Australian Competition & Consumer Commission

PETROL PRICES AND AUSTRALIAN CONSUMERS

Report of the ACCC inquiry into the price of unleaded petrol

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Australian Competition & Consumer Commission

GPO Box 3131
Canberra ACT 2601

EXECUTIVE OFFICE

23 Marcus Clarke Street
Canberra ACT 2601

tel: (02) 6243 1111
fax: (02) 6243 1199

www.accc.gov.au

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The Hon Chris Bowen MP
Minister for Competition Policy and Consumer Affairs
Parliament House
CANBERRA ACT 2600

Dear Minister

Inquiry into the price of unleaded petrol in Australia

On 15 June 2007 the former Treasurer agreed to the holding of a price inquiry by the Australian Competition and Consumer Commission (the ACCC) into the price of unleaded petrol, pursuant to section 95H(2) of Part VIIA of the *Trade Practices Act 1974* (the Act).

The inquiry was conducted by Commissioners John Martin, Stephen King and me. Initially the inquiry was to be completed and a report submitted to the Treasurer by 15 October 2007. Subsequently this deadline was extended to 15 December 2007.

Please find enclosed a copy of the ACCC's report.

Graeme Samuel
Chairman

Foreword

The ACCC has carried out a major public inquiry into unleaded petrol in Australia.

In undertaking the inquiry a vast amount of evidence has been gathered, analysed and assessed over a six-month period. We can say that we have crossed the continent in the pursuit of information. It has been six months of very hard work.

The outcome of this assessment is contained in this report.

Using all this gathered evidence we are able to conclude that that the unleaded petrol industry in Australia is fundamentally competitive. There is no obvious evidence of price fixing or collusion between the major participants in the industry. The evidence of price fixing in petrol markets to date has mainly involved specific instances at the retail level of the industry—it is not a fundamental condition of the industry. The ACCC will though, remain ever vigilant and any matters drawn to its attention will be investigated in accordance with normal investigatory processes.

While the industry is essentially competitive, this inquiry has brought to light some fundamental structural issues that raise concerns about current operations and future competitiveness:

- the Australian refining industry is relatively concentrated
- there are significant barriers to entry at the refining level.

Although existing demand for petrol cannot be met through domestic production alone, there are significant impediments to the large-scale importing of petrol by parties other than refiner-marketers, resulting in very little independent importing.

The result is that 98 per cent of Australia's total fuel requirements are largely controlled by the four refiner-marketers. This makes for a very concentrated industry.

The presence of independent imports in the Australian market would reduce this concentration and the dependence on Shell, Mobil, Caltex and BP. The report highlights all the factors that are currently working against independent importers establishing a solid base in this market. These factors range from a lack of access to import terminals and wharfage facilities of sufficient size to the conditions in the retail market. A large share of the retail petrol market is held by the refiner-marketers and the supermarket alliances therefore limiting the size of a retail market base for any large-scale independent importer.

Further, while the industry is fundamentally competitive, it became clear in the course of the inquiry that the major refiners have established a comfortable oligopoly. This begins with what are called 'buy–sell' contracts—the way that the refiners sell their fuel to satisfy each others requirement, which then has an impact through the whole distribution chain throughout Australia.

All this is compounded by the import parity pricing (IPP) policy—the policy of pricing locally refined petrol on the basis of the cost of importing refined petrol. IPP is the base for all wholesale prices that feed into pump prices. IPP is based on the notional cost of an imported equivalent product rather than the actual cost of domestic refining or even the actual cost of imports. If significant independent importing occurred, import parity pricing would more accurately reflect the true cost of importing. But as has been indicated, this is not currently the case and without this pressure there is little reason for the refiners to compete down the price with each other to the actual cost of imported petrol. Instead the IPP can be inflated beyond actual cost.

The report puts forward a number of recommendations to address these issues and to help promote greater competition in the wholesale market.

In contrast, if the wholesale level can be characterised by limited competition, the retail level is more competitive and has undergone significant structural change especially in the capital cities. We have seen the continuing demise of the small, individual, independent outlets and the move to highway style outlets. However, it is the entry of the supermarket chains—Coles and Woolworths that has really had a major impact especially with their shopper docket schemes. Other retail chains, operated by the refiner-marketers and the independent chain operators, have moved to provide alternative offerings particularly related to their convenience stores.

However, while significant innovation is occurring at the retail level, there is also a high level of consumer frustration about price fluctuations and the lack of transparency in prices. The report looks closely at this issue.

While some consumers can use price cycles there is a concern that consumers are at a disadvantage. The electronic subscription service, Informed Sources, is used by the major players in the retail market to give them access on a virtual real time basis, to information about prices being charged by every retail outlet that competes with their own. This information-sharing arrangement gives them enormous advantage over consumers.

