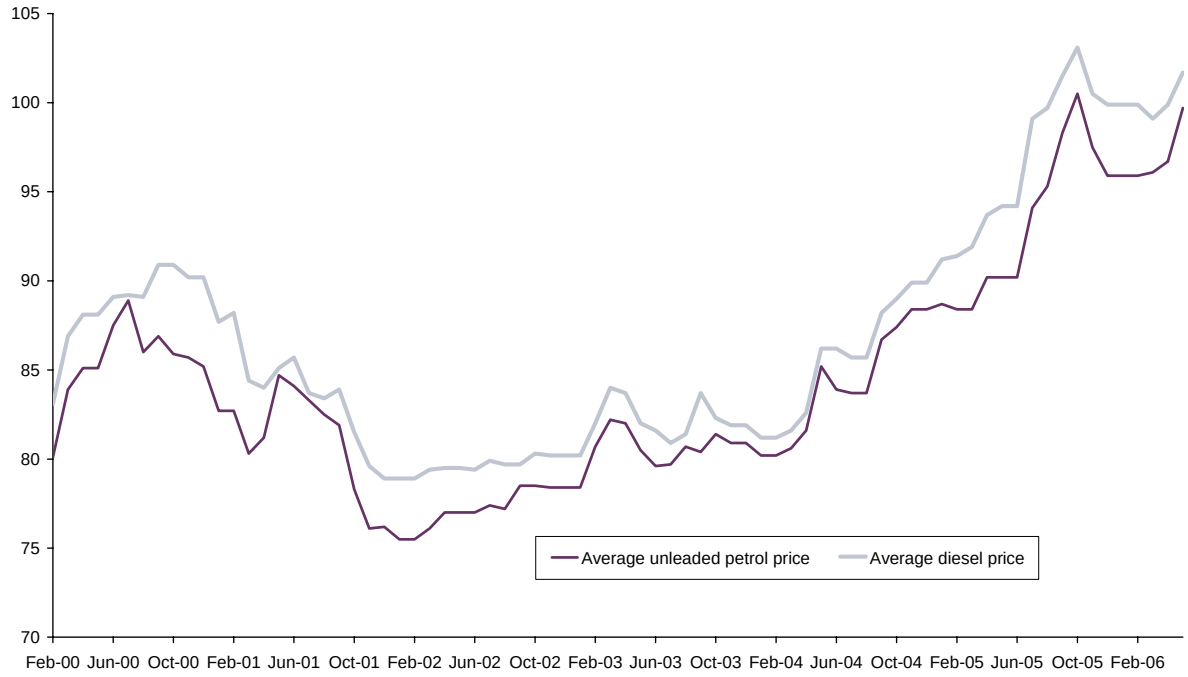
3 Road fuel prices and margins

This section of the report examines the evolution of the price of road fuels (unleaded and diesel) in the Isle of Man and the extent to which these price movements have been driven by changes in the costs of supply. In addition, it investigates how prices have moved relative to those in the UK and the justification for any cost differentials that may exist.

3.1 Evolution of road fuel prices

Over the last few years, petrol prices have increased substantially in nominal terms. As shown in Figure 3.1, the price of premium unleaded petrol, as reported by the Isle of Man Treasury as part of its retail prices index, has increased by around one-third, or 24 pence per litre (ppl), over the four years since the start of 2002 with 20 pence of this having been added to the price in the last two years. A similar pattern can be seen for the price of diesel.[14]

Figure 3.1 Average unleaded petrol and diesel prices in the Isle of Man, February 2000 to May 2006 (pence per litre)



Source: Isle of Man Treasury.

3.1.1 Elements of the tariff

These price movements should be explained by movements in the elements that make up the final retail price of a litre of petrol paid by the consumer:

[14] Diesel prices are usually at a premium to unleaded petrol prices. There are several factors that underpin this differential, including growing demand for diesel in the market and the inability of UK supply to meet this demand.

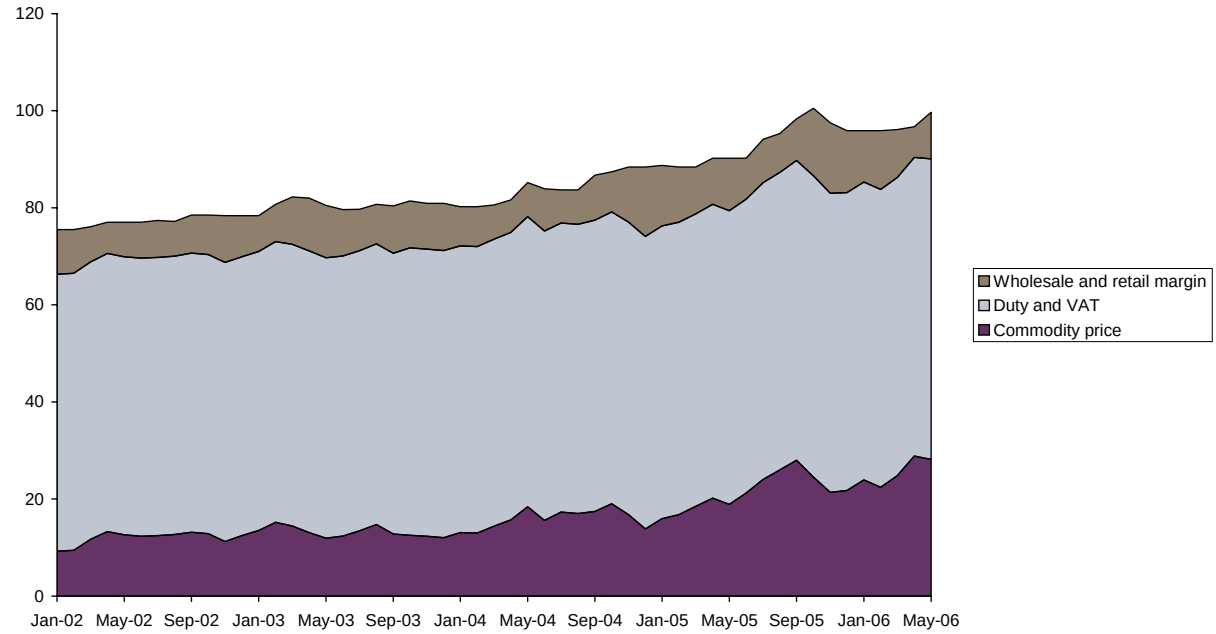
– the cost of the product (the commodity price);
– government fuel duties and taxes;
– the costs and profit of the petrol distributor (the wholesale margin); and
– the costs and profit of the petrol retailer (the retail margin).

The retail margin is calculated as the difference in the price paid by the retailer for delivery of petrol to the filling station (the Schedule Price) and the pump price of the petrol. This has to cover the costs of operating and maintaining the filling station, staff costs, any marketing and administrative costs, as well as providing a profit or return to the station owner.

The wholesale margin is the difference between the Schedule Price and the commodity, or ex-refinery, price of the product. This margin must cover the cost of transporting the product to a storage depot, storage of the fuel, and distribution of the fuel to the filling station, plus a profit for the distributor.[15]

By far the largest proportion of the cost is tax and duty, as is evident from Figures 3.2 and 3.3. In 2005, of an average pump price of 92.9ppl, tax and duty accounted for 60.9p, leaving 32p to cover the cost of fuel and the costs and profit of the distributors and retailers. Of this 32ppl, 21.4ppl represented the commodity price, leaving 10.6ppl (or 11% of the pump price) to cover the joint wholesale and retail margins. Similarly, for diesel, tax and duty accounted for 61.5p of a pump price of 96.4ppl, with the wholesale and retail margin being just 9.9ppl (or 10% of the final pump price).

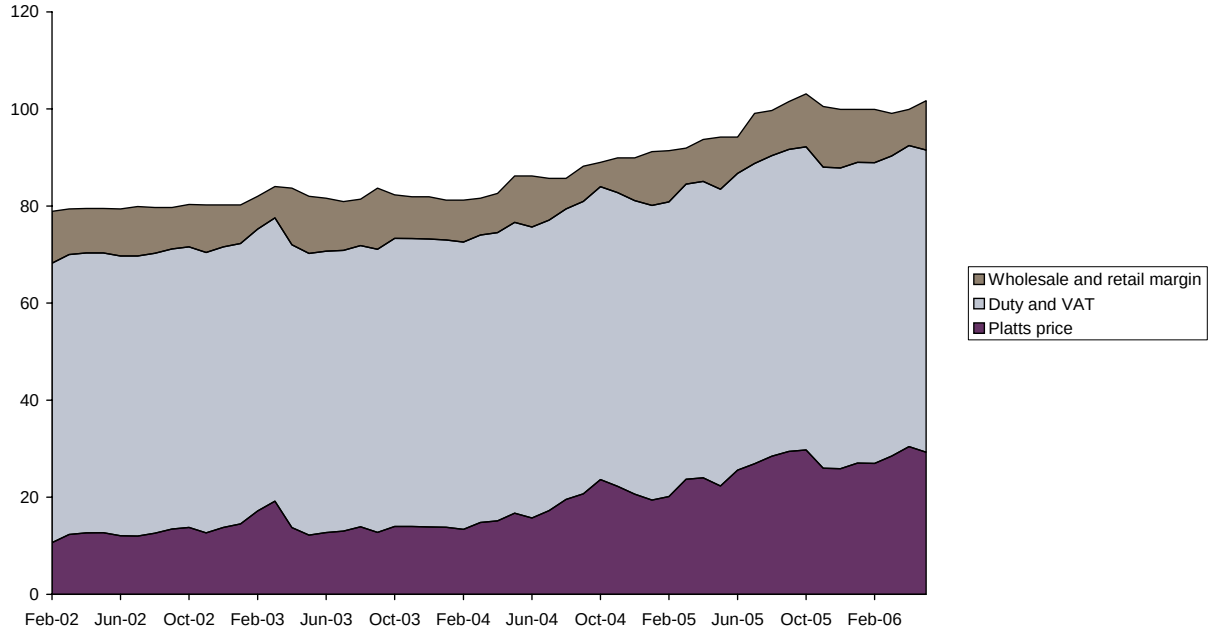
Figure 3.2 Breakdown of unleaded petrol prices in the Isle of Man (ppl)



Sources: Isle of Man Treasury, Platts, UK DTI, Oxera calculations.

[15] The wholesale margin must also cover any administration costs and, in the case of Manx Petroleums, representation of Shell (UK) to the retailers.

Figure 3.3 Breakdown of diesel prices in the Isle of Man (ppl)



Note: 2002 prices are an average of February to December 2002 prices.
Sources: Isle of Man Treasury, Platts, UK DTI, Oxera calculations.

Although tax and duty represent the largest proportion of the cost of petrol supply, not only are they outside the control of the companies themselves, but they have also changed relatively little over the course of the period under investigation, as can be seen from Tables 3.1 and 3.2.[16]

[16] The increases in tax and duty are a result of VAT being a proportionate tax (ie, 17.5% of the price of the commodity), rather than a fixed pence per litre (ppl) cost, like duty. Duty is levied at 47.10ppl on ultra-low-sulphur unleaded petrol and diesel.

Table 3.1 Breakdown of unleaded petrol prices in the Isle of Man (ppl, cash prices)

	2002	2003	2004	2005	January–May 2006	Average 2002–05	Change 2002–05 ppl	Change 2002–05 %	Change 2002–May 2006 ppl	Change 2002–May 2006 %
Commodity price	12.0	13.2	16.0	21.4	25.6		9.4	78	13.6	113.3
Duty and VAT	57.3	58.1	59.6	61.0	61.5		3.6	6.5	4.2	7.3
Wholesale margin	5.1	6.5	6.1	7.6[2]		6.3	2.5	49		
Retail margin[1]	2.9	2.8	2.5	2.9[2]		2.8	0	0		
Wholesale and retail margin	8.0	9.3	8.6	10.7	9.7	9.1			1.7	21.3
Retail price	77.2	80.6	84.2	93.1	96.9		15.9	21	19.7	25.5

Note: In this and all subsequent tables, the retail price may not add up to its components due to rounding. [1] The retail margin in the Isle of Man market for premium unleaded petrol has been calculated as the average retail price obtained from the Isle of Man Treasury *less* the average of Shell (UK) and Total (IoM)'s Schedule Prices weighted by their volumes. [2] The retail margin and wholesale margin calculations for 2005 are based on confidential company data from January 2005 to November 2005. The commodity price, wholesale and retail margin, and retail price figures are based on data from January to December 2005.
Source: Oxera analysis, company accounts, Isle of Man Treasury.

For unleaded petrol, two factors account for around 80% of the price increase over the period from 2002 to 2005: an 80% increase in the commodity price and a 50% increase in the wholesale margin. While the commodity price of diesel has effectively doubled over the period, the movements in margins are strikingly different to those observed for unleaded petrol—wholesale margins have actually fallen by 20%, whereas retail margins have increased by 79%.

Table 3.2 Breakdown of diesel prices in the Isle of Man (ppl, cash prices)

	2002	2003	2004	2005	January–May 2006	Average 2002–05	Change 2002–05 ppl	Change 2002–05 %	Change 2002–May 2006 ppl	Change 2002–May 2006 %
Commodity price	12.6	14.3	17.8	25.1	28.4		12.5	99	15.8	125
Duty and VAT	57.7	58.4	59.9	61.5	62.0		3.8	7	4.3	7.5
Wholesale margin	7.0	6.1	4.8	5.6[1]		5.9	–1.4	–20		
Retail margin[1]	2.4	3.4	3.1	4.3[1]		3.3	1.9	79		
Wholesale and retail margin	9.4	9.5	7.9	10.1	9.7	9.2	0.3	3.2	0.3	3.2
Retail price	79.7	82.1	85.6	96.7	100.1		16.7	21	20.4	25.6

Note: 2002 prices are an average of February to December 2002 prices. [1] The wholesale margin and retail margin calculations for 2005 are based on confidential company data from January to November 2005. The remainder of the calculations for 2005 represent data from January to December 2005.
Source: Oxera analysis, company accounts, Isle of Man Treasury.

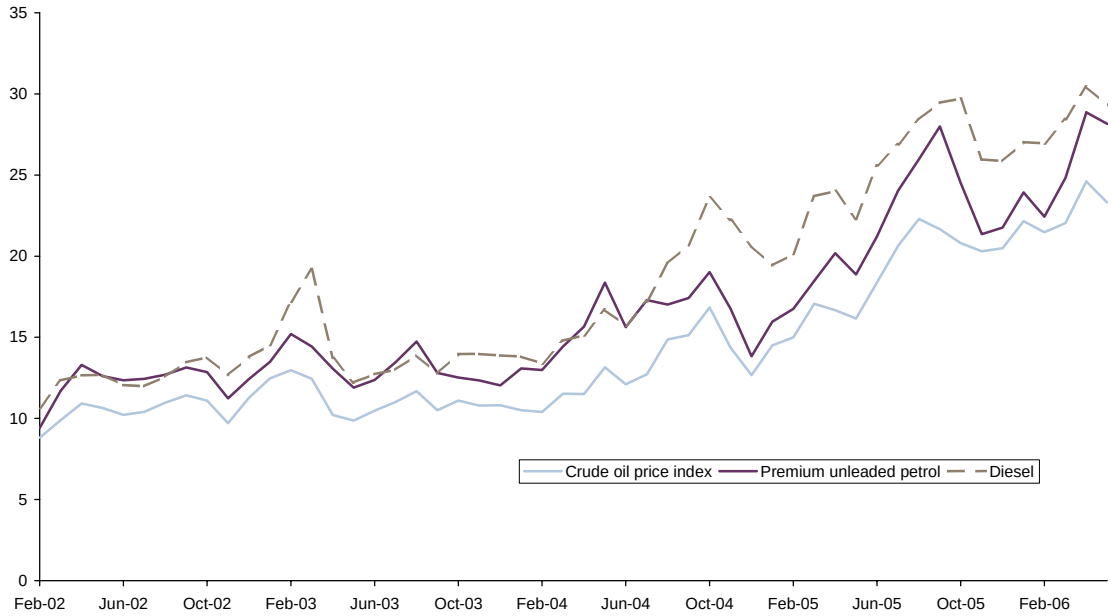
3.1.2 Commodity price

As the above discussion highlights, the largest increase in costs in the Isle of Man has arisen due to the higher commodity price of petroleum products. There is a liquid, competitive and transparent market for oil and derivative products against which most sales contracts are set. The fuel importers, Total (UK) and Shell (UK), base their product prices on those published by recognised price reporters on transactions undertaken at the Amsterdam-Rotterdam-Antwerp (ARA) hub. These prices reflect several market factors including:

– the underlying price of crude oil, the product from which petrol and diesel are derived through refining processes;
– the current supply of the product in the market;
– seasonal demand variation—as mentioned above, diesel and heating oil are partial substitutes, so diesel prices may rise in winter when demand for heating oil also increases.

The price of crude oil has reached historical highs over the last few years as a consequence of increasing global demand for oil, particularly from growing economies such as India and China, exacerbated by supply shocks, such as instability in the Middle East, the impact of Hurricanes Katrina and Wilma, and, more locally, the explosion in November 2005 at Buncefield oil depot. Although there is not a one-for-one relationship between crude oil and petrol or diesel prices, Figure 3.4 shows that the trend in the three products is similar.

Figure 3.4 Crude oil, unleaded petrol and diesel prices (ARA, ppl), February 2002 to May 2006



Source: Platts data, UK DTI.

This recent increase in crude oil prices has been a driver for increased costs in many markets, as is evidenced in the following discussion of the UK–Isle of Man differential.

3.1.3 UK–Isle of Man retail price differential

Historically, petrol in the Isle of Man has been sold at a premium relative to the UK. Over the period from 2002 to 2005, the average premium for premium unleaded was 4.05ppl and for diesel the comparable figure was 4.1ppl. As Table 3.3 illustrates, this premium had been narrowing from 2000 to 2004, although this trend was reversed in 2005, with substantial increases in the estimated differential.

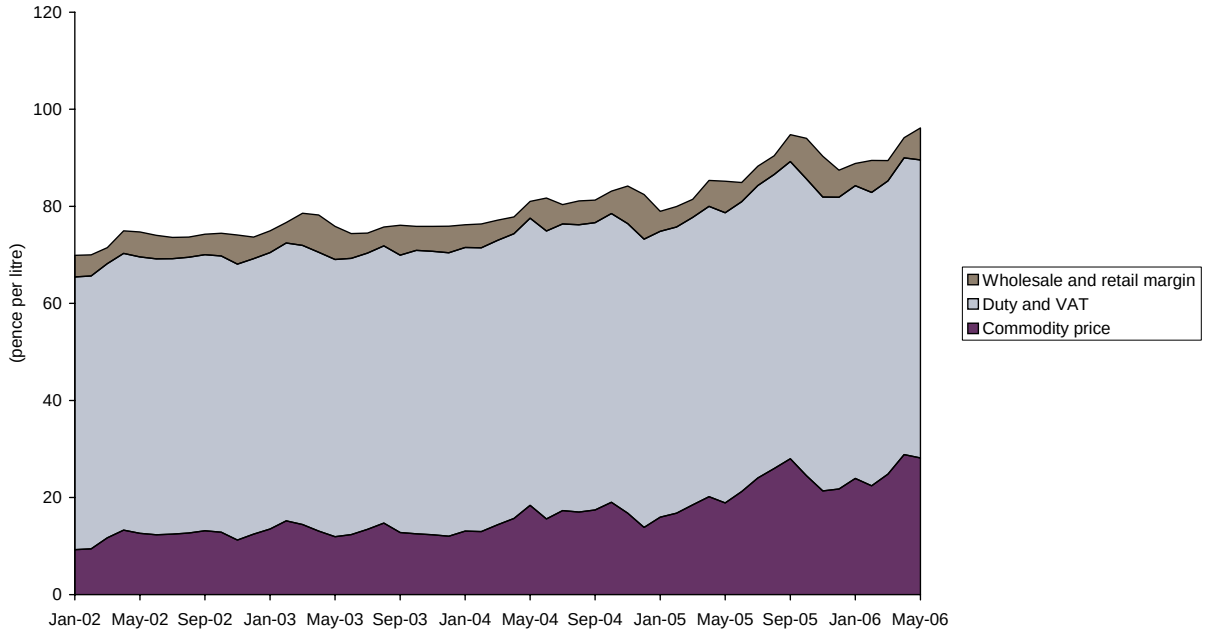
Table 3.3 Average unleaded petrol and diesel retail price comparison with the UK (ppl) (cash prices net of VAT and duty)

	2000	2001	2002	2003	2004	2005	January–May 2006
Unleaded							
Isle of Man	24.2	22.7	19.9	22.5	24.5	32.2	35.3
UK	19.4	18.0	16.5	18.6	21.2	26.7	31.4
Differential	4.8	4.6	3.4	3.9	3.4	5.5	3.9
Diesel							
Isle of Man	27.0	25.0	23.0	23.8	25.8	35.2	38.1
UK	20.7	19.9	18.4	20.2	22.6	30.2	34.0
Differential	6.3	5.1	4.6	3.6	3.2	5.0	4.1

Source: Isle of Man Treasury, UK DTI.