If one of the big retailers wants to raise prices, they have sufficient virtual real time information to understand what their competitors' response will be—they can deal with it very quickly and adjust their pricing accordingly. This would seem to reduce incentives to take the initiative to decrease prices. Instead it is better to wait for a competitor to move.

Significant differences in information levels between buyers and sellers can make for less competitive structures. The inquiry spent significant time trying to assess what options were available to solve this problem. One would be to curtail the way electronic subscription services are used by the major players in the market. Alternatively, information available to consumers could be enhanced by adopting, on a national basis, a scheme similar to FuelWatch in Western Australia. However, to introduce such a scheme on a national basis would be a significant commitment. In the end, the ACCC decided that while we could suggest options and at least provide a preliminary analysis, a more substantive assessment would have to be undertaken within government.

Where to from here?

Petrol prices in Australia might be reduced if some of the issues in the report are addressed. However, the adjustment could only expect to be marginal—there will not be a significant drop in petrol prices. It can only be measured in a few cents per litre. This is because the fundamental pricing of petrol is dictated by international factors: the price of crude oil, the US/AUS exchange rate and the international market for the refining of petrol.

Based on OECD studies, Australians have around the fourth lowest price of petrol in the world. The major reason for this is low taxes and excise duties. The actual price of petrol (excluding taxes) is pretty much the same throughout the world. Those who say the ACCC or the government must do something about petrol prices are simply ignoring the reality that petrol prices are set according to the international marketplace. What we can address are issues at the domestic level that can improve the competitive dynamics of the market and consumers' knowledge.

The ACCC would like to thank all those organisations that made submissions to the inquiry, gave evidence at hearings and that supplied information requested. For the most part, organisations made valuable contributions to the ACCC inquiry process. However, the ACCC is disappointed at the significant misinformation that was provided by several stakeholder representative groups—a practice that was challenged by the ACCC
at its public hearings.

It is hoped that an outcome of this inquiry is to set the record straight on key facts relating to the unleaded petrol market in Australia.

Contents

Glossary

Barrel	a barrel is an imperial measure used by the oil industry—one barrel is equivalent to 158.987 litres
Buy–sell arrangements	bilateral arrangements between domestic refiners for the supply of petrol to a refiner in a non-home refinery state
City–country differential	the difference between the average country retail price of petrol and the average city retail price of petrol
Commission agent	a retail arrangement whereby the site operator receives a commission for selling the supplier's product through a site owned or leased by the supplier
Distributor	a business which delivers petroleum products to retailers and end users
Duopoly	a market structure in which there are only two suppliers
Exclusive dealing	a type of conduct prohibited in certain circumstances by s. 47 of the *Trade Practices Act 1974* (the Act) broadly involving one trader imposing restrictions on another's freedom to choose with whom, or in what, or where it deals
Fixed costs	costs that do not vary with output
Fuel quality premium	a premium added to the pricing benchmark to reflect the higher quality of Australian grade fuel relative to the Singapore benchmark price
FuelWatch	a fuel-monitoring service operated by the Western Australian Government
Gasoline crack	the difference between the benchmark price of refined petrol and the benchmark price of crude oil, referred to as the 'refining margin' in previous ACCC publications
Gross indicative margins	the differences between retail petrol prices and wholesale petrol prices, as approximated by terminal gate prices. This measure is therefore a gross indicative measure and includes costs at both the wholesale and retail level (such as branding, transport beyond the terminal gate and costs associated with running a service station)
Import parity pricing	the setting of domestically refined petrol in the wholesale market at a price comparable to the cost of importing fuel into a given location in Australia
Independent	a retailer of petrol selling to the public from an independently owned site which may be either oil major branded or independently branded
Marginal cost	an additional cost from producing one extra unit of output
Notification	a process established by the Act under which a person who engages in exclusive dealing conduct may obtain legal protection from the application of the Act for that conduct
Oilcode	a prescribed mandatory industry code of conduct under s. 51AD of the Act. It regulates the conduct of suppliers, distributors and retailers in the downstream petroleum industry

Price support	support provided by a supplier to a retailer to cover for loss of revenue during periods of price discounting
Refiner margin	the difference between the prices of the suite of products produced at the refinery and the cost of crude oil.
Refiner-marketers	A firm that refines crude oil into petroleum products and then stores, sells and delivers them to resellers and end users—the 'oil majors'
Refinery exchange	arrangements between refiners before July 2002 for the arrangements swap of a volume of product in one location for an equivalent volume in another location where they did not operate a refinery
Refinery utilisation rates	the actual amount of production relative to a refinery's theoretical production capacity
Shopper docket	generally refers to a discount offer on fuel for consumers that have purchased a minimum amount of products from a nominated retailer. The main shopper docket arrangements involve purchases from businesses within the Woolworths or Coles groups
Terminal	a large storage facility where tanker vehicles gain access to supplies of petroleum products for distribution to retailers and end users. They are commonly located on the seaboard near sources of supply, such as ports and refineries
Terminal gate price (TGP)	a price for a spot purchase from a terminal that a purchaser that arrives at a wholesaler's terminal with a tanker truck could expect to pay for bulk purchases for cash
Third line forcing	one form of exclusive dealing conduct prohibited by s. 47 of the Act. It involves the supply of goods or services on condition that the purchaser acquires goods or services from a particular third party, or a refusal to supply because the purchaser will not agree to that condition
Vertical integration	the undertaking by a single firm of successive stages in the process of production and supply of a particular good

List of shortened forms

AAA	Australian Automobile Association
AANT	Automobile Association of the Northern Territory Inc.
ACCC	Australian Competition and Consumer Commission
AFRA	average freight rate assessment
AIP	Australian Institute of Petroleum
AIR	Australian Independent Retailers Pty Ltd
ANOP	ANOP Research Services Pty Ltd
APADA	Australian Petroleum Agents and Distributors Association
APCO	APCO Service Stations Pty Ltd
ASSCSA	Australian Service Station and Convenience Store Association
bbl	barrel
Bennetts Petroleum	Bennetts Petroleum Supplies Pty Ltd
BP	BP Australia Pty Limited
bpd	barrels per stream day
CAFTT	Consumer Affairs and Fair Trading, a division of the Tasmanian Department of Justice
Caltex	Caltex Australia Limited
Coles	Coles Group Limited
Coogee Chemicals	Coogee Chemicals Pty Ltd
cpl	cents per litre
CRP	Caltex reference price
diesel	automotive distillate
DITR	Department of Industry, Tourism and Resources (Australian Government)
DOCEP	Department of Consumer and Employment Protection (Western Australia)
EBIT	earnings before interest and tax
fob	free on board
Franchise Act	*Petroleum Retail Marketing Franchise Act 1980* (repealed)
GST	goods and services tax
Gull	Gull Petroleum
HHI	Herfindahl-Hirschman Index
IGA	Independent Grocers Alliance
ILG	The Independent Liquor Group Co-operative Limited
Informed Sources	Informed Sources (Australia) Pty Ltd
IPP	import parity price
KBD	thousand barrels per day
Liberty	Liberty Oil Pty Ltd
LPG	liquefied petroleum gas
Marstel	Marstel Terminals Pty Ltd

Matilda	Matilda Fuel Supplies
Metcash	Metcash Trading Limited Australasia
Mobil	Mobil Oil Australia Pty Ltd
MOPS92	Mean of Platts Singapore, Mogas92
MOPS95	Mean of Platts Singapore, Mogas95
ML	million litres
MTAA	Motor Trades Association of Australia
MTA NT	Motor Trades Association of the Northern Territory
MTA Queensland	Motor Trades Association of Queensland
MTA SA	Motor Trade Association of South Australia Inc.
MTA WA	Motor Trade Association of Western Australia
MTBE	Methyl tertiary-butyl ether
OECD	Organisation for Economic Co-operation and Development
NARGA	National Association of Retail Grocers of Australia Pty Ltd
Neumann Petroleum	Neumann Petroleum Terminals Pty Ltd
NRMA	National Roads and Motorists' Association
RACT	Royal Automobile Club of Tasmania
RACV	Royal Automobile Club of Victoria
RAC WA	Royal Automobile Club of Western Australia
ROCE	return on capital employed
RON	research octane number
RVP	Reid Vapour Pressure
Scotts	The Scott Group of Companies
SEP	Strasburger Enterprises (Properties) Pty Ltd
Shell	The Shell Company of Australia Ltd
Sites Act	*Petroleum Retail Marketing Sites Act 1980* (repealed)
Solo	Solo Oil Limited
SSA	Service Station Association Ltd
TACC	Tasmanian Automobile Chamber of Commerce
TGP	terminal gate price
The Act	*Trade Practices Act 1974*
Trafigura	Trafigura Services Australia Pty Ltd
ULP	unleaded petrol
United	United Petroleum Pty Ltd
VACC	Victorian Automobile Chamber of Commerce
Vopak	Vopak Terminals
Woolworths	Woolworths Limited
WFWC	Wagga Wagga Fuel Watch Committee
7-Eleven	7-Eleven Stores Pty Ltd

Overview

The petrol story in Australia

Few countries have embraced the motor vehicle with such enthusiasm as Australia. Crucial aspects of the way Australians live and work are directly attributable to motor vehicles. The pattern of settlement in Australia, and particularly the widely dispersed centres of industrial, agricultural and mining activity has contributed to Australia's reliance on motor transport.

However, the enthusiasm with which Australians have embraced their motor vehicles has been paralleled with an abiding suspicion regarding petrol prices. This has resulted in a long history of government involvement in petrol and petrol pricing.