Disaggregated wholesale and retail margins in the UK are not available. However, as shown in Table 3.4 and Figure 3.5, the main drivers of higher unleaded petrol prices in the UK have been rises in the commodity price (accounting for 70% of the increase) and in duty (25% of the increase). Unlike the Isle of Man, there has been very little change in the combined wholesale and retail margins.

Figure 3.5 Breakdown of unleaded petrol prices in the UK



Source: UK DTI, Platts.

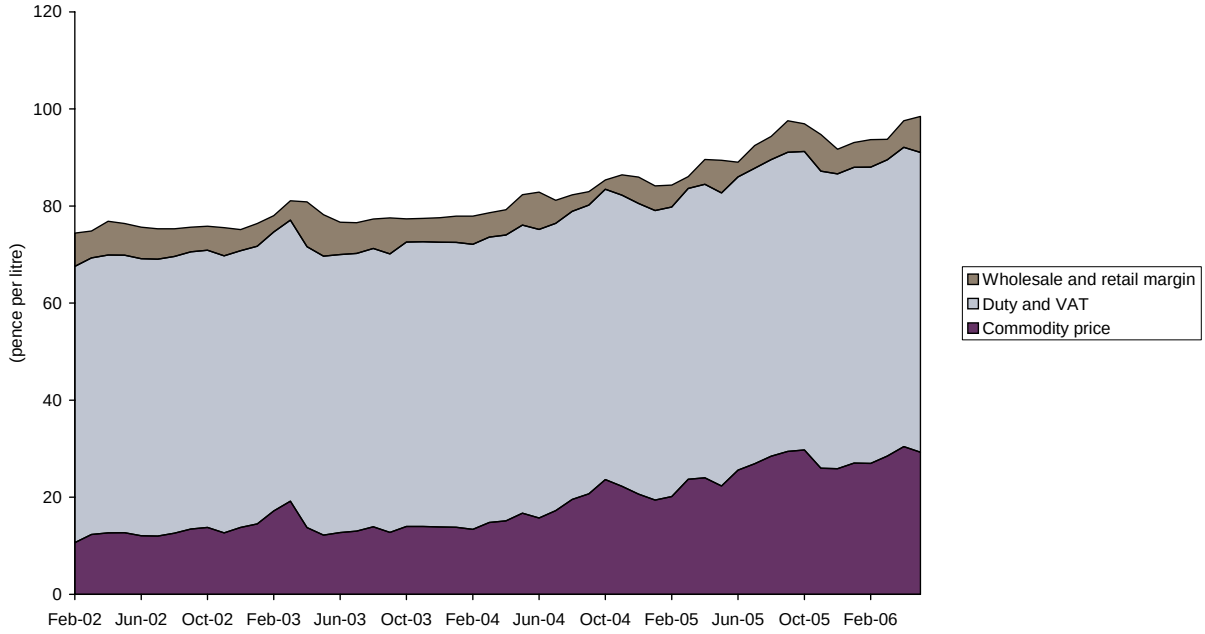
Table 3.4 Breakdown of unleaded petrol prices in the UK (cash prices, ppl)

	2002	2003	2004	2005	January–May 2006	% change 2002–05	% change 2002–May 2006
Commodity price	12.0	13.2	16.0	21.4	25.6	78	113
Duty and VAT	56.7	57.5	59.0	60.0	60.7	6	7
Wholesale and retail margin	4.6	5.4	5.2	5.3	5.2	15	13
Retail price	73.2	76.0	80.2	86.7	91.6	18	25

Sources: Isle of Man Treasury, Platts, UK DTI, Oxera calculations.

While the commodity price movement is greater than the movement in retail prices for diesel over the period, the average wholesale and retail margins in the UK have been falling over the period (see Figure 3.6 and Table 3.5). When compared with the Isle of Man margins (reported in Tables 3.1 and 3.2), it can be seen that the Isle of Man wholesale margin alone is greater than the combined margin in the UK. Although it has been reported that UK distribution businesses have not been profitable during this period. Understanding the reasons for these differences will help to inform the assessment of the reasonableness of current tariffs.

Figure 3.6 Breakdown of diesel prices in the UK



Note: 2002 prices are an average of February to December 2002 prices. 2005 prices are an average of January to November 2005 prices.
Sources: Isle of Man Treasury, Platts, UK DTI, Oxera calculations.

Table 3.5 Breakdown of diesel prices in the UK (ppl)

	2002	2003	2004	2005	January–May 2006	% change 2002–05	% change 2002–May 2006
Commodity price	12.6	14.3	17.8	25.1	28.4	99	125
Duty and VAT	57.1	57.7	59.3	60.6	61.3	6	7
Wholesale and retail margin	5.9	5.9	4.8	5.1	5.6	–14	–5
Retail price	75.5	77.9	81.9	90.9	95.3	20	26

Note: 2002 prices are an average of February to December 2002 prices.
Sources: Isle of Man Treasury, Platts, UK DTI, Oxera calculations.

3.2 Margins and market competition

Wholesale and retail margins are influenced by the costs associated with the distribution and retailing of petrol and the underlying market conditions. Given that the tax and duty regime in the Isle of Man is the same as that in the UK, and the commodity is internationally traded, differences in the price of petrol between the Isle of Man and the UK should largely reflect differences in the wholesale and retail margins. The remainder of this section reviews the reported costs associated with the wholesale and retail margins in the Isle of Man and the extent to which the differential against the UK price can be justified.

3.2.1 Wholesale margins

The wholesale costs for the Isle of Man can be expected to be different from those in the UK mainland due to the nature of the delivery infrastructure. In the UK, the

majority of wholesale distribution is direct by tanker from the refinery, or from a storage depot fed by an inland pipeline system. In contrast, suppliers in the Isle of Man receive deliveries of fuel by sea from coastal refineries and have their own storage infrastructure.

Furthermore, fuel is distributed in the Island using road tankers of up to 23,000 litres, whereas the average size of UK road tankers is 29,000 litres; thus, there may be economies of scale from larger operations in the UK.

Shipping costs

The shipping costs reported by Manx Petroleums and Total (IoM) (presented in Table 3.6) represent the charges made by Shell (UK) and Total (UK)to their respective distributors in the Island, covering the shipping cost and the associated administrative costs. In addition, an independent quotation for a charter delivery is presented to elicit an implied level for the administration charge.

There are substantial differences in the premia charged by the two companies (in particular, on diesel shipments). Furthermore, the administration cost varies between the two fuels, although there is a much narrower range of costs associated with Shell (UK)'s premium in the market than that of Total. However, there is no easily accessible evidence to determine whether the administrative costs are reflective of the actual costs of administrating the deliveries, but the large difference in premia between the two import suppliers may merit further investigation.

Table 3.6 Estimated import costs to the Isle of Man

	Ultra-low-sulphur unleaded petrol	Diesel (DERV 0.005% or less sulphur)
Shipping charges	0.97-1.15	1.33 -1.83
Import costs[1] (pence per litre)	0.59	0.67
Estimated administrative cost	0.38 - 0.56	0.66 - 1.16

Note: [1] A quote on shipping costs was obtained from Harris and Dixon Shipbrokers in London, which estimated the cost of shipping fuel from Milford Haven to the Isle of Man to be £18,000–£19,000 per 2,300 tonne shipment. The per-litre costs of shipping each of the fuels were calculated using the litre/tonne conversion factors given in DTI (2005), 'Digest of United Kingdom Energy Statistics 2005', May. One supplier has informed OFT that shipping charges have increased by almost 30% with effect from 1st July 2006.
Source: Manx Petroleums and Total (IoM)

Harbour dues

Harbour dues of £2.61 per tonne (or 0.19ppl for unleaded and 0.22ppl for diesel) are levied on fuel shipments at the Isle of Man. These add to the final tariffs of the fuels in comparison to those in the UK.

Costs of storage

The reported costs of storage in the Island are in the range of 0.4-0.7ppl. This cost has been derived from the charges levied by one company and the accounting information provided by the other.

Costs of on-Island distribution

CPL Petroleum, Manx Petroleums and Total (IoM)'s costs of on-Island distribution can be estimated using the accounting and other information that they submitted in

response to Oxera's information request. The information implies on-Island distribution costs in the range of 0.64–2.12ppl. This range reflects the information provided by the various companies.

Identified wholesale costs

Only in relation to import costs is there an identified differential in the costs associated with diesel and unleaded petrol wholesale costs. Thus, the reported wholesale costs incurred in the Isle of Man in 2005 have been estimated (see Table 3.8 below) and found to lie in the range of 2.5– 4.16ppl for unleaded petrol and 2.89 – 4.87ppl for diesel.

Against the estimated wholesale margins of 7.6ppl and 5.6ppl for 2005, this implies wholesale profit in the range of 3.44–5.10ppl for unleaded petrol and 0.73–2.71ppl for diesel. Thus, in particular for wholesale unleaded petrol, there appears to be a substantive return being earned.

Some of this estimated return may not actually accrue to the distribution companies. The purchase cost of the fuels has been estimated using monthly average ARA spot prices and the reported shipping costs (including the administration charge and sales premium).

However, comparing this with reported wholesale purchase costs gives a different picture and actual purchase costs for one distributor were found to be 0.6ppl and 0.3ppl higher than estimated for unleaded petrol and diesel respectively. The actual reported prices for the other distributor were 0.1ppl lower and 2.8ppl higher than the estimated purchase costs for unleaded petrol and diesel, respectively.

The differences in these figures may arise due to the nature of the contractual arrangements between the distributor and the oil companies, as a result of the timing of purchases in the market or due to a lack of competition between the oil companies.

Only in relation to import costs is there an identified differential in the costs associated with diesel and unleaded petrol wholesale costs. Thus, the reported wholesale costs incurred in the Isle of Man in 2005 have been estimated (see Table 3.8 below) and found to lie in the range of 2.5–4.16ppl for unleaded petrol and 2.89–4.87ppl for diesel.

Table 3.7 Estimation of wholesale costs and wholesale profits (ppl)

	Lower bound of wholesale costs	Upper bound of wholesale costs
Petrol		
Premium and shipping charges made by importers	0.97	1.15
Harbour dues	0.19	0.19
Storage costs	0.7[1]	0.7
Distribution costs	0.64	2.12
Wholesale costs	2.5	4.16
Wholesale margin in 2005[2]	7.6	7.6
Wholesale profits (margin *less* costs)	5.10	3.44
Diesel		
Premium and shipping charges made by importers	1.33	1.83
Harbour dues	0.22	0.22
Storage costs	0.7	0.7
Distribution costs	0.64	2.12
Wholesale costs	2.89	4.87
Wholesale margin in 2005[2]	5.6	5.6
Wholesale profits (margin *less* costs)	2.71	0.73

Source: Total (IoM), Manx Petroleums and CPL Petroleum.

The implication of these costs is that there remains a healthy margin in unleaded petrol and diesel. From the perspective of the distribution companies, as the retail market may be seen as a single market, the impact on company performance should also be considered across both fuels.

For example, in the Island in 2005, 66% of the volume of road fuels delivered was unleaded petrol and 34% diesel. Table 3.9 shows how the road fuels market has performed across both fuels. The average wholesale margin has been calculated at 6.9ppl. This is the average of the margins in the unleaded petrol (7.6ppl) and diesel (5.6ppl) markets, weighted by the share of these fuels in the road fuels market—i.e.:

$$(0.66 \times 7.6) + (0.34 \times 5.6) = 6.9\text{ppl}.$$

The average cost of a distribution business has been estimated in a similar manner to lie between 2.6ppl and 4.4ppl. The lower bound (upper bound) is the weighted average of the lower bounds (upper bounds) of the costs of distributing petrol and diesel from Table 3.8. The imputed wholesale profit is calculated as the difference between the average wholesale margin and the average reported wholesale cost range.

The additional wholesale cost payment over that based on average ARA data is estimated to lie in the range of 0.5 to 0.9. This is calculated separately for Manx Petroleums and for Total (IoM), as an average of their additional payments for unleaded petrol and diesel.

Removing this additional wholesale cost payment made to Shell (UK) or Total (UK), from the wholesale margin, the actual return earned by the distributor is in the range 1.6 to 3.8ppl. This suggests that a part of the wholesale margin on retail fuels is accruing off the Island to Shell (UK) and Total (UK).

Table 3.8 Road fuel market costs for on-Island distributors (2005, ppl)

Average wholesale margin	6.9
Average reported wholesale cost range	2.6 to 4.4
Imputed wholesale profit	2.5 to 4.3
Incremental wholesale purchase cost	0.5 to 0.9
Actual wholesale profit to distributor	1.6 to 3.8

Source: Manx Petroleums, Total (IoM), Platts, Oxera calculations.

In addition, 2005 saw a significant increase in wholesale margins over previous years—1.5ppl higher for unleaded petrol and 0.8ppl higher for diesel. Thus average margins over the whole period have been lower than at present. The main outstanding question is whether this is a reversal in trend or a temporary shift in margins. There is insufficient evidence to draw any firm conclusion. However, the increase in margins has coincided with the exit of Esso from the retail market. It is Oxera's understanding that Esso adopted a policy of pricing its petrol on-Island comparably with a benchmark site, or region, in the UK. Thus, there was effectively an external benchmark price that would reflect the declining trend in margins observed in the UK market over the same time period, which, since Esso operated the largest station in the Island, would influence the pricing decisions of other stations. Without this benchmark pricing strategy, price differentials appear to be rising; moreover, there is little variation across the Island itself.

Comparison with UK wholesale costs

One way in which to cross-check whether the wholesale margin is excessive is to compare the costs with those in the UK, adjusting for differences in the underlying structure of the markets. Little public data is available that would allow this type of comparison to be undertaken in a detailed manner, as it is not possible to strip out the wholesale margin in the UK explicitly. However, there are several reasons why the Isle of Man may have higher wholesale costs than the UK, rather than this reflecting higher profit:

– the higher costs of importation;
– lack of economies of scale in delivery;
– higher input costs, such as land rental or wages.

A number of studies have sought to quantify the difference associated with lower-volume and more complex delivery systems. A UK Office of Fair Trading (OFT) report in 2001 on the price differential between the Highlands and Islands and the UK average retail price estimated wholesale costs in the Highlands and Islands to be around 0.92ppl higher (in 2005 prices) than those of the UK average (including costs of shipping, storage and delivery to remote filling stations).[17]

The above figure should capture all wholesale costs and the lack of economies of scale in the supply chain. In addition, there may be differences in the underlying cost

[17] OFT (2000), 'Petrol and Diesel Pricing in the Highlands and Islands', July.

of the resources used (e.g., labour costs). Average salaries in the Isle of Man are known to be comparable to those in the UK.[18] However, a comparison of the levels of wages and salaries incurred by one of the local distributors (and an equivalent UK operator) illustrates a persistent differential in wages paid in fuel distribution. This comparison has been made using the accounting information provided by the company and the difference amounts to 0.6ppl (see Table 3.10). This differential may in part reflect the impact of lower economies of scale in the operation of a distribution business in the Isle of Man.[19]

Table 3.9 Wage costs (ppl)

	2004	2005
Isle of Man Distributor	1.47	1.49
Transport	*1.01*	*1.01*
Overheads	*0.46*	*0.49*
UK Distributor	0.86	0.86
Differential between wage costs in the Isle of Man and in the UK	**0.61**	**0.63**

Note: NHI, wages and social security included in wage costs. Pensions not included in wage costs. Totals may not sum due to rounding.

3.2.2 Retail margins

The retail margin covers the costs of running the filling stations and profit margins to the filling stations. In the Isle of Man the fuel suppliers, Shell (UK) and Total (IoM), suggest recommended retail margins to their filling stations. The information Oxera received indicates that the recommended margin from Shell (UK) on 1 litre of unleaded petrol is 3.15ppl and the median of Total (IoM) is 3.95ppl. There are additional charges or subsidies that can affect the actual margin received by a filling station:

– Shell (UK) operates an optional Plus Points system that is charged at 0.28ppl on each litre of petrol delivered and only rebated on Plus Points redeemed (retailers indicated that only around 10–15% of these are actually redeemed)[20];
– both Total (UK) and Shell (UK) offer additional support for refurbishment and improvements in safety standards at forecourts displaying their brand. This is often through an additional rebate on the Schedule Price paid, thereby funding extra investment in the retail site.

Thus, there are factors that may both increase or decrease the actual margin earned by petrol retailers.

Nevertheless, the average retail margins over the period 2002–05 of around 2.8ppl for unleaded petrol and 3.3ppl for diesel do not seem excessive in relation to reported margins in the UK. For example, average retail margins in the UK were estimated at 2.7ppl in 1997,[21] and retail margins of up to 5.5ppl were estimated as

[18] According to the Isle of Man Earnings Survey 2005, average Isle of Man wages are only 96% of those in the UK. See http://www.gov.im/lib/docs/treasury/economic/earnings/earnsurvrep05.pdf

[19] This should be captured in the 0.92ppl figure referred to above.

[20] As mentioned previously, participation in this scheme is optional.

[21] Mintel (1997), 'Petrol Forecourt Retailing', September.

required by filling stations with a throughput of 1.7 million litres to remain viable.[22] In this respect, the average2005 Isle of Man retail margins of 2.9ppl for unleaded petrol and 4.3ppl for diesel appear reasonable, given the 2.08m litre average throughput.[23]

To put this into context, a filling station with a throughput of 2m litres (the average in the Isle of Man), earning the 2.9ppl average margin in 2005, would make £58,000 in the year, to cover wage costs, utility bills, rental costs and rates, and any necessary maintenance, as well as provide a profit to the operator. This is not a significant profit margin for a filling station, which is why two broad trends have been observed in recent times:

– closure of a number of stations, leading to higher volumes per site—since the last major petrol price review in 1995, a third of the stations then in operation have closed; and
– an increase in revenue from non-fuel activities—e.g., convenience stores, car washes.

Thus, for filling stations to operate as viable businesses at the current level of throughput, revenues from forecourt shops are essential. If shop revenues were not present, the average throughput required would have to be substantially higher, implying a further drop in the number of stations in the Island.

Comparison with UK margins

Again, there are reasons why the Isle of Man may exhibit a higher retail margin than that seen in the UK:

– lower throughput;
– higher costs of operation;
– less intense competition.

One of the most important trends affecting retail margins in the UK has been the emergence of supermarkets as competitors to company- or dealer-owned sites. While petrol sales in the UK declined by 15% from 1992 to 2004, supermarkets' share of the market has risen from 11% in 1992 to over 30% in 2004 (see Table 3.11).