This report should therefore be seen as a continuum of these three historical strands—the major role that motor transport plays in the economy and society, the concern with petrol prices and the long-term community expectation that there is a role for government in what Australians consider to be a vexed issue.

A few statistics

According to latest figures there are 14.8 million motor vehicles, including motor cycles, registered in Australia. Passenger vehicles accounted for 77.6 per cent of all registered vehicles.[1]

Drawing on another set of statistics an even more precise picture emerges of the Australian way of travel.[2] In March 2006, 90 per cent of Australian households kept at least one registered motor vehicle in their garage or dwelling. Eighty per cent of those 18 years and over used a private vehicle to travel to work or study. Of these 95 per cent did so as a driver, while five per cent travelled as a passenger. Reasons for using private transport included comfort, convenience, privacy and lack of a public transport alternative.

The car is integral to Australians' work and leisure and to their role as family members. Given this, sensitivity to the costs involved is keen.

Of course there can be a huge variation in these costs. When purchasing a motor vehicle the three main factors considered by Australian households were cost (51 per cent), fuel economy (39 per cent) and the size of the vehicle (34 per cent).[3]

A focus on fuel is a focus on petrol—91 per cent of all fuel used by passenger vehicles was petrol.[4] Using the most recent household expenditure data (2003–04) and taking account of the whole range of motor vehicle expenses (registration, insurance parts, accessories, tolls, repair, parking fees etc.) the purchase of the motor vehicle was the largest component of weekly motor vehicle expenses (around 36 per cent) while petrol accounted for around 22 per cent (with all fuel coming to approximately 25 per cent).[5]

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1 Motor vehicle census, 31 March 2007, Australian Bureau of Statistics (ABS) catalogue 9309.0, updated : 16 November 2007.
2 Environmental issues: 'Peoples views and practices', March 2006, ABS cat 4602.0, updated: 21 November 2006.
3 Environmental Issues: People's views and practices, op.cit.
4 Survey of Motor Vehicle Use, 31 October 2006, ABS Cat 9208.0, Updated: 19 October 2007.
5 Household Expenditure Survey, 2003–04, ABS Cat 6535.0.55.001, Detailed Expenditure Items.

Petrol price fluctuations

Petrol is effectively a homogenous product so there is little reason for brand loyalty. Without services or other add-ons the focus for petrol purchases is primarily on price. As a result, petrol prices are under constant scrutiny and what the community observes causes anxiety.

City motorists notice significant price changes over the week and often within a day.

Petrol prices are highly visible and variable. Motorists in the normal course of the day—getting to work, doing the shopping, collecting children—observe different prices almost without looking, as petrol prices are prominently displayed on price boards outside the service stations. In metropolitan areas there are many petrol stations and two or three stations of different brands can often be found next to each other. Commissioned survey work indicates that a very significant proportion of surveyed motorists inform themselves of petrol prices from service station display boards. Undoubtedly, price variations between different days of the week are a major issue of concern.

With such visibility and awareness about differences in prices city drivers want answers to what they consider a sensible question—if petrol can be discounted on some days of the week, why should there not be lower prices on a more permanent basis? Further, country people, while facing fewer price fluctuations, see what they regard as an unfair gap between country and city prices. As it is the same product, why should there be such significant differences in the way it is sold in different parts of Australia?

One consequence of these types of questions is the long-standing role of Australian governments in petrol and petrol pricing. The level of involvement seems quite unusual by international standards, certainly for OECD countries. Interestingly by OECD standards Australian unleaded petrol prices are not high.

Government involvement in petrol prices

The first petrol importing business was established in Australia in 1901 and with it, the newly established Commonwealth, introduced a customs duty as a revenue raising measure.[6] Domestic refineries were established in 1929 and an excise duty was introduced to fund road development.

Pricing became a critical issue with the outbreak of World War II. The imposition of price controls on petroleum products by the Commonwealth occurred in 1939 and lasted until 1948. From 1948, prices were controlled by state governments. However, by the mid-1950s, there was only one remaining state authority (South Australia) setting prices. The South Australian Prices Commissioner in effect acted as a price setting authority for the whole of Australia with the industry in each state generally adopting, voluntarily, the commissioner's findings.

The Commonwealth became more involved in petrol regulation with the first oil shock in the early 1970s. The price of wholesale petroleum products was regulated in 1973 by the Commonwealth Prices Justification Tribunal. The tribunal was replaced by the Petroleum Products Pricing Authority in 1981. During this time, New South Wales, Victoria, South Australia and Western Australia reintroduced forms of wholesale and retail price controls.

6 *Customs Act 1901* (Cwlth).

The life of the Petrol Authority was short and in 1984, it was subsumed by the Prices Surveillance Authority (PSA).[7] The PSA also replaced state and territory regulation of wholesale petrol prices. The major oil companies were required to notify the PSA of proposed price increases for the supply of certain wholesale petroleum products including petrol and diesel. At the retail level, service station operators were free to set prices as market conditions allowed.

The next major Federal Government intervention occurred after a spike in the price of oil caused by the Iraqi invasion of Kuwait. The Commonwealth Treasurer froze wholesale petrol prices on 9 August 1990 for 21 days, and directed the PSA to hold a public inquiry into the pricing and supply of wholesale and retail petroleum products by the six refining companies.

Prices oversight lasted for another eight years. In 1998, in response to reports by the Industry Commission and Australian Competition and Consumer Commission (the ACCC)[8], formal prices surveillance ceased as part of the government's reform package for the petroleum industry. From 1 August 1998 petrol and diesel prices were deregulated and wholesalers were free to set their own prices based on market conditions.

All of the eight states and territories have legislation under which petroleum product prices could be regulated. For most state and territory governments the regimes are regarded as reserve powers, however, Western Australia and Victoria have subsequently introduced regulatory arrangements that are intended to improve transparency and competition at the wholesale or retail level.

As part of the reform package the refiner-marketers agreed to support an independent price monitoring system for 100 country towns to be monitored by the Australian Automobile Association, and the ongoing monitoring of petrol prices by the ACCC, with a particular focus on 'hot spots'.[9]

This ongoing monitoring role has involved the ACCC in a number of major projects on petrol pricing.

The government asked the ACCC (in 1999) to consider how international crude oil price movements had been translated into Australian retail prices. Also, in response to consumer concerns about fluctuations in retail petrol prices, the ACCC's informal monitoring role was extended to informing consumers (in 2002) about how to take advantage of petrol price cycles. These include, 'Assessing shopper docket petrol discounts and acquisitions in the petrol and grocery sector' in 2004.

Most recently, and following a Senate inquiry into petrol pricing, and in response to a divergence movements between international benchmark prices and the domestic retail price of petrol, the Commonwealth Treasurer approved, on 15 June 2007, the holding of an inquiry by the ACCC into the price of unleaded petrol under Part VIIA of the Trade Practices Act.[10] This report contains the findings of the ACCC following the completion of this inquiry.

A cautionary note is appropriately sounded at this point. In the course of preparing the report the ACCC identified a level of misinformation in the reporting of petrol prices that was concerning. The frequency of the misinformation increases its credibility to consumers. As a result governments are pressured to respond and the ACCC is required to assess the data so that reliable and objective information is available to consumers. Commentators on petrol prices have an acknowledged responsibility to the members they represent to raise concerns. However, this responsibility should also include a commitment to discourage myths and misapprehensions that are not supported by the evidence.

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7 Prices Surveillance Authority, ***Inquiry in relation to the supply of petroleum products matter numbers: S17/84/1-9***, final report, 25 July 1984, pp. 7–9.

8 Industry Commission, ***Petroleum products***, (Report No. 40, AGPS, Melbourne, 5 July 1994), Australian Competition and Consumer Commission, ***Inquiry into the petroleum products declaration***, 15 August 1996.

9 Australian Competition and Consumer Commission, ***Increase in the average retail petrol prices in Australia compared with the rise in international prices*** (24 November 1999).

10 Treasurer, The Hon. Peter Costello MP, ***ACCC to inquire into petrol prices*** (Media release No. 050, Melbourne, 15 June 2007).

The ACCC inquiry

The 2007 inquiry has been a major inquiry. Its initial trigger was the ACCC's identification as part of its ongoing monitoring role of a substantial divergence between movements in domestic regular unleaded prices and movements in the international benchmarks for unleaded petrol used by Australian refiners in early June 2007.

Subsequently the ACCC wrote to the Treasurer seeking his approval for an inquiry under Part VIIA of the *Trade Practices Act 1974* (the Act). In response, the terms of reference of the inquiry set out by the then Treasurer made reference not only to price determinations but to the structure of the industry, the extent of competition at the different industry levels and to impediments (and possible remedies) to efficient pricing.

A mass of evidence has been assembled from the hearings, submissions and the ACCC's own research in response to these terms of reference. The report resulting from this work is necessarily long, complex and detailed.

A high level summary has, however, been provided. The summary is divided into three parts:

1. Set-up and background details about industry structure that need to be understood before the workings of the industry can reasonably be established.
2. Critical findings that have emerged from the analysis of evidence before the inquiry.
3. Overall conclusions and implications for competitiveness.

Summary of the ACCC inquiry into unleaded petrol prices

1 Background and industry structure

The ACCC and before it, the PSA, has had a long involvement in prices surveillance and informal monitoring in the petroleum industry. There has also been a wider involvement in the petroleum industry through the ACCC's and before it the Trade Practices Commission's administration and enforcement of the Act.