Table 3.10 Characteristics of UK filling stations by ownership

Owner	Number of outlets	Average throughput (thousand litres/yr)	Market share (%)	Outlet share (%)
Company	2,716	4,706	35.5	26.2
Dealer	6,506	1,925	34.1	62.8
Supermarket	1,132	9,791	30.6	10.9
UK average	10,354	3,529	100.0	100.0

Source: Forecourt Trader (2005), 'Fuel Market Review 2005', June.

The development of supermarkets as retailers of road fuels has not only intensified the level of competition, but has also resulted in substantially higher average

[22] Wood Mackenzie Consultancy (1995), 'UK Price War: The tiger still stalks'.

[23] The required retail margin may be expected to increase with declining throughput, so as to cover the costs of forecourt retailing.

throughput in the UK market. Thus, the ppl margin necessary to break even has fallen, with the consequent ability to charge lower prices. This is evidenced in Table 3.12, which sets out average prices in the UK for all sites irrespective of ownership, all sites excluding supermarkets, and dealer-owned sites alone.

The 2005 differential in the Isle of Man–UK prices of unleaded petrol declines from 4.5ppl to 4.0ppl when supermarket sites are excluded. Furthermore, if dealer-owned sites alone are considered, the differential falls to 3.6ppl. This implies that 0.9ppl (4.5ppl *less* 3.6ppl) of the differential is due to a combination of higher throughput in the UK market and the intensity of competition introduced as a result of the existence of supermarkets. While it is not possible to split this incremental benefit between the throughput effect and the competition effect, it does indicate that introducing new competitors with alternative marketing strategies and associated products or services may encourage further cost reductions.

Table 3.11 Isle of Man unleaded petrol prices compared with UK prices differentiated by ownership of filling stations, average 2005 (ppl)

	Final retail price	Duty and tax	Price net of duty and tax	Differential with the Isle of Man
Isle of Man	92.9	60.9	32.0	–
UK average (dealer-, company- and supermarket-owned sites)	87.7	60.2	27.5	–4.5
UK (dealer- and company-owned sites)	88.3	60.2	28.0	–4.0
UK (dealer-owned sites)	88.7	60.3	28.4	–3.6

Note: UK prices from September 28th 2005. Unweighted mean of prices calculated.
Source: www.forecourttrader.co.uk (news section); Isle of Man Treasury Department.

Similarly, diesel prices in the Isle of Man can be compared with UK prices split by ownership. Excluding supermarket sites, the 2005 Isle of Man–UK price differential declines from 4.2ppl to 3.8pl, indicating that the impact of supermarket sites equates to 0.4ppl. Analysing prices at dealer-owned sites alone indicates that the lower throughput in the Isle of Man and less intense competition than in the UK contributes to 0.9ppl[24] (4.2ppl *less* 3.4ppl) of the Isle of Man–UK differential in diesel prices.

[24] Calculations may not sum due to rounding assumptions.

Table 3.12 Isle of Man diesel prices compared with UK prices differentiated by ownership of filling stations, average 2005 (ppl)

	Final retail price	Duty and tax	Price net of duty and tax	Differential with the Isle of Man
Isle of Man	96.4	61.5	35.0	
UK average (dealer-, company- and supermarket-owned sites)	91.5	60.7	30.8	–4.2
UK (dealer- and company-owned sites)	92.0	60.8	31.2	–3.8
UK (dealer-owned sites)	92.5	60.9	31.6	–3.4

Note: UK prices from September 28th 2005. Unweighted mean of prices calculated.
Source: www.forecourttrader.co.uk (news section); Isle of Man Treasury Department

3.2.3 Accounting for the differential in prices

In 2005, the average differential between prices of unleaded petrol net of tax in the Isle of Man and the UK was 5.5ppl (Table 3.3). The above discussion suggested that the following can be identified as justifiable reasons for this differential:

– 0.92ppl for higher distribution costs;
– harbour dues of 0.19ppl;[25]
– 0.9ppl due to higher average throughput of filling stations in the UK and greater competition.

This implies that, in 2005, 3.5ppl was not explained by identified cost differentials. Over the period 2002 to 2005, against an average differential of 4.05ppl, 2ppl is unexplained by the costs above.[26] There are several potential explanations for this:

– there are further incremental costs on distribution related to shipping that are not all accounted for in the comparison to date;
– as discussed in relation to Table 3.9, the wholesale cost of purchase is inflated by 0.5 to 0.9ppl above the expected efficient cost of purchase;
– the wholesale business in the UK is not very profitable—the OFT study in 2000 indicated that it earned no profit. Thus, some additional return would be necessary to sustain the current distribution network in the UK. Section 5 studies the profitability of the distribution companies in the Isle of Man to find that, on average, their return on sales is 2ppl, which explains the majority of the remaining differential.

3.3 Summary

Having reviewed the petrol and diesel markets and the costs and margins earned at different points in the supply chain, the main conclusions are that:

[25] Conversion from £2.61 per tonne.

[26] This figure differs from those presented in Tables 3.12 and 3.13 as they are point estimates and the analysis undertaken has reviewed the longer-term trend in price differentials.

– retail margins are relatively low, in particular for small sites or those with average throughput. However, there is little observable price competition among station operators, with an Island-wide price offered by the majority of stations;

– against a benchmarked, internationally reported commodity price, the wholesale margin appears high. Closer inspection reveals that the imported cost of petrol and diesel is around 0.7ppl higher, on average, than that estimated using the external benchmark price, indicating either higher costs associated with supplying to the Island or the accrual of a higher margin by the fuel suppliers in the UK;

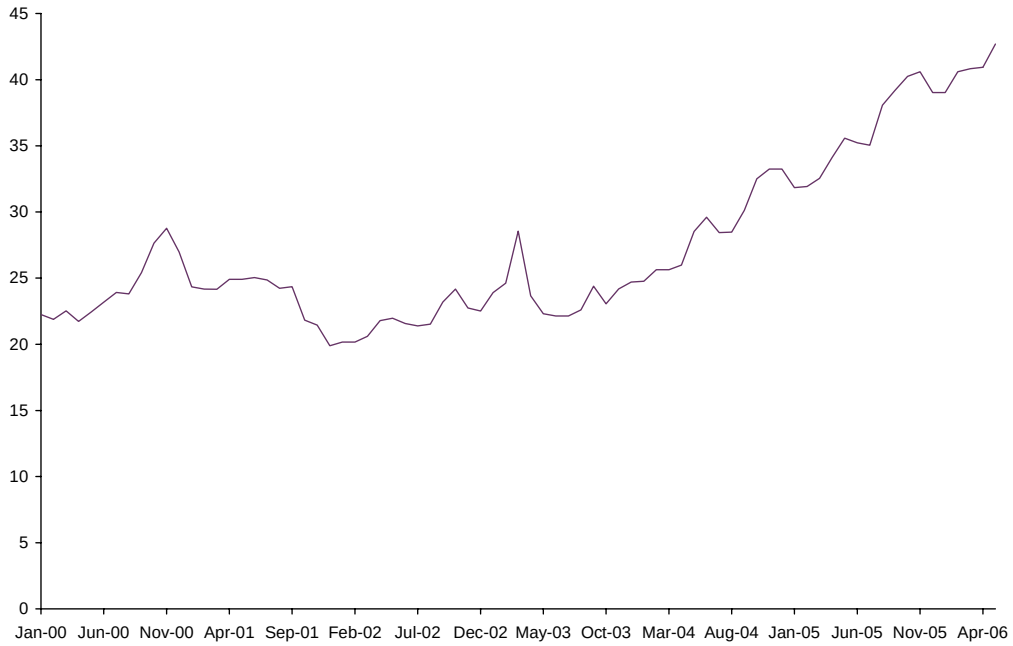
– around 3ppl of the differential with the UK in 2005 cannot immediately be explained as a result of higher distribution and retailing costs on the Island. Although this is explained in part by the additional import costs over the efficient benchmark costs, the majority is due to the fact that wholesale activities were unprofitable in the UK during the period when cost information was available, while a return on sales of 2ppl was being earned in the Isle of Man.

4 Heating fuel prices and margins

4.1 Evolution of heating fuel prices

Kerosene and gas oil are the main heating fuels used in the Isle of Man, kerosene being the principal fuel used for domestic heating and gas oil being the major fuel sold to the commercial sector. Over the last six years, kerosene tariffs in the Isle of Man have increased by 86% in nominal terms and gas oil tariffs have risen by 64% (see Figures 4.1 and 4.2)[27]. Kerosene tariffs increased from an annual average of 24.2ppl in 2000 to an all-time high of 42.69ppl in May 2006. Similarly, gas oil tariffs rose by 17.4ppl between February 2000 and October 2005.

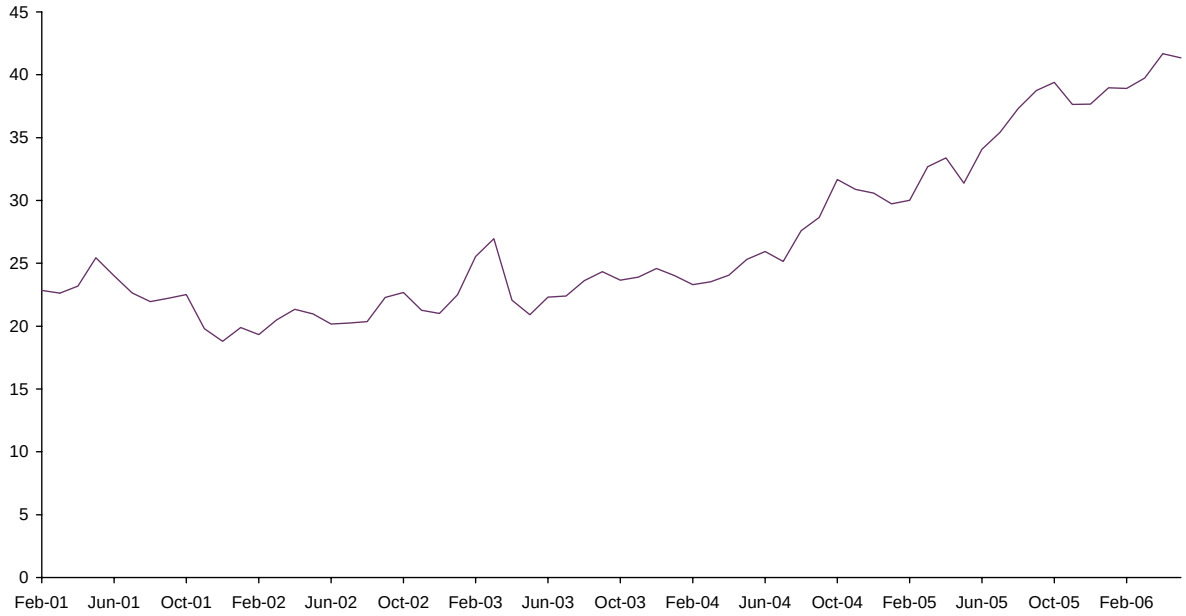
Figure 4.1 Movements in average kerosene tariffs in the Isle of Man (inclusive of taxes), January 2000 to May 2006 (ppl)



Source: Isle of Man Comparative Heating Schedule (CHS).

[27] Kerosene tariffs have been obtained from the Office of Fair Trading Comparative Heating Schedule. This source has not been used for gas oil tariffs as the majority of gas oil is sold to non-domestic customers and thus the Comparative Heating Schedule figures on gas oil are not fully representative of the range of tariffs offered to larger commercial and industrial customers.

Figure 4.2 Movements in average gas oil tariffs in the Isle of Man (inclusive of taxes), February 2001 to May 2006 (ppl)



Source: Manx Petroleums, Total (IoM), Oxera calculations.

4.1.1 Elements of the tariff

These price movements should be explained by movements in the elements that make up the final retail price of kerosene or gas oil paid by the consumer:

- ex-refinery price (commodity price);
- wholesale and retail margin, including:
  - the costs of shipping fuel from Great Britain to the Isle of Man;
  - harbour dues at the Isle of Man;
  - storage and distribution costs;
  - advertising, sponsorship and community projects;
  - profit margin;
- excise duty and VAT.

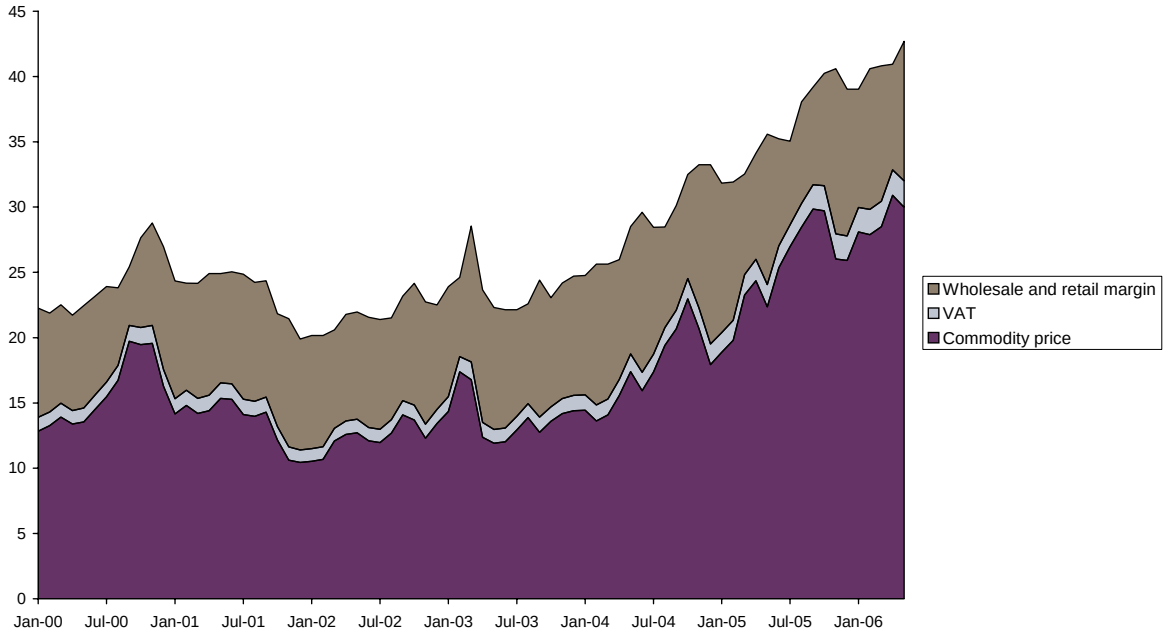
The 'wholesale and retail margin' is determined and calculated here as the tariff (net of duty and VAT) *less* the ex-refinery price.

Changes in tariffs can take place due to changes in any of their components: the commodity price, the wholesale and retail margin, duties and taxes. As commodity prices are quoted in US dollars, changes in the exchange rate will also influence the commodity price paid by distributors in the Isle of Man. Furthermore, changes in the wholesale and retail margin can take place due to changes in underlying costs or profit margins, or reflect underlying inefficiencies in the supply chain.

Figure 4.3 and Table 4.1 show the estimated component cost changes over time. The major cost change has been in the underlying commodity price, which has accounted for over 80% of the change in the tariff. As discussed in section 3 in relation to the road fuels market, the drivers of this commodity price increase are global in nature and have affected all markets. The most recent increases in

wholesale kerosene prices, between 2004 and 2005, have not been fully passed on to customers. Consequently, wholesale and retail margins fell, although they have risen over the whole period under investigation.

Figure 4.3 Movements in average kerosene tariffs in the Isle of Man, January 2000 to May 2006 (ppl)



Source: IoM OFT, Platts, Oxera calculations.

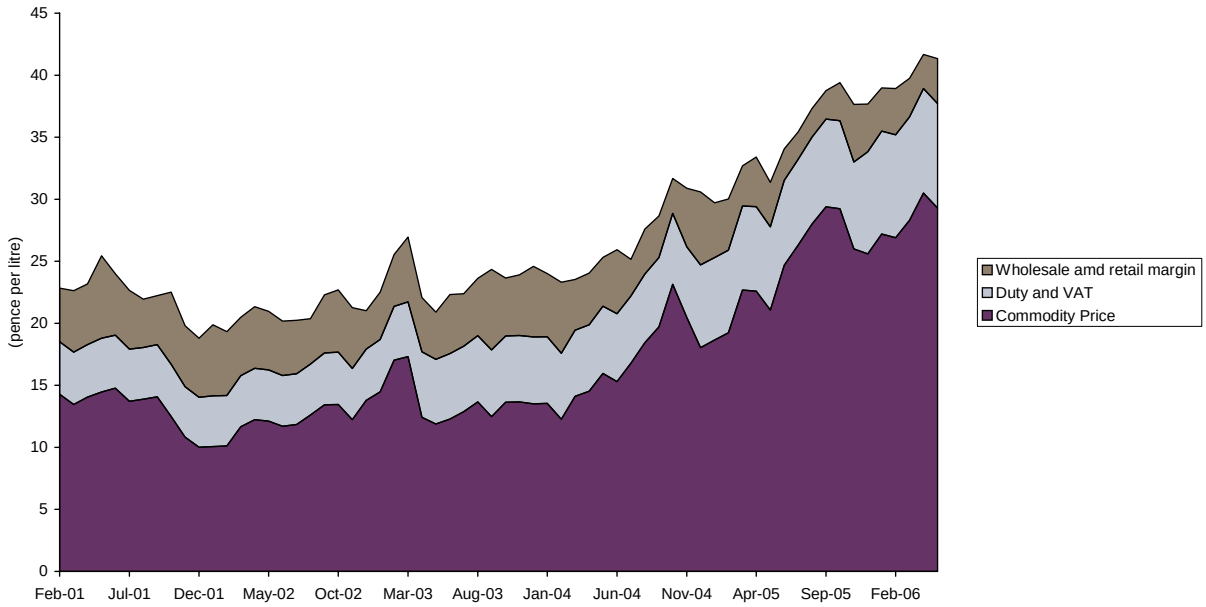
Table 4.1 Components of kerosene tariffs in the Isle of Man, January 2000 to May 2006 (ppl)

	2000	2001	2002	2003	2004	2005	January–May 2006	Change 05 2000– ppl	Change 05 2000– %	Change 2000–May 2006 ppl	Change 2000–May 2006 %
Commodity price	15.7	13.7	12.4	13.9	17.5	25.1	29.1	9.4	60	13.4	85
VAT	1.2	1.1	1.0	1.1	1.4	1.7	1.9	0.5	42	0.7	58
Wholesale and retail margin	7.3	8.9	8.4	8.8	10.0	9.3	9.8	2.0	27.4	2.5	34
Tariff	24.2	23.7	21.8	23.9	28.8	36.1	40.8	11.9	49	16.6	69

Sources: Isle of Man Treasury, Platts, Oxera calculations.

Figure 4.4 and Table 4.2 illustrate the same analysis for gas oil. However, while the commodity price increase once more accounts for the vast majority of the observed price increase (around 86%), the wholesale and retail margin has been squeezed and has fallen over the same period. This has been offset by an increase in taxes associated with gas oil. In addition to VAT, an extra duty payment is imposed on gas oil (see Table 4.3). This duty has increased from 3.13ppl at the start of the period under study to 6.44ppl towards the end, contributing in part to the increase in tariffs.

Figure 4.4 Movements in average gas oil tariffs in the Isle of Man, February 2001 to May 2006 (ppl)



Source: Manx Petroleums, Total (IoM) data, Oxera calculations.

Table 4.2 Components of gas oil tariffs in the Isle of Man, February 2001 to May 2006 (ppl)

	2001	2002	2003	2004	2005	January–May 2006	Change 2004–05 (%)	Change 2001–May 2006
Commodity price	13.3	12.1	13.8	16.9	24.5	28.4	45	113
Duty and VAT	4.2	4.1	5.1	5.6	6.9	8.4	25	100
Wholesale and retail margin	4.5	4.6	4.7	4.3	3.3	3.3	–22	–27
Retail price	21.9	20.8	23.6	26.7	34.8	40.1	30	83

Sources: Manx Petroleums, Total (IoM) data, Platts, Oxera calculations.