Recently, the ACCC investigated allegations of price fixing, predatory pricing and other anti-competitive activities in the petroleum industry. It has also evaluated proposed mergers in the petroleum industry and third line forcing notifications for various petrol shopper docket schemes (these relate to prohibitions in the Act on exclusive dealings that impose restrictions on freedoms to trade). Since March 2007, the ACCC has also been administering the Oilcode which regulates the conduct of suppliers, distributors and retailers in the downstream petroleum retail industry.

From this diverse involvement, as well as the present inquiry, a detailed understanding of the workings of the petroleum industry has been formulated.

In summary, the Australian petroleum industry operates at three broad levels: refining and importing, wholesale and distribution, and retail. Each of these is outlined below. The relationship between the different layers is complex. Some larger companies operate across the different layers but in different ways. Within these different roles they have a major impact on the structure and nature of the industry. Other companies have less significant roles and they are essentially takers rather than makers of the industry structure.

Refining and importing

Unleaded petrol sold in Australia is either refined from crude oil in Australian refineries, or imported as a finished product from overseas refineries or blending operations.

Crude oil is the major input into petrol refining. Australia produces crude oil. However, the proportion of crude oil supplied from Australian oil fields to domestic refineries has declined over time. Instead countries like Vietnam, Malaysia and Indonesia are major sources of imports of crude oil. Australian crude oils tend to be lighter and sweeter, and therefore more expensive, than imported crude oils.

There are seven refineries operating in Australia making for a relatively concentrated industry. Victoria, New South Wales, and Queensland each have two refineries. Western Australia has one. Tasmania, South Australia, and the Northern Territory source unleaded petrol through imports from domestic or international refineries.

The seven refineries are operated by:

- Shell Company of Australia Limited (Shell)—Victoria and New South Wales
- Mobil Oil Australia Pty Ltd (Mobil)—Victoria
- Caltex Australia Limited (Caltex)—New South Wales and Queensland
- BP Australia Pty Ltd (BP)—Queensland and Western Australia.

Mobile previously operated a refinery at Port Stanvac in South Australia but it was 'mothballed' in 2003 and there is no immediate plan to reopen it.

To supply markets in which they do not operate refineries Caltex, BP, Mobil and Shell contract to buy product from a local refiner in what are known as 'buy–sell' agreements.

The use of the term, 'buy–sell' in this context, describes the pairing of supply contracts between refiners who supply to each other simultaneously in different markets. However, contracts between each set of buy–sell partners are discrete and between buy–sell partners who negotiate a buy–sell arrangement, there is no requirement for either partner to buy or sell equal quantities from the other (for example, on average BP and Mobil were net sellers of petrol during the period 2002–03 to 2006–07, while Shell and Caltex were net purchasers).

These buy–sell arrangements have been the subject of extensive investigation during the inquiry and are given considerable attention in the report. One issue which the ACCC has considered carefully is whether such arrangements are consistent with effective competition in the petroleum market. This is discussed in chapter 13.

Refining capacity for petroleum products (not just unleaded petrol) has declined over recent years in Australia. This has been occurring at a time when refining capacity in the Asia-Pacific region has increased. Further, refineries in Australia are comparatively small and are among the most expensive to operate in the region.

A number of advantages, including location advantages seem to be, currently at least, protecting existing refineries. For example, it is cheaper to import crude into Australia than to import refined fuel. Substantially larger ships are used for importing crude oil compared to those used to import refined fuel. Freight costs for crude are therefore lower.

New Australian fuel standards were announced in 2001and introduced progressively (from January 2002 to January 2006). As these standards were out of line with overseas standards the availability of imports of Australian grade petrol was reduced. The protection which the Australian refiners enjoy as

a consequence of these changes is part of the location advantage which they enjoy in comparison to importers of petroleum products.

In 2006–07, Caltex was the leading producer of unleaded petrol with around 33 per cent share of total unleaded petrol production. BP was the second largest producer of unleaded petrol with around 30 per cent share, followed by Shell with around 25 per cent and Mobil with about 12 per cent.

Existing demand for petrol cannot be met through domestic production alone. Estimates suggest that imports of petrol represented around 15 per cent of the sales of petrol in 2006–07.

All of the four refiner-marketers import petrol into Australia.

There are also independent petrol importers including Trafigura in Victoria, Gull in Western Australia, and Neumann in Queensland. However, these companies are irregular importers and source most of their product from Shell, Mobil, Caltex and BP. Independents accounted for 9 per cent of total imports in 2006–07 (with the closure of the Port Stanvac refinery in 2003, Mobil's imports have increased, further decreasing the proportion of imports attributable to independents). Also a decline in independent imports occurred when Woolworths ceased to obtain petrol from Trafigura from January 2004.