Table 4.3 Gas oil duty levels (ppl)

March 9th 1999	3.03
March 21st 2000	3.13
April 9th 2003	4.22
December 3rd 2004	5.22
December 5th 2005	6.44

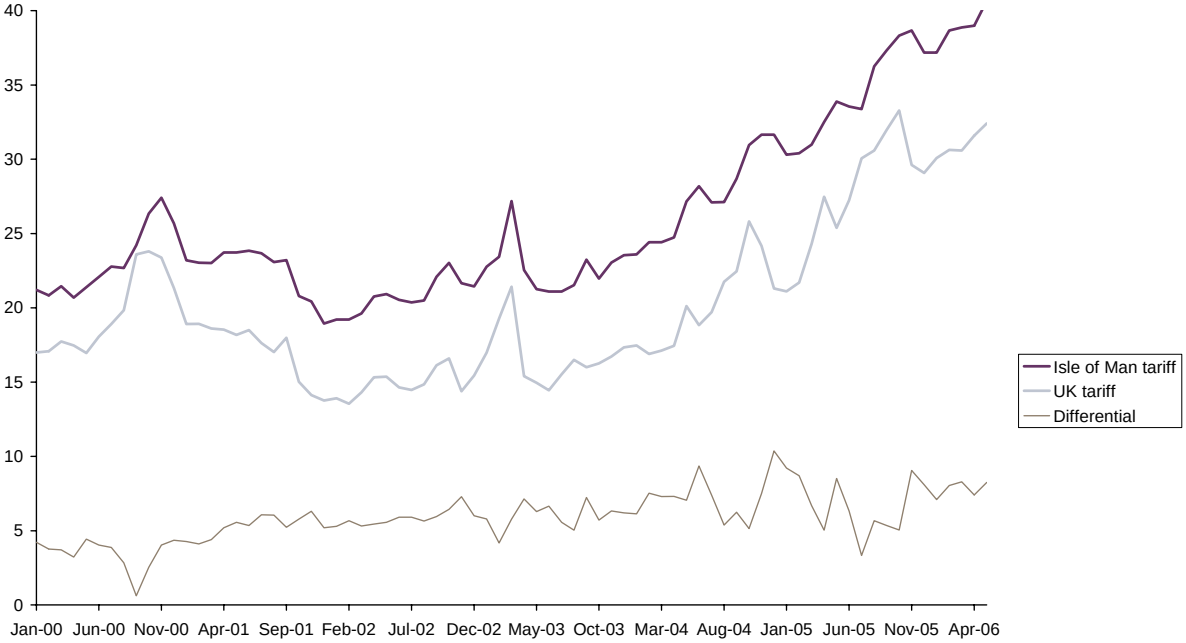
Source: DTI (2005), 'Quarterly Energy Prices', December, p. 121.

4.1.1 Isle of Man–UK price differentials

From 2000 onwards, the average kerosene tariffs (net of duty and vat) have been higher in the Isle of Man than in the UK, as shown in Figure 4.5 and Table 4.4. This differential has increased from just 3.4ppl in 2000 to 6.6ppl in 2005.

In general, tariffs in both jurisdictions have been following the underlying commodity prices and consequently follow a similar pattern of change.

Figure 4.5 Comparison of Isle of Man average kerosene tariffs with average UK tariffs, January 2000 to May 2006 (tariffs net of duty and VAT)

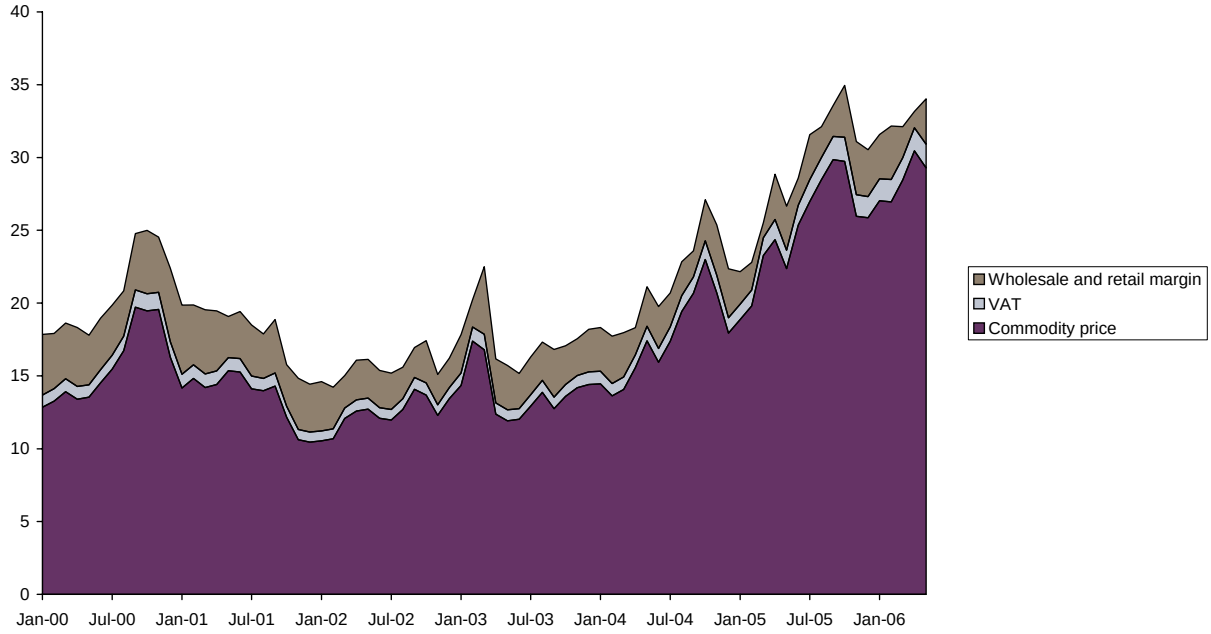


Source: Isle of Man Comparative Heating Schedule, UK DTI, Oxera calculations.

As can be seen from Figure 4.6 and Table 4.4, commodity price increases have more than accounted for the increase in kerosene prices in the UK, wholesale and retail margins having been squeezed. This is contrary to the experience in the Isle of Man, where wholesale margins in the kerosene market have increased over the period. This may also largely explain the increasing differential with the UK.[28]

[28] The UK data is taken from the DTI's energy price data series, which estimates prices for deliveries up to 1,000 litres and is reflective of prices paid on or about the 15th of the month. One company has commented that these prices are not reflective of actual prices in the UK market as they merge non-comparable price series (ie, including large volume aviation and manufacturing prices that are low-price, low-margin), and hence lead to the observed low estimated margins. However, no more consistent data series were available for the study.

Figure 4.6 Breakdown of kerosene prices in the UK (ppl)



Source: UK DTI, Platts.

Table 4.4 Breakdown of kerosene prices in the UK (ppl)

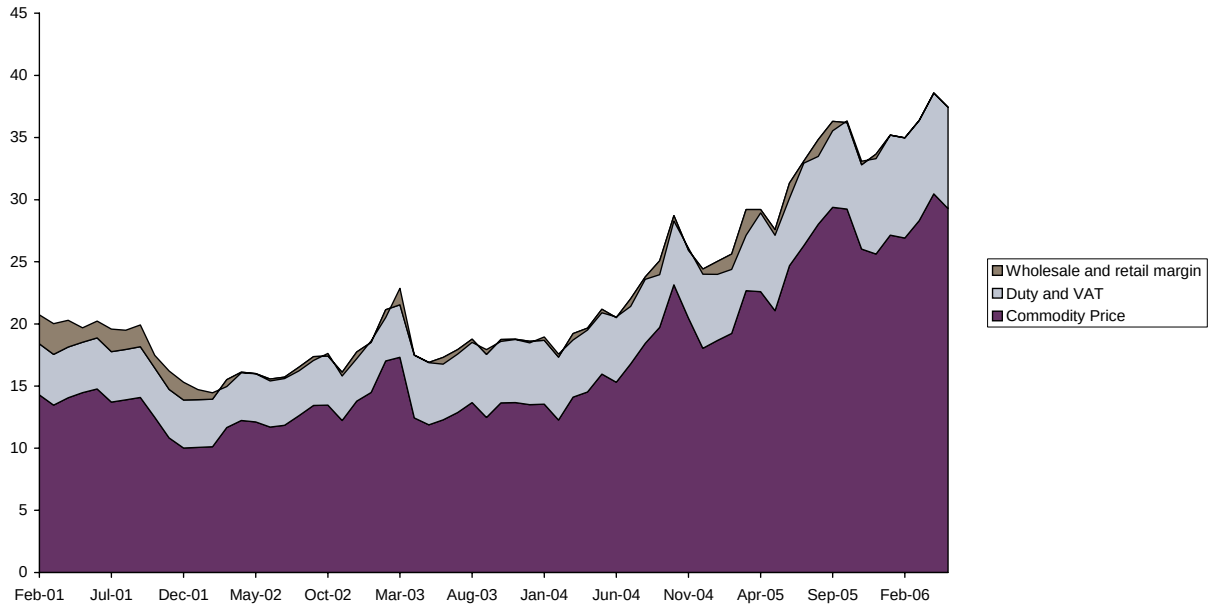
	2000	2001	2002	2003	2004	2005	January–May 2006	Change 2004–05 (%)	Change 2000–05 (%)	Change 2000–May 2006
Commodity price	15.7	13.7	12.4	13.9	17.5	25.1	28.4	43	60	81
VAT	1.0	0.9	0.7	0.8	1.0	1.4	1.6	36	40	60
Wholesale and retail margin	3.9	3.6	2.5	2.9	2.7	2.6	2.6	–8	–33	–33
Retail price	20.6	18.1	15.7	17.6	21.3	29.0	32.6	36	41	58
Differential between wholesale and retail margins in the Isle of Man and in the UK	**3.4**	**5.3**	**5.9**	**6.0**	**7.2**	**7.1**	**8.2**			

Sources: Isle of Man Treasury, Platts, UK DTI, Oxera calculations.

Similar patterns can be observed in the gas oil market, as shown in Figure 4.7 and Table 4.5, where the differential has increased. However, the wholesale margins for gas oil in the UK appear negative. Such low margins in the UK are not likely to be sustainable over time.[29]

[29] The same caveat noted in the previous footnote regarding the UK price data series applies here.

Figure 4.7 Breakdown of gas oil prices in the UK, February 2001 to May 2006 (ppl)



Sources: UK DTI, Platts, Oxera calculations.

Table 4.5 Breakdown of gas oil tariffs in the UK (ppl)

	2000	2001	2002	2003	2004	2005	January–May 2006	Change 2004–05 (%)	Change 2001–05 (%)	Change 2001–May 2006 (%)
Commodity price	14.9	13.3	12.1	13.8	16.9	24.5	28.4	45	84	114
Duty and VAT	4.1	4.0	3.9	4.8	5.3	6.7	8.1	26	64.9	103
Wholesale and retail margin	2.5	1.8	–0.1	0.0	–0.3	–0.6	–2.0	100	–133	–211
Tariff	21.5	19.1	15.9	18.6	22.0	30.3	34.6	38	59	81
Differential between wholesale and retail margins in the Isle of Man and in the UK		**2.7**	**4.7**	**4.7**	**4.8**	**4.5**				

Note: 2001 figures averaged from February to December 2001.
Sources: Platts, UK DTI, Oxera calculations.

4.2 Margins and market competition

The estimated wholesale and retail margins in the Isle of Man over the period 2001–2005 are 9.1ppl for kerosene and 4.3ppl for gas oil.[30] These compare with the corresponding margins in the UK of 2.8ppl and 0.2ppl. As in the case of the road fuels market, the differential with the UK may arise due to necessarily higher costs in the Isle of Man, additional profits, or inefficiencies in the supply chain.

In addition, the price series used for the kerosene analysis are those collected for the purposes of the OFT comparative heating schedule, which are an average of the prices charged by the three suppliers. The actual prices faced by consumers may vary from these not only because of their choice of supplier but also the timing of collection—the prices are collated on the first day of each month—and furthermore because they do not reflect the range of discounts made available to customers by the suppliers.

Review of the information provided to Oxera has indicated that discounts on the reported prices vary by company. Discounts on kerosene (900 litre deliveries) range from 0.15ppl to 1.2ppl, whereas.

For gas oil, similar discounts are available over the headline tariffs reported in the information request (and presented in Figure 4.4). These can be calculated by comparing the headline tariffs with the average reported revenue of the companies. Discounts on gas oil (2250 litre deliveries) for commercial purposes and depending on annual consumption were found to be in the range 1.44ppl to 2.47ppl.

The remainder of this section reviews the reported costs associated with the wholesale and retail margins in the Isle of Man and the extent to which the differential against the UK price can be justified.

4.2.1 Shipping costs

The costs of shipping fuel into the Isle of Man, as indicated by Total (IoM), Manx Petroleums and an independent shipbroker, are detailed in Table 4.6. As in the road fuels market discussion, there appears to be a variance in the administration costs between the two fuels and between the two companies. There is no obvious explanation for this difference in cost.

[30] This uses the information presented in Tables 4.1 and 4.2. The margins are similar over the period 2002–05.

Table 4.6 Estimated import costs to the Isle of Man

	Import costs[1] (ppl)	Shipping charges (ppl)	Implied administrative charge (ppl)
Kerosene (burning oil)	0.64	0.91-0.98	0.27–0.34
Gas oil	0.68	0.85 -1.13	0.17–0.45

Note: [1] A quote on shipping costs was obtained from Harris and Dixon Shipbrokers in London. It estimated the cost of shipping fuel from Milford Haven to the Isle of Man to be £18,000–£19,000 per 2,300 tonne shipment. The per-litre costs of shipping each of the fuels were calculated using the litre/tonne conversion factors given in DTI (2005), 'Digest of United Kingdom Energy Statistics 2005', May. One supplier has notified the OFT that shipping charges have increased by approximately 30% from 1st July 2006.
Source: Manx Petroleums and Total (IoM).

Harbour dues

Harbour dues of £2.61 per tonne (or 0.21ppl for kerosene and 0.23ppl for gas oil) are levied on fuel shipments at the Isle of Man. These add to the final tariffs of the fuels in comparison to those in the UK.

Costs of storage

On the basis of accounting information provided to Oxera, the cost of storage is in the region of 0.7ppl, reflecting, once again, the direct costs of storage or the service charge levied by the companies.

Cost of distribution and retailing

The cost of distributing kerosene and gas oil (taken from one of the company's reported cost data) has been calculated at 2.47ppl.[31]

It is likely that the cost of distribution will be higher for the heating fuels market as the drop sizes are higher in the road fuels market than in the heating fuels market. Therefore, it takes longer to deliver the same amount of fuel than it does in the road fuels market.

The total wholesale costs are therefore anticipated to be in the range 3.94–4.36ppl for kerosene and 3.90–4.53ppl for gas oil (see Table 4.7).

[31] 19% of CPL Petroleum's fuel sales are in the road fuels market, 81% being in the heating fuels market. Assuming the efficient costs of distributing petrol are 0.64ppl (see section 3), 0.64 X 0.19 + (costs of distributing kerosene and gas oil) x 0.81 = 2.12ppl. This implies that the cost of distributing heating fuels is 2.47ppl.

Table 4.7 Estimation of wholesale costs (ppl)

	Lower bound of wholesale costs	Upper bound of wholesale costs
Kerosene		
Premium and shipping charges made by importers	0.91	0.98
Harbour dues	0.21	0.21
Storage costs	0.7[1]	0.7
Distribution costs	2.12	2.47
Wholesale costs	3.94	4.36
Gas oil		
Premium and shipping charges made by importers	0.85	1.13
Harbour dues	0.23	0.23
Storage costs	0.7	0.7
Distribution costs	2.12	2.47
Wholesale costs	3.90	4.53

Source: Total (IoM), Manx Petroleums and CPL Petroleum.

The fuel distributors undertake both distribution and retailing activities in the heating fuels market. Thus, the combined margin must also cover retailing costs. Table 4.8 presents estimates of the margin remaining in the two segments, after adjusting for the wholesale distribution costs and an average price discount.[32]

This shows that, on the assumptions underlying the cost allocation above, there is a substantive margin to cover retailing and profit margin on kerosene, but no margin on gas oil. This may be slightly biased, as it is likely that a higher proportion of the costs of retailing will fall on the domestic market (i.e., kerosene) due to the higher numbers of customers that the companies have to deal with. However, it does suggest that the domestic heating oil market is potentially cross-subsidising the gas oil market. This is not necessarily anti-competitive, as it may reflect an efficient distribution of the recovery of fixed costs from the market that is most price-insensitive. Nevertheless, it may also indicate that companies are able to extract higher margins from this market that could also increase total returns. This is reviewed in greater detail in section 5, which analyses the profitability of the individual companies, and their activities in the different segments of the market.

[32] An unweighted average price discount of 0.67ppl for kerosene and 1.96ppl for gas oil is applied in Table 4.8.

Table 4.8 Retail and profit margin (ppl)

	Kerosene	Gas oil
Wholesale and retail margin (average 2001 to 2005)	9.1	4.3
Wholesale distribution costs	3.94 to 4.36	3.90 to 4.53
Margin less wholesale costs	4.75 to 5.21	–0.23 to 0.40
Margin adjusted for price discount	4.18 to 4.64	–3.08 to –2.41

Source: Oxera calculations.

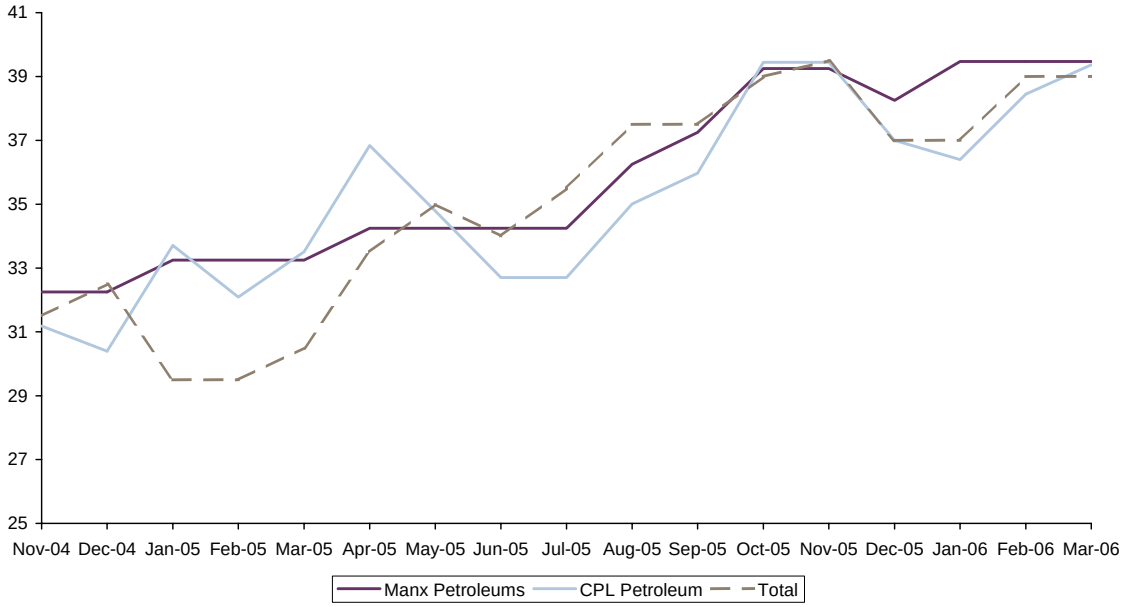
4.3 Price competition and market shares

With several players in the market, there is strong potential for price competition. Figure 4.8 shows the tariffs collected by the Isle of Man Office of Fair Trading as part of the Comparative Heating Schedule reporting for kerosene (from November 2004 to March 2006), with Figure 4.9 showing the prices for gas oil (2,000-litre delivery).),. For kerosene, the differential between the minimum and maximum tariffs on the day in question (the first day of the month) has averaged 1.1ppl over the period, with a 2ppl differential being present in the gas oil deliveries.[33]

These figures appear lower than those provided to Oxera as part of the study, which may reflect the timing of the collection of the data for the comparative heating schedule. On average, over the period 2001 to 2005, one supplier charged 1.7ppl more for kerosene than its main competitor and for gas oil, it averaged 3.5ppl more. In 2005, the kerosene and gas oil differentials were on average 2.2 and 3.7ppl respectively. Therefore, at an average domestic kerosene delivery of 900 litres, customers could have saved nearly £20 per delivery in 2005 if they had purchased from the cheapest supplier on the day. Commercial gas oil customers could have saved an average of £83 on each 2,250-litre delivery by choosing the cheapest supplier. Figure 4.8 shows that there can be significant benefits gained in "shopping around" as there can be as much as 4ppl difference. It can also be seen that all three of the suppliers has offered the lowest price on one or more occasions during the period.

[33] Domestic gas oil tariffs, also reported in the CHS, showed a 2ppl differential on a 2,250-litre delivery.

Figure 4.8 Kerosene tariffs (ppl)



Source: Isle of Man Office of Fair Trading, Comparative Heating Schedule.

Despite these significant price differentials between the suppliers the kerosene market share has only changed very slightly. The lack of market share response to these price differentials may be a result of several factors affecting the domestic heating fuels market:

- actual tariffs differ from the reported information and hence differentials are significantly lower—for example, there may be additional discounts or rebates linked to payment methods;
- actual or perceived differences in the service levels provided by the two companies;
- customers being tied to particular suppliers through various contract terms;
- high actual or perceived switching costs for customers resulting in customer inertia—this may be linked to a lack of transparency in prices across the competitors in the market.

In the kerosene market, there are three main methods by which domestic customers contract with suppliers. Each method provides differing levels of ease of switching suppliers. The least disposed to switching are the customers who have an automatic signalling system fixed to their fuel tanks. The supplier with which the customer has contracted refills the customer's tank whenever the fuel falls below a certain level. Under such a contract, customers are essentially tied into a particular supplier.[34]

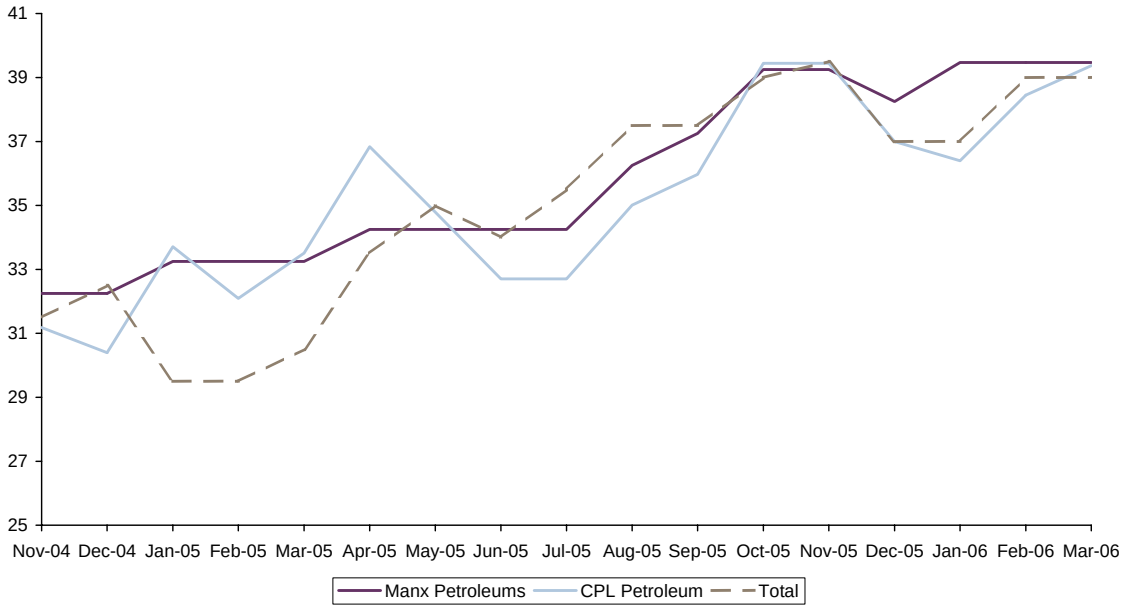
Alternatively, some customers receive regular fuel drops based on their historical pattern of consumption. The third type of customer contacts any or all of the suppliers whenever the demand for fuel arises. This provides the greatest opportunity for customer switching, as customers could study tariffs charged by different suppliers before making a purchase.

[34] However, no information has been supplied to Oxera on whether any formal contractual terms exist that tie the customer to the individual supplier.

Therefore, while certain customers are essentially tied into their existing suppliers, others are flexible to switching due to the nature of their supply contracts. Despite this, levels of switching appear to remain low. This may be explained by customer inertia against switching due to satisfaction with existing suppliers, as is evidenced in the UK gas and electricity markets.[35] Most customers in the UK are aware of the possibility of switching, and, driven by the prospects of cost savings, some do switch quite frequently. Given high levels of supplier satisfaction, a group of non-switchers, however, do not switch despite there being no barriers to switching. In a similar pattern, it is possible that factors such as levels of customer service in the Isle of Man could lead to limited levels of switching. Also, in the UK, half of non-switchers in the electricity and gas markets and a quarter of switchers have never tried to compare different suppliers' tariffs. Similarly, general inertia in the Isle of Man may imply that customers are not aware of kerosene tariffs charged by different suppliers.

The differential in tariffs between suppliers has had a greater impact on market shares in the gas oil market than in the kerosene market. Market shares have remained highly volatile, indicating greater competition within the market. This can be expected due to the different nature of supply contracts in the gas oil market than in the kerosene market, with annual tendering for large contracts, such as major government supply contracts. The greater degree of competition is also indicated in the lower levels of wholesale and retail margins available in the gas oil market than the kerosene market.

Figure 4.9 Gas oil tariffs (ppl)



Source: Isle of Man Office of Fair Trading, Comparative Heating Schedule.

Greater competition between suppliers could be encouraged by ensuring that customers are aware of the differences in tariffs charged by them. While the Comparative Heating Schedule does compare prices of different heating fuels (electricity, gas, kerosene and gas oil), it only provides an average of the prices charged for kerosene and gas oil by Total (IoM), Manx Petroleums and CPL Petroleum.

[35] Ofgem (2006), 'Domestic retail market report—June 2005', February.

A way forward would therefore be to publish individual suppliers' tariffs to ensure that customers are aware of the available options and that there is greater competition within the market. The only caveat to be applied would be that the price differential may only be accurate on the day the information is obtained but it would nevertheless highlight to consumers that differentials do exist.

4.4 Summary

In 2005, the average difference between kerosene prices on the Isle of Man and in the UK was 7.1ppl, and that between gas oil tariffs was 4.5ppl. This accounts for:

– shipping costs and premia range from 0.91ppl to 0.98ppl in the case of kerosene, and 0.85–1.13ppl for gas oil;
– around 0.2ppl of this differential is accounted for by harbour dues.

This leaves 6ppl for the kerosene differential and 3.1–3.4ppl of the gas oil differential unaccounted for. There is no satisfactory means of estimating any cost impact due to the smaller scale of operations in the Island. In addition, for gas oil, as illustrated in Table 4.5, distributors are incurring losses and therefore prices are not necessarily sustainable in the long run.

Distribution costs have been estimated at 2.12–2.47ppl. Adjusting for discounts, the wholesale and retail margins on gas oil are negative, whereas a considerable margin is being earned on kerosene, implying that the domestic market may be cross-subsidising the gas oil market.

5 Profitability

One way of assessing whether the prices for road fuels and heating fuels, discussed in sections 3 and 4 respectively, are reasonable is by examining the profitability of the companies supplying these products, as well as the returns achieved in the specific road and heating fuel markets. These returns can then be compared with those earned in the UK or other comparator markets. Profitability being high (low), as measured against a competitive benchmark, may provide *prima facie* evidence that prices are unreasonably high (low). However, even if profitability is low or normal, prices could still be unreasonably high if the company is inefficient, which suggests that profitability analysis alone would not be sufficient in that case.

The remainder of this section is structured as follows.

– the relevance of measuring profitability for an assessment of the reasonableness of prices and the methodological approach adopted is discussed (section 5.1);
– the calculations of the different profitability measures are presented, and these results are then related to the findings of sections 3 and 4 (section 5.2);
– these profitability results are benchmarked (section 5.3);
– the key findings are then summarised (section 5.4).

5.1 Relevance of profitability to assessing reasonableness of prices

The profitability of the Isle of Man companies active in the road fuels and heating fuels market provides an indicator of the extent of competition in the market and helps determine whether prices are excessively high. There is significant precedent for competition authorities to examine the profitability of companies in a market investigation, in both the UK and elsewhere. Other indicators of the extent of competition, and potential market power, include market share (discussed in section 2), entry barriers, the pattern of price changes over time and how they compare internationally (see sections 3 and 4). In a market inquiry, profitability should therefore be considered in the context of the overall assessment and not in isolation.[36] The profitability of the companies, and, where relevant, their different divisions and products, may therefore have an important role in the overall assessment of whether prices are excessive.

It is important also to discuss what can and cannot be concluded from a profitability analysis in terms of an inquiry into excessive pricing. In a competitive market, which is ultimately the benchmark against which profitability should be compared, profitability may vary significantly between firms and across time. Indeed, in theory, it is the presence of 'high' profits that acts to encourage entry by new firms, until the marginal firm achieves 'normal' profits. Apparently high profitability could also be explained by a number of factors other than excessive pricing, including

[36] Competition Commission (2003), 'Market Investigation References: Competition Commission guidelines', CC3, June.

measurement problems, cyclical or transitory factors, and some firms being more efficient than others or benefiting from past innovation.[37]

However, over the medium term, it could be expected that profitability should move towards the competitive benchmark, for example a firm's cost of capital, because high profitability should have 'signalled' to other firms to enter the market. If returns are shown to be persistently and substantially above the competitive benchmark for a firm that constitutes a substantial part of the market, this therefore provides evidence of limitations in the competitive process.[38] An element of judgement may be required to make an assessment of what time period constitutes 'persistent' and by how much returns need to exceed the competitive benchmark before they can be considered 'substantial'.[39] In addition, even if profitability is found to be low or normal, this might reflect inefficiency rather than prices being set at a reasonable level. Thus, the extent to which a firm may be inefficient should be considered; otherwise consumers will effectively pay for this inefficiency.

Competition authorities have adopted several measures of profitability, including, for example, return on sales (ROS) and return on capital employed (ROCE), based on the circumstances prevailing in the particular inquiry (e.g., are intangible assets likely to be significant?). This suggests that the most relevant measure of profitability should be selected, as discussed below.

Conceptually, the internal rate of return (IRR) and the net present value (NPV) are considered to be the correct measures of profitability.[40] However, calculating the IRR requires cash-flow data, which only Manx Petroleum reports. Estimating the IRR in the context of an assessment of excessive profitability also requires the modern equivalent asset (MEA)[41] value to be estimated, as this is the lowest cost of entry when profitability is excessive. Where cash flow and MEA data are not available or are of uncertain quality, other measures of profitability (such as the gross margin, ROS and ROCE) should be measured.[42] Therefore, this part of the report focuses on these alternative measures of profitability.

5.2 Profitability results

Total (IoM) and Manx Petroleums have submitted statutory and management accounts for their Isle of Man operations, while CPL Petroleum has submitted management accounts for its Isle of Man operations and statutory accounts for CPL Petroleum Limited (UK). Using this information, it is possible to estimate the following accounting measures of profitability.

– **Gross margin**—this measures returns after duty, VAT and the cost of fuel has been removed from revenue (the result of which is the company's gross profit). The gross margin is calculated by dividing gross profits by revenue (net of duty and VAT). For Total (IoM), the gross margin therefore corresponds to the retail and wholesale margin for the road fuels market and heating fuels market, as

[37] Competition Commission (2003), op. cit., p. 35.

[38] Competition Commission (2003), op. cit.

[39] Some factors that may need to be considered here include the length of the 'life cycle' of investment in the industry, as well as how volatile profitability returns have been.

[40] Kay, J.A. (1976), 'Accountants Too Could be Happy in a Golden Age: The Accountant's Rate of Profit and the Internal Rate of Return', *Oxford Economic Papers,* **28**, 447–60.

[41] Edwards, J., Kay, J. and Mayer, C. (1987), *The Economic Analysis of Accounting Profitability*, Clarendon Press: Oxford.

[42] Oxera (2003), 'Assessing profitability in competition policy analysis', A report prepared for the OFT, July.

well as the gross profit on retail shop sales. For Manx Petroleum and CPL Petroleum, it reflects the retail and wholesale margin for heating fuels and any gross profit in distributing petrol and diesel.

– **ROS**—this is a measure of the operating returns on the business, which is calculated by deducting operating expenses from gross profits (which produces earnings before interest and tax, or EBIT) and dividing this by revenue (net of duty and VAT). While ROS is usually presented as a percentage, if EBIT is divided by volumes of litres sold, a return in pence per litre can also be calculated. However, the ROS may differ between fuels.

– **ROCE**—this measures the return to investors (debt holders and equity) against the capital they employ. It is calculated by dividing EBIT by capital employed in the business (i.e., the sum of debt and equity).

The remainder of this section sets out the results of these measures. The measures of profitability are also examined for their relevance in the context of this market.

5.2.1 Profitability according to margin on turnover measures

Figure 5.1 sets out the gross margins for Total (IoM), Manx Petroleums and CPL Petroleum for the period for which data has been provided.[43] The gross margin for Total (IoM) is higher than that for Manx Petroleums and CPL, which might reflect the following factors.

– Total (IoM) owns and operates a number of petrol stations, and may therefore have a higher cost base to support.
– As Total (IoM) earns a retail and wholesale margin in the road fuels market, while Manx Petroleums and CPL Petroleum only distribute in this market, it might be expected to have higher gross margins.
– Total (IoM)'s overall profitability (e.g., its ROS) might be higher.

A significant increase in the gross margin for Total (IoM) occurred during financial year 2001, from 17.1% in 2000 to 24.5%, or an increase of 7.4% points or 2.8ppl (see Table 5.1). This is because Total's gross profits rose in 2000, staying at a higher level since. Changes to gross profits help indicate the extent to which changes to the price of the underlying fuel have been passed through to final consumers. When prices are rising, maintaining a stable gross margin requires revenue to increase by more than the cost of fuel.[44] Gross margins can also change if there are changes in the relative volumes of different fuels, which each have different gross margins.

After the increase in Total's (IoM) gross margin in 2001, the margin rose slightly in 2002 to 25.7%, before falling to 24.7% in 2004. Between 2001 and 2004, Total (IoM) was able to maintain a reasonably stable gross margin, which would have required revenue increases by more than the increase in the cost of the underlying fuel. However, a proportionately larger increase in the cost of fuel than in revenues led to a decline in the gross margin to 19.9% in 2005.

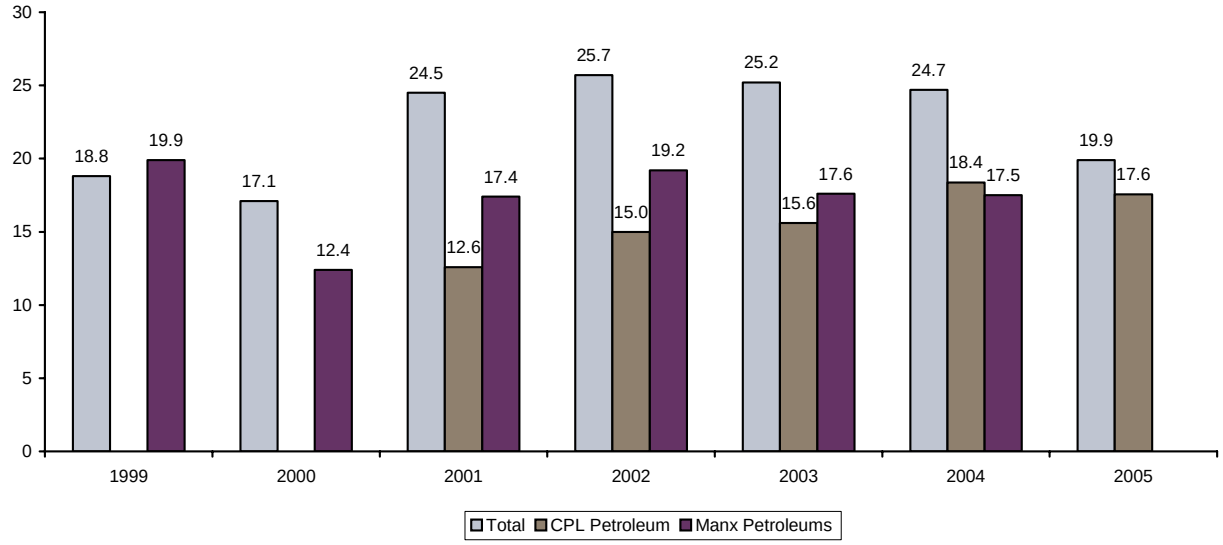
[43] All references to CPL Petroleum in sections 5.1 and 5.2 are to the Isle of Man depot of CPL Petroleum Ltd.

[44] For example, if revenue is £100 and the cost of fuel £40, gross profits are £60 and the gross margin is 60%. If the cost of fuel increases to £50 and revenue increased to £110 (eg, a similar increase of £10), while gross profits would remain £60, the gross margin would fall to 54.5%. The revenue increase required to maintain a constant gross margin can be calculated as the change in the cost of fuel divided by 1 minus the gross margin. So, in the above example, the revenue increase that would be required is £10 (the increase in the cost of fuel) divided by 0.4 (eg, 1 minus the gross margin of 60%), or £25. Therefore, the higher the initial gross margin, the proportionately higher increase in revenue compared to the cost of fuel that would be required.

Manx Petroleums' gross margin appears to have been slightly more volatile than that of Total (IoM), indicating that it has not always been able to increase revenue by more than the cost of fuel which would be required to maintain a constant gross margin when prices are rising. A significant fall in the gross margin occurred in 2000 (7.5% points), but margins have since recovered, to around 17–18%.

Finally, CPL Petroleum's gross margin follows a slightly different pattern to that of the other companies, generally increasing throughout the period 2001–05. As discussed above, increases to gross margins when the underlying cost of fuel is rising indicates that revenue is increasing by more than the cost of fuel, as well as there possibly being a shift in the relative volumes of fuel sold (towards higher gross margin fuels). By 2004, CPL Petroleum's gross margin is slightly higher than that of Manx Petroleums.

Figure 5.1 Gross margins, 1999–2005 (%)



Note: Due to unavailability of data gross margins could not be calculated for CPL Petroleum in 1999 and 2000, and for Manx Petroleums in 2005. CPL Petroleum's accounting year ends on March 31st, whereas Manx Petroleums and Total (IoM)'s ends on December 31st.
Source: Total, CPL Petroleum and Manx Petroleums data, Oxera calculations.

It is also possible to convert gross profits into pence per litre (see Table 5.1). The data in the table does not correspond to the gross margin (ppl) that the companies have submitted for their different fuel types, but rather averages this across all fuels.