Importation requires access to ports capable of offloading cargoes of petrol to connected terminal facilities. Terminals capable of receiving cargoes via pipeline can be located away from port facilities. Terminals operated by the refiner-marketers near domestic refineries are used to store refinery production and imports received at the port facilities linked to the refinery.

Most terminals capable of receiving cargos of imports in Australia are owned and operated by Shell, Mobil, Caltex and BP. Joint ventures and a range of other arrangements are used between these companies to 'share' facilities.

There are also a number of independent operators of seaboard terminal facilities used to offload, store and distribute petrol in Australia. Shell, Mobil, Caltex and BP are key customers of these terminals.

There is very little, if any, spare capacity in Australia available for use by an independent importer at the present time.

While construction of further terminalling infrastructure is a possibility, this is constrained by a number of factors including the significant investment costs involved and the long term commitment required for such a construction to take place. Such a commitment requires any independent importer to have a sufficient downstream retail market available to it. It is difficult for an independent importer to secure such a market without the certainty of terminalling infrastructure to undertake such importing. One seems dependent on the other and currently neither is occurring

While Australia is a significant importer of petrol, small quantities of petrol are exported—mainly to New Zealand (81 per cent of exports) but also to Singapore (19 per cent of exports). A range of options would seem to be available to the refiner-marketers to sell product in circumstances of excess supply.

In terms of the fuel sold, the refiner-marketers (Shell, Mobil, Caltex and BP) source the fuel they sell into the wholesale and/or retail sector from three main sources: own refinery output; buy–sell arrangements with other refiners; and imports. Independent suppliers source their fuel from either domestic refiners or imports.

Wholesale

Each of the refiner-marketers and a number of independent wholesalers (such as Liberty, United, Gull, Neumann and Trafigura) sell fuel at the wholesale level in Australia. The supply of fuel from terminals is undertaken by distributors. Some distributors are independent while others are owned by the wholesalers. The numbers of distributors have declined significantly with the evolution of the industry. Regional areas are more likely to be supplied by distributors.

A number of methodological problems emerge when an attempt is made to get precise figures for market share in the wholesale market. On the best figures able to be used by the inquiry, Caltex was the market leader with about 39 per cent of total wholesale volumes in 2006–07. Shell, Mobil, Caltex and BP together had 96 per cent of the wholesale market with independents (Liberty, United, Matilda, Trafigura, Gull and Neumann) having the remaining 4 per cent in 2006–07.

Independents have had a declining share of wholesale volumes over the period 2002–03 to 2006–07. The supermarket alliances have resulted in a substantial portion of wholesale sales being redirected to the supermarkets and away from the independent resellers at the wholesale level.

This raises issues about the level of concentration in the wholesale sector. A critical issue to be examined by the report is the extent to which competition operates and is able to provide a constraint on behaviour within the wholesale sector. These issues are examined in chapter 13.

What can be said by observing the market structure is that vertically integrated refiners (Shell, Mobil, Caltex and BP) dominate the wholesale sector. There is very little importing by independent wholesalers so that most fuel sold by independent wholesalers is re-selling of fuel obtained from the domestic refiners.

Shell, Mobil, Caltex and BP supply almost all of the fuel sold at wholesale in Australia, either directly or indirectly.

Retail

The retail sites where most Australians buy their unleaded petrol can have quite different wholesale supply and ownership relationships with the company whose brand of petrol they sell.

There are four broad categories of petrol retailing operations:

- *Refiner-marketer owned sites*—Each of Caltex, Mobil and BP have directly owned and operated retail outlets. Shell is an exception here for unlike the other refiner-marketers it owns but does not operate any retail sites outside its commercial vehicle refuelling network.
- *Refiner-marketer branded independent and distributor owned sites*—Independent operators tend to own their own site but retail the fuel from one of the refiner-marketers. There are also distributor-owned sites that do this. The price of fuel at these sites is determined by the operator. Distributor-owned sites are run by a local fuel distributor, some of which are owned or part-owned by the refiner-marketers.
- *Supermarkets*—Supermarket chains operate sites which have shopper docket discount schemes linked to grocery sales at their supermarkets. These are the Coles Express and Caltex/Woolworths joint venture sites. Prices at these sites are determined by Coles Express and Woolworths.
- *Independent operators selling their own brands*—These range from the large independent chains to small one to two site operations. There are also independent operators that purchase fuel from the independent wholesalers and align themselves with the independent wholesalers' brand.

Retail sites within these categories can be operated by the owner of the site, or operated on behalf of the owner of the site under a commission agency or franchise arrangement. An independent owner operator may choose to align its site by the use of signage etc with the brand of fuel sold by a particular wholesaler. There are also instances in which owner-operated sites receive price support from their wholesaler.