Table 5.1 Gross profits (ppl)

	1999	2000	2001	2002	2003	2004	2005
Total (IoM)	n/a	3.3	6.1	5.9	5.7	6.7	6.7
CPL Petroleum	n/a	n/a	4.2	4.5	4.7	5.3	6.4
Manx Petroleums	4.9	4.1	5.0	6.0	5.4	6.4	n/a

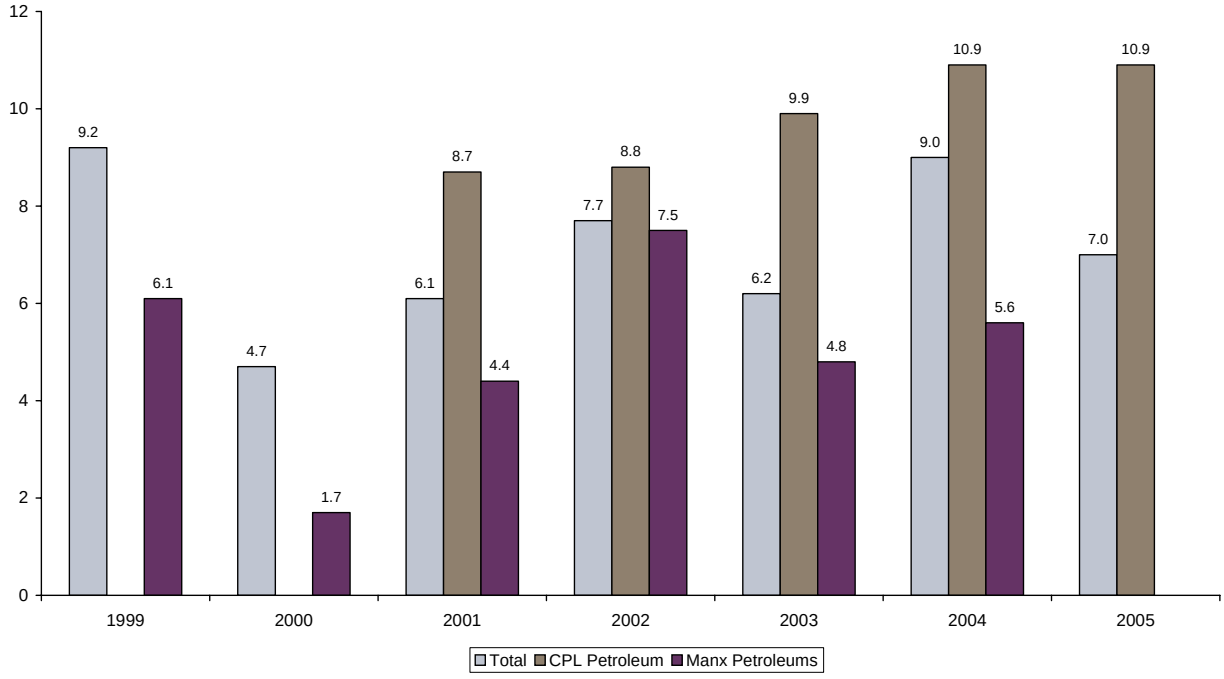
Source: Data from Total (IoM), CPL Petroleum and Manx Petroleums, Oxera calculations.

However, each of the three companies has overhead costs, and it is the ROS that corresponds to the ultimate profit earned. Figure 5.2 sets out the ROS for the companies examined here. Data availability for the three companies differed over time, allowing the ROS to be calculated for at least two companies only from 2001.

The ROS of both Total (IoM) and Manx Petroleums show reasonably similar trends from 1999 to 2004 (the years when both companies' returns could be calculated). Returns decline in 2003, only to increase in 2004, although the increase for Total (IoM) was larger. Furthermore, in 2004, the difference between the two companies' ROS (3.4% in 2004) is lower than the difference between their gross margins (7.2% in 2004), which may reflect the fact that Total (IoM) also owns and operates retail petrol sites.

CPL Petroleum (IoM)[45] has the highest ROS of the three companies, despite its gross margin generally being lower than that of Total (IoM) and Manx Petroleums through most of the period examined here (see Figure 5.1).

Figure 5.2 Return on sales (%)



Note: Due to the unavailability of data, ROS could not be calculated for Total and CPL Petroleum in 1999 and 2000, or Manx Petroleums in 2005.
Source: Data for Total (IoM), CPL Petroleum and Manx Petroleums, Oxera calculations.

It is also possible to present the ROS in terms of pence per litre sold (see Table 5.2). The per-litre operating profits for Total (IoM) have generally risen throughout the period under study, declining slightly from 2004 to 2005. Per-litre operating profits of CPL Petroleum remained fairly constant from 2001 to 2004. Due to the end of its contract with Esso, there was a change in the mix of fuel delivered by CPL Petroleum, with the volume of product delivered to filling stations on behalf of Esso decreasing by 30% in 2005. This resulted in the increase in its ROS in 2005.

From 2001 to 2004—the years when returns for all three companies could be estimated—Total (IoM) had the highest per-litre ROS of the three companies. Furthermore, high operating profits may result from lower overhead costs due to higher efficiency. Also, Total (IoM) is the only one of three companies to operate in all segments of the supply chain, and has ownership of relatively high-margin filling station shops (see Table 3.10), which could contribute to its having a higher ROS.

[45] ROS figures directly submitted by CPL Petroleum have been used instead of data from the management accounts of its Isle of Man depot because the latter do not include management costs for the Isle of Man operation.

Table 5.2 Return on sales (ppl)

	1999	2000	2001	2002	2003	2004	2005
Total	n/a	0.9	1.5	1.7	1.4	2.4	2.3
CPL Petroleum	n/a	n/a	1.2	1.2	1.5	1.5	2.3
Manx Petroleums	n/a	n/a	1.4	1.4	1.0	1.6	n/a

Source: Data for Total (IoM), CPL Petroleum and Manx Petroleums, Oxera calculations.

Only Total (IoM), which separates its management accounts into retail (road fuels and shop sales) and commercial (heating fuels), reports profit (before interest and tax) separately for the road fuels and heating fuels market. However, as Total (IoM) retail accounts also include retail shop sales, a share of common costs associated with shop sales would need to be removed from retail accounts to derive a ROS for petrol and diesel. Furthermore, estimating the ROS (either in percentage or pence per litre) from the management and financial accounts of Manx Petroleums and CPL Petroleum requires common or shared costs between these markets (e.g., head-office costs) to be allocated between the markets, and then between the separate fuels where possible (e.g., petrol and diesel).

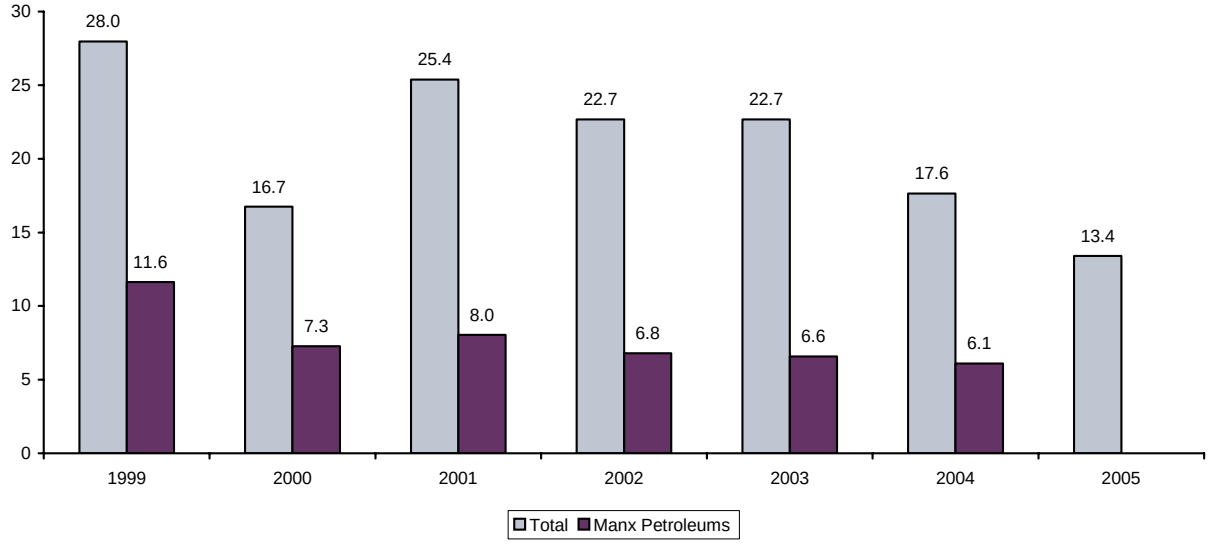
5.2.2 Profitability according to the return on capital employed

Another approach to measuring profitability would be to calculate the ROCE of the three companies. However, CPL Petroleum has not provided balance-sheet data for its IoM activities and, therefore, the ROCE is only estimated for Total (IoM) and Manx Petroleums. The ROCE provides a measure of the returns achieved against the investment (i.e., debt and equity) made in a business or activity. Estimating the ROCE requires a judgement as to what constitutes the actual capital employed of the business. This is because the traditional measure of capital employed (total assets less current liabilities) may exclude various items of financing capital (e.g., short-term borrowings for financing rather than operational purposes). Examination of accounts has not indicated the significant presence of such items, and capital employed is measured here as total assets minus current liabilities.

The ROCE may not, however, be an appropriate measure of profitability for companies with low levels of capital intensity. Margin on turnover measures, such as the gross margin and ROS, may be more useful measures in those instances.[46] Total has a higher capital intensity than Manx Petroleums, as can be noted from the levels of fixed assets as a percentage of total sales (see Figure 5.3), although capital intensity seems to be falling for both companies over time. Thus, the ROCE would arguably be a more appropriate measure of profitability for Total (IoM) than Manx Petroleums. However, there is no clear basis to decide at what point low levels of capital intensity imply that a ROCE may not be an appropriate measure of profitability. Furthermore, working capital is likely to be significant in this industry, which implies that overall capital employed may be significantly higher than fixed assets alone.

[46] See Oxera (2003), op. cit.

Figure 5.3 Fixed assets as a percentage of total sales



Source: Data for Total (IoM), CPL Petroleum and Manx Petroleums, Oxera calculations.

The distribution and retailing of fuels may involve relatively high levels of working capital (e.g., stock, trade debtors and trade creditors) compared with fixed assets, such as land and buildings and vehicles and overall capital employed. As balance-sheet data provides a snapshot at a point in time (i.e., the last day of financial year), the level and value of working capital on that day might not be a reliable indicator of average working capital.[47] For example, the heating fuels market is seasonal, which implies that average stock (and therefore capital employed) may be higher in winter months. It is not yet clear whether this implies that the estimated capital employed for Total (IoM) and Manx Petroleums as at the end of the financial year significantly underestimates average capital employed, if it underestimates average capital employed at all. Taking an average between financial years is also unlikely to overcome seasonality problems.

Finally, the ROCE estimated here is based on historic acquisition costs, rather than replacement cost, data for which is not available. It is profitability according to the (depreciated) replacement cost that is relevant when testing for the presence of excess returns.[48] However, there may be circumstances where historic costs approximate replacement cost—for example, where the industry is subject to low levels of technological or cost changes. Furthermore, even where replacement cost asset values were used, any revaluation or uplift to these asset values may still need to be incorporated into the profitability estimates.

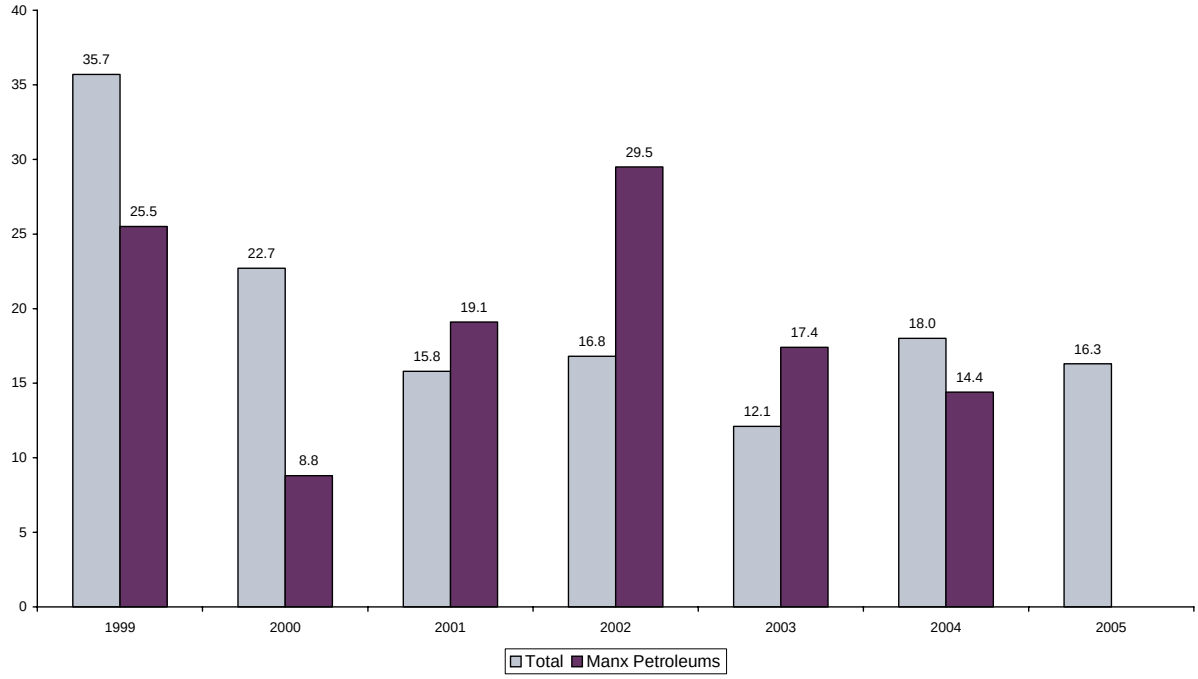
Nonetheless, it is still informative to examine the ROCE based on historic acquisition costs, for example because there is some evidence that the firms examined here use this measure, among others, to assess their performance over time. The estimated ROCE for the two companies is illustrated in Figure 5.4. The capital employed by Total (IOM) has risen continuously from 1999 to 2004, while a fall in profits in 2003

[47] For example, if stock is used during a month and the company only restocks at the end of the month, the value of stock at month end potentially overestimates average stock (and therefore working capital) during the month and year. In practice, both Total (IoM) and Manx Petroleums restock during the month, so it is less likely that stock levels at the end of the financial year are not representative of average stock held during the year.

[48] See, for example, Competition Commission (2003), 'Market Investigation References: Competition Commission Guidelines', June 2003, p. 35.

helps account for the decline in the ROCE in that year. The decline in 2005 was due to a greater increase in capital employed than in operating profits. Overall, its ROCE averaged 20.1% between 1999 and 2004. Manx Petroleums' average ROCE between 1999 and 2004 was 19.1%.

Figure 5.4 Return on capital employed (%)



Source: Data for Total (IoM), CPL Petroleum and Manx Petroleums, Oxera calculations.

5.3 Benchmarking analysis

It is possible to benchmark the ROCE against the cost of capital. As no such clear-cut benchmark exists for the gross margin or ROS, these profitability measures are often benchmarked against those earned by companies operating in the same or similar industry, or companies sharing similar business characteristics. This section benchmarks the ROCE against the cost of capital and the profitability of the suppliers of road and heating fuels against companies in the same industry. Benchmarking against a large sample of companies that share similar business characteristics has been undertaken in Appendix 1.

5.3.1 Benchmarking ROCE against the cost of capital

As set out in Table 5.3, the costs of capital of Manx Petroleums and Total (IoM) have been estimated at 10.6% based on 'optimal' gearing of 30% and at 10.3% based on actual gearing of 0% (see Appendix 1 for calculations). These averages are similar, irrespective of whether an optimal or actual gearing approach is adopted. Overall, the ROCE of both companies exceeds their estimated cost of capital.

Table 5.3 Total (IoM) and Manx Petroleums' costs of capital

	1999	2000	2001	2002	2003	2004	Average
'Optimal' gearing	10.4	10.8	9.6	10.0	10.4	12.6	10.6
Actual gearing	10.2	10.6	9.3	9.6	10.1	12.3	10.3

Source: Oxera calculations

5.3.2 Benchmarking profitability ratios against companies in the same industry

The liquid fuels market in the UK appears to be a low-returns business. Estimates from the United Kingdom Petroleum Industry Association (UKPIA) indicate that over the last five years, the average ROCE in refining and marketing was 3.1%, or under 0.5ppl. This appears to be significantly below that of the Isle of Man companies examined here. In addition, UKPIA member companies involved in downstream activities alone incurred total losses of £275m in 2001.[49]

Instead of comparing the Isle of Man distributors with the UKPIA member companies involved in the entire fuels supply chain, it seems to be more appropriate to use fuel distributors as comparators. CPL Petroleum Ltd (including UK operations), for example, may be considered an appropriate comparator to the Isle of Man companies, as it is solely a distributor of fuels. The ROS for CPL Petroleum Ltd[50] is significantly lower than that of the three Isle of Man companies (see Table 5.4), which indicates that a part of the differential in prices between the Isle of Man and the UK may be due to higher profitability in the Isle of Man. However, to the extent that the financing costs (e.g., the cost of capital) of the Isle of Man companies are higher, a slightly higher ROS might be expected.

Table 5.4 Benchmarking against CPL Petroleum—ROS (%)

	1999	2000	2001	2002	2003	2004	2005
CPL Petroleum	n/a	n/a	1.2	2.3	1.6	1.6	1.2
Total (IoM)	9.2	4.7	6.1	7.5	6.2	9.0	7.0
CPL Petroleum (IoM)	n/a	n/a	8.7	8.8	9.9	10.9	10.9
Manx Petroleums	n/a	n/a	n/a	7.5	4.8	5.6	n/a

Source: Total (IoM), CPL Petroleum and Manx Petroleums.

However, CPL Petroleum Ltd (its entire operations) has a higher ROCE than that of Total and Manx Petroleums.

[49] United Kingdom Petroleum Industry Association.(http://www.ukpia.com/faqs/profitability.aspx)

[50] ROS figures submitted by CPL Petroleum have been used instead of figures calculated from their statutory accounts. This is because CPL Petroleum has advised Oxera that the data in the statutory accounts includes a significant charge for CPL Group Head Office costs. These costs relate to the management of CPL Group companies and are only recharged in the year-end statutory accounts and not in the management accounts that form the basis of the ROS figures quoted for the Isle of Man business.

Table 5.5 Benchmarking against CPL Petroleum—ROCE (%)

	1999	2000	2001	2002	2003	2004	2005
CPL Petroleum	n/a	n/a	56.9	44.3	35.5	33.4	17.7
Total	35.7	22.7	15.8	16.8	12.1	18.0	n/a
Manx Petroleums	25.5	8.8	19.1	29.5	17.4	14.4	n/a

Note: ROCE not calculated for CPL Petroleum (Isle of Man) due to unavailability of data.
Source: Total (IoM), CPL Petroleum and Manx Petroleums data, Oxera calculations.

5.4 Summary

The analysis of the profitability of the three companies reinforces the results obtained in sections 3 and 4.

– CPL Petroleum has the highest ROS of the three companies, reflecting the fact that a greater proportion of its business is in the high-margin heating fuels market, as against the road fuels market which provides relatively lower margins.

– The average cost of capital of Total (IoM) and Manx Petroleums has been estimated at 10.6% under the 'optimal' gearing assumption and at 10.3% using actual gearing. This is lower than Total (IoM)'s average ROCE of 19.9% and Manx Petroleums' average ROCE of 19.6%. Although this provides some evidence of returns above the competitive benchmark, when these potentially excess returns are translated into ppl terms, the amounts involved do not appear very significant. A number of other factors should be taken into account before interpreting these ROCE estimates. For example, assets have been valued according to their historic cost, and an alternative approach would have been to use depreciated replacement cost estimates. Also, this estimate does not take account of the fact that the returns may differ among fuels. Finally, these returns need to be considered within the context of the general state of competition in the market, for example the relatively stable market shares, high levels of concentration and relatively high entry barriers.

6 Conclusions and recommendations

6.1 Road fuels market

6.1.1 Findings

The prices of both unleaded petrol and diesel have risen by around 20ppl (nominal) over the last two years. A significant proportion, around two-thirds, of this increase can be attributed to an increase in the price of the product, linked to the underlying increase in global crude oil prices. However, the analysis shows that the increase in the wholesale and retail margins (i.e., the cost of transporting, storing, distributing and selling the product, together with the profit margin earned on these activities) was the other major factor underlying the increase in retail prices.

For unleaded petrol, the retail margin has remained relatively constant (at 2.8-2.9ppl), which is comparable with the reported mark-up of 3.15ppl for Shell (UK) and therefore the major cause of this price rise (excluding commodity purchase price increases) has been an increase in the wholesale margin. However, there is a slightly different pattern in the diesel market, where retail margins appear to have increased and wholesale margins have been declining.

Notably, between 2004 and 2005, the combined wholesale and retail margins for both unleaded and diesel increased significantly. This corresponded with the loss of Esso as an active market participant. However, it is unclear whether this is a transitory position or whether it represents a change in the retail pricing dynamic in the Island.[51] (Esso had operated a pricing policy that benchmarked the price in its stations to representative sites in the UK.)

For unleaded petrol, the estimated wholesale margin over the period 2002 to 2005 is 6.3ppl for the Isle of Man. (This can be compared with a combined retail and wholesale margin of 5ppl in the UK.) Reported cost information produces the following breakdown of this margin:

– shipping costs and harbour dues account for 1.2–1.4ppl;

– storage and distribution costs account for 1.34 to 2.82ppl—the individual company reporting differs here. These ranges can be ascertained for both CPL and Manx Petroleums. (Manx Petroleums has one additional cost which is thought to be a cost pass-through, or revex.) While Total does not report its distribution costs in this manner, the implication from its accounts is that the storage and distribution costs are around 2ppl.

This leaves between 2.1ppl and 3.8ppl of the wholesale margin unexplained, or representing profit to the distribution businesses, or the fuel suppliers (since the fuel suppliers contract with the distributors and it is they who receive the Schedule Price). The main explanations on the cost side are:

– wholesale purchase costs are higher than the average ARA price assumed. (Initial analysis suggests that the prices paid by the distribution companies are

[51] Evidence from January to May 2006 shows that the combined margin has decreased slightly from its 2005 level.

around 0.7ppl higher on average than the imputed wholesale delivery cost, partly reflecting the nature of the contract terms). This would reduce the margin to 1.4–3.1ppl;

– additional costs are associated with the distribution businesses that are not captured fully in the interpretation of the accounts presented in this report.

The margin on diesel over the same period (2002–05) was 5.9ppl. However, diesel faced higher reported costs of delivery (1.6–2.1ppl, compared with 1.2–1.4ppl for unleaded). Taking this into account, the profit margin is in the range 0.8–2.8ppl.

The overall ROS across the entire business for CPL Petroleum and Total were 2.3ppl, and for Manx Petroleums were 1.6ppl. The wholesale margin remaining over the cost factors may therefore be reflected in distributors' profit margins.

An alternative way of assessing the level of prices is to consider the cost relative to the UK. The price differential for unleaded was 5.3ppl in 2005 (averaging 4.1ppl over the last five years) and 4.8ppl for diesel in 2005 (4.3ppl on average over the last five years). The differential in costs is analysed separately, and this analysis shows that 2.3ppl of the differential results from higher transport costs and lower throughput:

– harbour dues of around 0.2ppl are paid when shipping fuel to the Island;

– there is a recognised differential for wholesale delivery costs to remote distribution networks. This difference is 0.92ppl in 2005 prices (as reported in the OFT Highlands and Islands report);[52]

– the average throughput in the Island (just over 2m litres per annum) is well below that in the UK (3.5m litres per annum). There will therefore be less scope to exploit economies of scale of operation. In addition, the nature of competition in the UK, with supermarkets accounting for over one-third of the market, is more intense than could be realised in the Isle of Man (average supermarket throughput is the equivalent of a quarter of total volumes in the Island). Differences in these two aspects can be seen to account for 0.9ppl.

This leaves around 2ppl unaccounted for on average, across the last five years. The UK OFT report did indicate that there were no margins being earned in wholesale activities in the UK, which would not be sustainable in the long run (i.e., UK margins would need to increase for the current wholesale distribution businesses to continue operating in the long run). This figure of 2ppl is comparable to the ROS of the Isle of Man fuel distributors.

It is not obvious that this unexplained component of the differential is captured by the distributors:

– Manx Petroleums reported net margins to Shell (UK) of around 5ppl (after allowing for shipping costs) in the last quarter 2005;

– Total (IoM) accounts indicate a combined wholesale and retail margin of 7ppl. (It operates some filling stations and these costs are not separated out in its accounts);

[52] OFT (2000), op. cit.

– CPL Petroleum costs and revenues are not separated, but the majority of its costs are in the heating oil business (which accounts for the majority of its business).

Average retail margins for filling stations are slim—around 3ppl—although they vary among the main suppliers. (The information suggests that Total offers a retail margin of around 3.95ppl, and Shell (UK) 3.15ppl). Sustainable margins often depend on the non-fuel activities of the stations and the margins being earned on the fuel retail activities are reasonable for the average throughput filling station.

The extent to which overall pump prices are reasonable thus depends on the view taken on the wholesale margin. The analysis has illustrated that wholesale margins include somewhere between 1ppl and 2ppl of profit for the distributor and that this is to the high end of industry benchmarks.

However, two mitigating factors suggest that the prices should still be considered reasonable:

– overall profitability, covering both road fuels and heating fuels, is not excessive; and

– cost differentials with the UK have, 2005 accepted, been falling consistently over the period to levels that can be justified on observed cost differentials.

It is infeasible that the Isle of Man can have prices equivalent to those in the UK. Even with large consolidation in the road fuels retail market (around half the existing stations would need to close to provide comparable volumes to those in the UK), the additional delivery costs would persist.

Road Fuels – Recommendations

1. The Office of Fair Trading should undertake monitoring of wholesale and retail prices on a monthly basis to identify the changes and levels of prices in the Isle of Man.

2. Local distributors should be required (through the introduction of legislation if necessary) to notify the Office of Fair Trading in advance of all road fuels price movements as they apply to deliveries to filling stations.

3. Local distributors should be required (through the introduction of legislation if necessary) to provide such information as may be required by the Office of Fair Trading to enable them to undertake those monitoring activities identified in these recommendations.

4. The month-on-month change in pump prices should be highly correlated with the change in the average commodity price (allowing for some lags in response), and therefore monitoring of the correlation in these prices should be undertaken by the Office of Fair Trading.

5. The differential between Isle of Man and UK retail prices should also be monitored and although timely data series may be difficult to obtain it is recommended that the two main UK sources used during the investigation should be used for this purpose, namely:

    - the DTI Quarterly Energy Prices publication, which provides monthly UK average pump price data three months in arrears; and

- monthly price comparisons presented in the trade journal, "*Forecourt Trader"*, which differentiates stations according to ownership (i.e., whether they are hypermarket stores, company-owned or dealer-owned).

5. It is recommended that the most relevant short term price benchmark to use would be that described as "dealer-owned" sites, as the majority of sites in the Isle of Man at present are dealer-owned and have similar average throughput to equivalent sites in the UK. The use of the UK DTI average monthly pump price series may prove more reliable in the longer term and should be used to validate any assumptions based on the short term price benchmarks.

6. The differential between Isle of Man and UK retail prices should be reviewed on a month-by-month basis, in addition to any commodity price movements, as a means of monitoring potential changes in the implied cost of supply in the Island.

7. It is recommended that a differential of 3ppl between the Isle of Man average retail price and the UK average retail price (for dealer owned sites) be accepted as justified and around 4ppl on average be allowed for some short-term discrepancies and time-lags. A differential of 5ppl or more would trigger further detailed examination and could lead to a Section 19 report to the Council of Ministers.

8. The benchmark differentials mentioned in Recommendation 7 should be reviewed on a regular basis to take account of any cost movements in the Isle of Man or UK.

9. It is recommended that the Office of Fair Trading publicises its ongoing monitoring activities with commentary on price movements and any review of benchmarks.

10. There is already transparency in pricing by filling stations with their large highway price notices which are required by law but the public perception of fuel pricing movements could be further improved by permitting filling stations to only alter their prices upon receipt of a new delivery.

6.2 Heating oil market

6.2.1 Findings

The same companies are involved in the heating oil (or commercial) fuels market as are present in the road fuels market. However, the distribution companies contract directly with the customers, unlike in the road fuels market where the contract may be with an off-Island entity, such as Shell (UK). As the companies use the same sets of assets for their heating fuels and road fuels operations, there may be some cross-subsidisation between the two markets.

The prices of domestic heating oil (dominated by kerosene sales) have risen by around 50% over the last five years in nominal terms. Those for industrial use (largely gas oil) have increased by around 60% over the same period.

Rises in the underlying commodity price account for more than the observed change in gas oil prices, as wholesale and retail margins have fallen over the period. Most

significantly, the margin dropped by around 25% in 2005. This may be in response to more intense competition from Manx Gas for customers in this market segment, as there is evidence that customers are price-sensitive and have some buyer power (as seen in the changes in market share as differentials in prices emerge).

Thus, the observed price increases for gas oil should not be seen as unreasonable.[53]

For the domestic heating oil market, the margins have been increasing over time. There are substantial differences in the margins being earned in the residential and commercial markets for heating oil. Using illustrative cost allocations, the commercial sector appears to be making a loss and the residential market is where the main profit is made. It is possible that the domestic market is therefore subsidising the industrial market and, possibly, the road fuels market. This is not necessarily inefficient, as there is a sizeable common cost of supply between road fuels and heating fuels, and the allocation of most of this to the domestic heating fuel market may reflect differences in the underlying characteristics of the consumer groups.

Although margins may be high, there is scope for competition among the distributors, as evidenced by the price differentials that exist and the discounts and service or payment options that each offers. The evidence here is that the price sensitivity of customers to tariff differentials is relatively low. Differences of up to 2ppl (up to £20 per delivery) between companies have been observed, yet market shares have shown little change over the period, indicating that consumers are not responding to price differentials. This results from the fact that there is little transparency in prices for domestic customers on which to make informed choices.

The combined wholesale and retail margins in the domestic heating oil market have averaged 9.1ppl over the last five years, with the differential to the UK price being around 6ppl. For gas oil, these margins have been around 4.3ppl and the differential with the UK has been around 4ppl. Taking account of the costs of the wholesale and retail activities, together with discounts offered on the standard prices reported to the OFT, the net margin earned in the domestic heating oil market is between 4.08ppl and 4.64ppl, whereas margins for gas oil are negative, ranging between –2.41ppl and –3.08ppl.

Domestic heating oil margins are therefore considered to be high and towards the upper end of the range of acceptable prices when the product is considered in isolation.

It might also be argued that whereas the average margin across all liquid fuels is considered reasonable much of this margin comes from the domestic heating fuels market where consumers appear to be paying a premium to subsidise competition in the commercial heating oils market.

However, as mentioned above, overall margins are not necessarily excessive and the price differentials between segments can represent an efficient means of recovering the common costs of the overall operations. Since the infrastructure is shared with the petrol distribution chain, the main differences in wholesale and retail margins should be associated with the following components:

– higher costs of administration/marketing—the companies undertake active marketing to customers and deal with significantly more customers on a

[53] If anything, there may be a secondary concern regarding the effect on inter-fuel competition if there is cross-subsidisation. However, there is no evidence that gas oil prices are predatory (ie, below the variable cost of supply).

monthly basis. For example, only 20 petrol sites require servicing each month as opposed to several hundred heating oil customers;

– higher costs of distribution—the loads are smaller and the number of deliveries greater.

Recommendations – Heating Fuels

1. Local distributors should be required (through the introduction of legislation if necessary) to provide such information as may be required by the Office of Fair Trading to enable them to undertake those monitoring activities identified in these recommendations.

2. The Office of Fair Trading should publish the actual retail prices charged by each supplier for each fuel type (rather than the average) which is currently shown in the Comparative Heating Schedule. This would facilitate consumer switching and place competitive pressure on distributors from the demand side of the market. The Comparative Heating Schedule should be more widely publicised for this purpose.

3. As variations in price are largely a function of changes in the underlying fuel purchase costs the Office of Fair Trading should monitor changes in these costs and compare against changes in retail price on a regular basis.

4. The difference in the combined wholesale and retail margins between the Isle of Man and United Kingdom has been established by this investigation and should form the benchmarks for ongoing monitoring by the Office of Fair Trading. As the margin earned on kerosene is "...considered to be high and towards the upper end of the range of acceptable prices when the product is considered in isolation", any future observed margins greater than those identified in the report should trigger further examination and a possible investigation under Section 19 of the Fair Trading Act 2001.

5. The Office should monitor any price movements against underlying cost movements and ensure that margins remain around the average observed over the past 5 years. This benchmark should be kept under review, with the suppliers required to provide information to support changes to the margin (i.e. shipping costs, wages etc.).

6. It is recommended that the Office of Fair Trading publicises its ongoing monitoring activities with commentary on price movements and any review of benchmarks.

Appendix 1 Cost of capital estimation

A1.1 Estimating the cost of capital for Manx Petroleums and Total (IoM)

Economic regulators often compare the ROCE with a company's or activities' cost of capital, which is the weighted average cost of debt and equity.[54] The cost of debt is the sum of the risk-free rate and the debt premium associated with lending to the company, while the cost of equity (according to the capital asset pricing model) is equal to the risk-free interest rate plus the equity beta, times the equity risk premium (ERP). Neither Total (IoM) nor Manx Petroleums was able to provide an estimate of its cost of capital, and this has therefore had to be estimated, using the following main assumptions.

– **Real interest rate**—the real interest rate is estimated as an average of the yield from British Government Securities of 5-, 10- and 20-year maturities. Actual real interest rates are used, as it is past operating performance that is of interest in this context.

– **Inflation expectations**—in theory, the nominal interest rate comprises the real interest rate plus inflation expectations. While financial market-derived estimates of inflation expectations are available for the UK, similar estimates do not exist for the Isle of Man. In addition, as the Isle of Man's inflation rate has differed from that in the UK in recent years, it would be inappropriate to use UK-derived inflation expectations. Another approach to estimating the nominal risk-free rate is to use actual inflation, which is the approach adopted here.[55] Therefore, the nominal risk-free rate is estimated as the sum of the real interest rate and actual IoM RPI inflation.

– **Debt premium**—this is estimated by examining the debt premium on publicly traded debt. The debt premium on a sterling BBB-rated bond, which may be above the credit rating of Total (IoM) and Manx Petroleums, and a UK gilt between 1999 and 2004 ranges between 1.1% and 2.1%. As Total (IoM) is fully owned by Total (UK), a debt premium similar to the BBB debt premium might be appropriate. However, to err on the side of caution, a debt premium of 2.5% is assumed for each company for every year between 1999 and 2004.

– **Asset and equity beta**—the asset beta represents the inherent systematic risk of a company's operations, before allowing for the financial risks associated with borrowing or gearing. The equity beta is the asset beta adjusted upwards to reflect the additional risks associated with a geared firm.[56] A number of factors can explain the inherent systematic risk of a company's operations, including the extent of volume and price risk, whether the industry is regulated and the amount of operational leverage. Operational leverage is defined as the share of

[54] See, for example, Competition Commission (2005), 'Provisional Findings Report, Appendix J', August 23rd.

[55] Using the actual inflation rate would be consistent with the actual inflation rate being equal to expected inflation plus the inflation risk premium.

[56] The asset beta is equal to the equity beta times (1 – g), where g is equal to gearing, assuming no debt beta and according to the 'Miller' approach.

fixed to total costs, and measures the change to operating costs as revenues change. Although the petrol distribution and retail business differs significantly from that of water or electricity distribution, the most recent determinations for the asset beta in the UK for these sectors have been in the range of around 0.4–0.5.[57] A higher asset beta for Total (IoM) and Manx Petroleums seems appropriate, as these companies are not guaranteed a regulated revenue stream, although volume risk is not necessarily very high. An asset beta assumption of 0.8 is assumed here.

– **Gearing**[58] —with respect to gearing, the key regulatory distinction is whether actual or 'optimal' level of gearing should be adopted. While most economic regulators in the UK seem to adopt an optimal capital structure, which varies from industry to industry, the UK Competition Commission has generally preferred to use actual company gearing.[59] Both approaches to determining gearing are adopted here in order to determine the cost of capital. Neither Manx Petroleums nor Total appears to have net debt. Therefore, both are assumed to have gearing of 0%. With respect to the 'optimal' gearing approach, the assumption here is that the companies could sustain a gearing level of around 30%, lower than that typically assumed in regulated sectors such as water and energy. This is because Total (IoM) and Manx Petroleums are both small companies that are in practice largely equity-financed. In addition, as these companies are not regulated—and therefore are not allowed a given level of revenues—they face greater revenue risk than regulated firms. Given these considerations, a gearing of 30% may be considered appropriate.

– **Equity risk premium**—the ERP is the additional return required to invest in risky equity rather than risk-free debt. Academic and survey evidence is often used to determine the appropriate ERP. In the UK, Ofgem that indicated a range for the ERP of 2.5–4.5% was appropriate, while Ofwat used a range of 3.5–5.0%.[60] A range of 3–5% for the ERP seems appropriate. Taking the midpoint, the calculations reported here assume a 4% ERP.

Table A1.1 reports the estimated cost of capital for Total (IoM) and Manx Petroleums, with a small cap premium for equity of 0.8% included for both companies.

[57] Ofgem (2004) and Ofwat (2004), op. cit.

[58] Defined as net debt divided by net debt plus equity. Net debt is defined as total debt minus cash at bank and in hand.

[59] Oxera (2002), 'The capital structure of water companies', report prepared for Ofwat, October 11th.

[60] Ofgem (2004) and Ofwat (2004), op. cit.

Table A1.1 Total (IoM) and Manx Petroleums cost of capital, 1999–2005 (%)

	1999	2000	2001	2002	2003	2004
Nominal risk-free rate (%)	4.6	5.1	4.2	4.7	5.0	7.1
Debt premium (%)	2.5	2.5	2.5	2.5	2.5	2.5
Pre-tax cost of debt (%)	7.1	7.6	6.7	7.2	7.5	9.6
Asset beta	0.8	0.8	0.8	0.8	0.8	0.8
Gearing—'optimal' (%)	30	30	30	30	30	30
Gearing—actual (%)	0	0	0	0	0	0
Equity beta (with 'optimal' gearing)	1.1	1.1	1.1	1.1	1.1	1.1
Equity beta (with actual gearing)	0.8	0.8	0.8	0.8	0.8	0.8
Small cap premium (%)	0.8	0.8	0.8	0.8	0.8	0.8
Post-tax cost of equity (with 'optimal' gearing) (%)	10.0	10.5	9.5	10.0	10.4	12.5
Post-tax cost of equity (with actual gearing) (%)	8.6	9.1	8.2	8.7	9.0	11.1
Tax multiplier	1.16	1.16	1.14	1.11	1.11	1.11
Pre-tax cost of equity (with 'optimal' gearing) (%)	11.8	12.2	10.8	11.2	11.6	13.8
Pre-tax cost of equity (with actual gearing) (%)	10.2	10.6	9.3	9.6	10.1	12.3
Cost of capital (with 'optimal' gearing) (%)	10.4	10.8	9.6	10.0	10.4	12.6
Cost of capital (with actual gearing) (%)	10.2	10.6	9.3	9.6	10.1	12.3

Source: Oxera calculations.

The average cost of capital of Total (IoM) and Manx Petroleums has been estimated at 10.6% with 'optimal' gearing assumption, and at 10.3% with actual gearing. Overall, the ROCE of both companies exceeds their estimated cost of capital, although there would be no expectation that it should equal the cost of capital in each year.

A1.2 Benchmarking profitability ratios against a large sample

It is possible to benchmark Total (IoM) and Manx Petroleums' accounting profitability—in particular their ROS, EBITDA[61] margin and ROCE—against a wider selection of companies, for example those listed on an equity exchange. This analysis was undertaken by compiling a dataset of companies in the UK FTSE 350 (hereafter, FTSE 350) over the period 2000–05, using data from Datastream, and calculating their profitability.[62] All the results in this section are averages over that time period. Where a company is a constituent member of the UK FTSE 350 for only a part of this time period, the averages reported are for this shorter time period. So, for example,

[61] Earnings before interest, tax, depreciation and amortisation.

[62] Companies selected were constituent companies of the UK FTSE 350 on the last day of the calendar year. The number of observations for the measures of profitability and characteristics differs because not all of the required data was available for each company.

if a company was first included in the UK FTSE 350 in 2003 and remained in it until 2005, the average is for the period 2003 to 2005.[63]

Total (IoM) and Manx Petroleums have different business characteristics (e.g., size, capital intensity) to many of the companies in the FTSE 350. This is controlled for by calculating a number of potential indicators of a company and then comparing Total (IoM) and Manx Petroleums' profitability to companies that are most similar for each of these indicators. These indicators and their definition are as follows.

– **Size**—the proxy for size is the companies' net sales or revenues. While it would have been possible to use total assets as a proxy, accounting asset values may exclude assets operated on leases and intangible assets. Revenue therefore seems a more appropriate proxy for size. This is important as, compared with many of the companies in the FTSE 350, Manx Petroleums and Total (IoM) are relatively small in terms of revenue.

– **Cost structure**—a number of estimates of the cost structure of a company exist. For simplicity, cost structure is defined here as net revenue minus EBITDA, divided by capital expenditure (CAPEX). Other things being equal, firms with larger CAPEX commitments will have a lower cost structure ratio.

– **Capital intensity**—this indicator is an important control for companies with very low levels of assets employed. These companies may, for example, have high and possibly volatile ROCE that could affect average ROCE across the UK FTSE 350. Capital intensity is measured as the ratio of net revenue to fixed assets.

– **Risk**—finally, a number of measures of business risk exist. For example, the standard deviation of revenue or earnings growth could be an indicator of risk. Each of these measures will have a slightly different interpretation. Risk is measured according to the standard deviation of the annual growth in EBITDA.

These indicators are calculated for Total (IoM) and Manx Petroleums and the sample of FTSE 350 companies. Sub-samples are then created based on the 15, 25 and 50 companies just above and below the size, cost structure, capital intensity and risk of Manx Petroleums and Total (IoM) respectively. The sub-sample sizes are therefore 30, 50 and 100 companies in total respectively, with 12 sub-samples overall. As an example, the sample of 30 companies based on size therefore constitutes the 30 companies in the FTSE 350 over this time period with average revenue closest to Total (IoM) and Manx Petroleums respectively. Likewise, the sample of 100 companies based on cost structure represents a sample of the 100 companies with an average cost structure closest to that for Total (IoM) and Manx Petroleums. The profitability (ROS, EBITDA and ROCE) of each company in the sub-samples is then compiled, ranked and put into deciles for each measure of profitability. So, decile 0–0.1 for the ROS sub-sample based on 30 companies for the indicator size represents the ROS for the three lowest ROS for the companies of a similar size to Total (IoM) and Manx Petroleums respectively. It is therefore possible to compare Total (IoM) and Manx Petroleums' profitability while controlling for the selected indicators.

Table A1.2 compares the mean and median profitability measures for the FTSE 350 companies with those of Total (IoM) and Manx Petroleums. Both companies have a

[63] An alternative approach would have been to keep the sample of companies constant. However, this is unlikely to have a material impact on the results.

lower ROS than the median for the FTSE 350. This might be consistent with the distribution and retail of fuel supplies being a relatively low-margin business, at least compared with those of other sectors. However, both Total (IoM) and Manx Petroleums have a higher ROCE than the median for the FTSE 350 companies.

Table A1.2 Comparison of profitability ratios

	ROS (%)	EBITDA margin (%)	ROCE (%)
Number of observations	443	428	332
Mean (FTSE 350)	18.2	24.6	10.3
Median (FTSE 350)	11.7	18.2	11.9
Manx Petroleums	6.0	16.8	21.5
Total (IoM)	6.8	23	17

Sources: Manx Petroleums, Total (IoM), Datastream, Oxera calculations.

Table A1.3 compares the indicators selected for Manx Petroleums and Total (IoM) and the FTSE 350 companies. Manx Petroleums and Total (IoM) are significantly smaller than the mean and median FTSE 350 company. The mean capital intensity for the FTSE 350 seems to be affected by outliers, but the median of 5.2 appears more reasonable.

Table A1.3 Comparison of descriptive criteria

	Revenue (£'000)	Capital intensity (revenue/fixed assets)	OPEX/CAPEX	Volatility of earnings (standard deviation, %)
Number of observations	450	226.0	387.0	315.0
Mean (FTSE 350)	3,188,483	425.9	36.7	77.9
Median (FTSE 350)	625,100	5.2	20.4	20.9
Manx Petroleums	<20,000	14.5	75.41	18.4
Total (IoM)	<20,000	4.8	2.1	12.2

Note: Earnings are EBITDA. Standard deviation is the standard deviation in growth in earnings.
Sources: Manx Petroleums, Total (IoM), DataStream, Oxera calculations.

The next step is to control separately for size, capital intensity, cost structure and volatility of earnings by forming sub-samples of the 15 companies and 50 companies respectively just above and below Manx Petroleums for each of these characteristics. Table A1.4 shows the deciles in which Manx Petroleum's profitability appears once each of the variables has been controlled for when the total sub-sample size is 30 companies. In comparison with other firms of similar size, Manx Petroleums has low profitability. However, when comparing with firms of similar cost structures and capital intensity, Manx Petroleums comes in the middle to higher end of the range.

Table A1.4 Manx Petroleums' comparative profitability, 30-company sample

Variable	ROS	EBITDA	ROCE
Size	0–0.1	0.1–0.2	–
Capital intensity	0.5–0.6	0.6–0.7	0.7–0.8
Cost structure	0.6–0.7	0.7–0.8	0.8–0.9
Volatility of earnings	0.1–0.2	0.3–0.4	0.8–0.9

Source: Datastream, Oxera calculations.

Table A1.5 shows the results when the total sub-sample size is 100 companies. Again, while Manx Petroleums' profitability appears low when size is controlled for, profitability appears in the middle to the higher end of the range when other indicators are chosen.

Table A1.5 Manx Petroleums' comparative profitability, 100-company sample

Variable	ROS	EBITDA	ROCE
Size	0.1–0.2	0.1–0.2	—
Capital intensity	0.5–0.6	0.6–0.7	0.4–0.5
Cost structure	0.5–0.6	0.7–0.8	0.7–0.8
Volatility of earnings	0.1–0.2	0.4–0.5	0.7–0.8

Source: Datastream, Oxera calculations.

The next step is to control separately for size, capital intensity, cost structure and volatility of earnings by forming sub-samples of the 15 and 50 companies just above and below Total (IoM) for each of these characteristics. Table A1.6 shows the deciles in which Total (IoM)'s profitability appears once each of the variables has been controlled for separately. Like Manx Petroleums, Total (IoM) has low returns on sales and earnings in comparison with firms of similar size. Controlling for cost structure, its ROS and the EBITDA margin are also quite low, whereas its ROCE is high. Its ROCE is also high when compared with firms of similar capital intensity.

Table A1.6 Total (IoM) comparative profitability, 30-company sample

Variable	ROS	EBITDA	ROCE
Size	0–0.1	0.1–0.2	—
Capital intensity	0.4–0.5	0.8–0.9	0.6–0.7
Cost structure	0.1–0.2	0.1–0.2	0.8–0.9
Volatility of earnings	0.2–0.3	0.6–0.7	0.6–0.7

Source: Datastream, Oxera calculations.

Table A1.7 shows the results for Total (IoM) when the total sample is 100 companies. The results appear similar to those found when the sample size was 30 companies.

Table A1.7 Total (IoM) comparative profitability, 100-company sample

Variable	ROS	EBITDA	ROCE
Size	0.1–0.2	0.1–0.2	0.8–0.9
Capital intensity	0.5–0.6	0.8–0.9	0.6–0.7
Cost structure	0.1–0.2	0.2–0.3	0.8–0.9
Volatility of earnings	0.2–0.3	0.5–0.6	0.6–0.7

Source: Datastream, Oxera calculations.

APPENDIX 2 PUBLIC SUBMISSIONS

A total of 30 public submissions were invited and an outline of these is provided below.

In respect of Liquid Fuels the main comments suggested -

- there was a lack of competition particularly in respect of petrol and diesel and this might be related to the withdrawal of ESSO from the Island.
- that shipping costs should not be a reason for any increased differential between the Island and the UK as coastal tankers are used all around the British Isles to supply areas distant from refineries or areas not supplied by pipeline. In the latter case road tankers might be an alternative but would be more expensive than shipping.
- petrol and/or diesel was 7-10 pence per litre dearer in Isle of Man than UK and that whereas there were significant variations in UK prices that was not the case in IOM.
- the public were not aware of how much duty and VAT was applied to liquid fuels and these facts should be more widely published.

In respect of Gas the main comments suggested -

- there were still problems left over from the natural gas conversion programme and that gas was leaking from the mains which consumers were paying for
- there was a lack of competition
- gas prices were dearer in IOM than in UK
- that VAT should not be charged on an essential such as gas
- there should be discounts for high consumption
- there should be no variation in tariff across the Island
- price increases were affecting business
- Manx Gas should purchase gas on the futures market
- OFT should publish comparative prices with UK and explain why there might be differences
- there was no need for standing charges
- that Government cap prices.

In respect of Electricity the main comments suggested –

- there was alack of competition
- there was a need for greater monitoring
- the borrowings of the MEA were cause of high price
- MEA were trying to increase direct debits to more than compensate for increase tariffs
- electricity was dearer than in the UK
- price increases were affecting business and inward investment
- businesses were facing even greater costs per unit by the time demand charges and capacity charges were taken into account.
- the gas pipeline should be paid for by Government as it was an all island initiative.

A number of other more general comments were put for forward as follows –

- those not in receipt of the pension supplement were hardest hit as they were not compensated for increased cost of energy
- pension increases had not kept pace with energy cost increases
- fuel poverty was a concern for many and more should be done to ascertain the number affected
- higher prices might encourage a reduction in consumption
- Government should develop a "green" energy policy
- here was no energy policy in existence
- the current policy was the wrong policy

Finally four submissions suggested that OFT or Government should be an "Energy Regulator" and able to cap prices.

Outline of Submissions

1. Farmer

Asked that Government makes the public aware of the tax percentage on diesel and petrol and asked that OFT publishes the current tax rates on fuel even before the investigation reports.

2. Taxi Owner

Complained that diesel was almost 10p/litre dearer in the Isle of Man than in the UK and he felt there was a conspiracy between the fuel distributors in setting the price as the public have no choice.

3. Private Consumer

Wanted to know why the cost of heating oil in Belfast was over £54 more than in Isle of Man for 1000 litres.

4. Businessman

Directed the investigation to a website dealing with petrol prices in UK which showed in some areas petrol prices varied by up to 19p a litre.

5. Private consumer

Suggested the Manx Gas are still drilling holes and digging pavements attempting to trace and plug leaks and asked how much work was done before the conversion programme to prevent this loss. Wanted to know how much gas was lost in distribution system and how much does it cost the consumer. Also highlighted problems with conversion of his appliance and the high cost of replacing same.

6. Private consumer

Queried the borrowing of monies by the subsidiary company of the MEA and asked if Treasury permission was required for such borrowing as in the case of the MEA itself.

7. Pensioner

Asked why MEA are not making more use of interconnector cable to obtain a cheaper supply source.

8. Retired Liquid Fuels Industry expert

Extensive comments suggesting that there should be little difference between the cost of liquid fuels in the IOM and the UK. He believed shipping costs could not be blamed for the differential as it is a cheaper way to move fuel compared to road tankers supplying major cities around the UK which are not supplied by pipeline. Pointed to the numbers of filling stations having reduced and therefore volumes will have increased. Oil companies now own a number of filling stations and therefore earn profits on all parts of the distribution chain. Withdrawal of ESSO from Island may be significant.

9. Private consumer

Increase in electricity prices lead to a need for MEA to review monthly direct debit payments. MEA sought to double the direct debit to pay off arrears but consumer wrongly thought this was to cover increase in tariffs only. Compromise reached.

10. Private consumer

Similar to above.

11. Private consumer

Wanted to know why we are on average paying 10p/ litre more than in UK along with unfair tax calculations. Said Manx Gas seemed to use cold weather as excuse for price increases and asked why standing charge crept up as well as unit charge. Hoped that someone would "answer for the mess the MEA is in one day, but meanwhile at least the standing charge has gone". Asked why consumers are paying 5% VAT on both gas and electricity when both these are essential in the Manx climate.

12. Private consumer

Said prices for gas and electricity had always been excessive and even more so now. Pointed to there being no choice as Manx Gas and MEA have the monopoly and they know their customers cannot go elsewhere.

13. Private consumer

Compared gas prices with UK suppliers (Powergen) and said Manx Gas charged twice as much. Also pointed out that there was no discount for high consumption and queried need for standing charge.

Similar comparisons made in respect of electricity albeit differentials not quite as great and asked if consumers were paying for MEA debt.

Said diesel was being sold in Sheffield at 91.9p/litre whereas in Isle of Man it was 98.9p/litre and wanted to know why there should be a 7p difference.

Believed that lack of competition was major problem for consumers in respect of gas, electricity and telecommunications.

14. Private consumer

Pointed out that those who do not receive the Manx Pension Supplement are even harder hit (by energy price increases) as they are not in receipt of the 50% increase in pension and particularly for those above the means tested Income Supplement levels.

15. Building services engineers

Pointed to variances in gas tariffs across the Island. Explained that businesses could negotiate a tariff regardless of whether they use LPG or natural gas and based on consumption but no such flexibility existed for private consumers. Proposed that Government should encourage "district heating systems" in new housing schemes incorporating combined heat and power units. Would like to see Manx Gas take over the incoming gas supply at Kirk Michael rather than continue to buy from MEA. The double utility profit is a recipe for disaster. Mentioned electricity being 30% more expensive than in UK at present and this was bound to hinder inward investment. Wanted to see continuing monitoring of electricity prices to ensure consumers are not made to pick up the tab for poor decisions by the MEA/Government. Stated oil was cheapest form of heating but installations were more expensive and hence Government's move to install gas systems in public sector housing. Coal was expensive and very inefficient. Average consumption on coal to heat one room would cost £80 a month and full central heating would cost less than this even at current levels of oil and gas prices.

16. Private consumer

Quoted diesel prices in UK at 89.9p/litre and 90.9p/litre when in IOM he paid 98.9p/litre for same brand of fuel.

17. Private consumer

Mentioned "fuel poverty" (where people are spending more than 10% of income on fuel) and said that it was not simply the absolute price of energy that mattered but how it rose in relation to peoples income. Asked that Government collect necessary data on how many people suffer fuel poverty and said it was not just pensioners affected by this but single people and those with young children. Pointed to the lack of an Integrated Government Energy Policy. Said there needed to be an IOM energy regulator.

18. Private consumer

Suggested gas should be bought on the futures market and OFT should publish comparative prices of British Gas and other UK suppliers against Manx Gas and explain why the difference. Government should "cap" the price of gas and was sure the investigation may mean Manx Gas needed to moderate its profits or be nationalised. Pointed to electricity in London costing 7p a unit as opposed to over 10p a unit in the Isle of Man which he claimed illustrated the lack of effective governmental controls.

Also felt motorists were a “soft target” and said petrol was 86.9p/litre in Lancaster whereas in IOM it was 94.9p/litre.

19. Private consumer

Suggested that Government was wrong to base its energy policy on a “diminishing resource” i.e. fossil fuels. Higher prices will encourage people to reduce consumption and/or convert to greener sources of energy. Companies should not be allowed to “profiteer”. OFT/Government should be a “regulator” to ensure that private enterprise only makes a reasonable return on investment. Pointed to petrol and diesel prices being 10p cheaper in Liverpool and electricity being cheaper in UK but accepted that economies of scale would result in cheaper prices.

20. Private consumer

Highlighted problems of pensioners facing high fuel costs and maintaining that pension increases do not compensate for such increases. Suggested that alternate renewable forms of energy should be introduced along with a “public think-tank” rather than using consultants.

21. Manufacturer and wholesaler

Major concern threatening their business having seen electricity bills rise by almost 100% in past two years. Called for special tariffs to be introduced for industry (equivalent to UK average) as present high prices feed into retail price index and ultimately affects freight rates which results in higher costs.

22. Small service business

Complained that Manx Gas price increases mean they will have to lay-off staff and asked the question “…are we the Manx people paying a fair price for gas or are Manx Gas overcharging for it due to a closed market in the Isle of Man”. Also called for a regulator – suggested capping of prices.

23. Small service business

Increase in electricity costs threatening her business – difficult to pass it on to the elderly, young families and those on tight budgets.

24. Manufacturer

Business tariff for electricity means that effective unit costs are doubled when, the likes of demand charges, standing charge and capacity charges are taken into account.

25. Organisation

Quoted electricity prices in IOM are higher than in UK but did not believe this would change with a cable linked to another jurisdiction. However prices in recent years were unsustainable and envisaged little could be done to reduce costs in near future. Suggested that following the acquisition of Manx Gas by IEG, gas prices in IOM had soared and so did the profitability of IEG. Did not accept that shipping petrol to IOM should cause it to be dearer here when fuel is shipped in coastal tankers all round British Isles without any resultant premium being paid. Suggested OFT investigate

any cartel operating between the petrol wholesalers. Solid fuel was also stated to be more expensive and again queried the reasons for this. Also commented that Manx Gas consumers were still suffering distress and appliances not working more than two years after the natural gas conversion programme was completed.

26. Retired industry expert

The decision to bring natural gas to the Island was a political one and undertaken for the benefit of the Island not merely electricity consumers. As a result the entire Island should contribute by charging the costs of such projects to the IOM and General Revenue account. He point out the need for MEA to keep separate accounts of each area of activity. Fuel Cost Adjustments were felt to be appropriate in all energy sources but needed to be monitored.

27. Leading service provider

Electricity pricing is a serious concern to business. Despite this they receive no volume discount and pointed to an increase in costs of almost 51% between April 2001 and December 2005. Serious impediment to inward investment and supported this by explaining that in a recently proposed business case they had found that it would be £73,000 more expensive in the Isle of Man than in Guernsey.

28. Private consumer

Queried why road fuels were dearer in IOM when it comes by the cheapest form of transport (ships) rather than being distributed by road tanker around the UK. Pointed out that Government was one of the biggest sufferers of high fuel prices due to its large buildings, estate and vehicle fleets and suggested nationalising the fuel supply industry. Raised issues of MEA infrastructure renewal and suggested privatising MEA by selling to a major UK energy firm.

29. Private consumer

Queried standing charge on gas supply and the need for it.

30. Organisation

Identified electricity as current key area of concern to business and wanted to see benchmarking of prices against other appropriate jurisdictions. Suggested that electricity prices were beginning to threaten future viability of business and that oil, petrol and diesel were impacting on the cost of goods brought to the Island and the cost of exports. Some members had suggested there should be an Energy Regulator to control prices and quality of supply.