If sites are operated on behalf of the owner as a commission agent then compensation is generally paid in the form of a commission based on the quantity of product sold. A franchise relationship occurs where an individual rents a site or a number of sites, and operates under a franchise agreement. Franchisee operated sites may receive price support from their wholesaler.

Differentiating these types of relationships is important because it shows the complex relationship between the different layers in the petroleum industry and it gives some insight into the potential influence of refiner-marketers in pricing outcomes across the country. Also to further complicate the picture returns for some petrol retailers are driven more from non-petrol revenue (convenience stores for example) and this influences their approach to selling petrol.

2 Critical findings

Determining prices in the petroleum industry

A key issue for this inquiry is whether the pricing approaches adopted by the different layers of the petroleum industry are appropriate having regard to competition and industry performance.

Refining and importing

With regard to refining and importing the following are key issues impacting on the price of petrol:

- Import parity pricing (IPP) is the policy of pricing locally refined petrol on the basis of the cost of importing refined petrol. IPP is simply the landed cost of obtaining refined product from overseas refiners. When evaluating pricing, it is important to note that prices at all stages of the petrol supply chain are heavily influenced by the landed price of imported petrol into Australia, whether or not the petrol sold is actually refined in Australia or imported. Currently around 80 to 85 per cent of unleaded petrol is produced locally but is priced by reference to the landed cost of alternative available supply.
- Since deregulation in August 1998, Shell, Mobil, Caltex and BP have continued to price petrol throughout the supply chain on the basis of a pricing formula said to be based on import parity pricing. Although the details of the pricing formula used to derive refinery prices varies from party to party, the formula for any petroleum product can generally be expressed as:

IPP based domestic refinery price = a benchmark refinery price (e.g. MOPS95) + quality premium + shipping costs + wharfage + insurance and loss

- The key driver of petrol prices based on the IPP formula is benchmark refinery prices and the benchmark used for unleaded petrol is the Platts quote for a particular specification of petrol, most commonly Mogas95 (known as MOPS95—Mean of Platts Singapore).
- The calculations of the other add-ons are explained in detail in the report (see chapter 7). Their levels tend to vary from state to state although the insurance and loss component is a fixed percentage of the landed price. The quality premium, another component of the refinery price, has risen over the past five years. Changes in exchange rates have an impact on price because

the Singapore benchmark price is expressed in US dollars per barrel. Critically, the benchmark refinery price contributes to around 92 per cent of the domestic refinery price.

- The use of a formula to set domestic refinery prices has important implications for petrol pricing through the supply chain. The pricing formula is the basis of domestic refinery prices in the individual 'buy–sell' arrangements between Shell, Mobil, Caltex and BP.
- Although there are subtle differences in different buy–sell arrangements, buy–sell prices are based on the refinery pricing formula set-out above. The key implication of buy–sell price determination is that buy–sell prices are based on the **notional** costs of imported equivalent product rather than the actual costs of domestic refining or even the actual costs of imports.
- The refiners' contend generally that unless they achieve the import price in Australian markets, there is little incentive to produce. Similarly, a buyer would be unwilling to pay more for local product than the cost of equivalent imports. These arguments assume, however, that imports are both a true alternative source of supply of Australian grade petrol, and would be readily available should a local refiner attempt to raise prices substantially above import parity. If this is the case, import prices would place a constraint on domestic refinery prices.
- It is clear to the ACCC that the buy–sell price is significant for petrol pricing in Australia as it essentially forms a floor for the setting of wholesale prices. It forms the basis for the negotiated price for all wholesale sales by the refiner to wholesale resellers and it forms the basis of terminal gate prices (TGP) (which are offered in compliance with the Trade Practices Act and for the pricing of spot transactions in the wholesale market).

Given the pre-eminence of the buy–sell price in the setting of prices in the wholesale market, the ACCC has carefully considered whether the buy–sell price and the formula on which it is based is appropriate and consistent with notions of workable competition.

In this context, the inquiry considered it important to assess the impact of pricing by reference to this refining price formula, described above, on the rate of return from refining operations.

Clearly, the price of imported or locally refined petrol is not directly related to the costs of production but is rather based on benchmark overseas prices with various actual or notional add-ons reflecting quality premiums and freight. Nevertheless, actual domestic costs are relevant to a consideration of refining profitability as these will need to be recovered through sales of refined product.

Evidence (some of which was confidential) was presented to this inquiry about domestic refining costs of production. The evidence was examined in detail and the broad conclusion made that Australian refineries are more costly to operate than competitor refineries in the Asia-Pacific region, particularly Singapore.

Key indicators of refining profitability used by the industry were also examined. The caveats that necessarily came with this information had to be explored. In addition, considerable time was spent during the inquiry questioning the refiners about the profitability of domestic refining. The refiners were also asked to provide the ACCC with additional information about a number of refinery performance indicators.

Drawing all this complex evidence together the ACCC was able to conclude that:

- Australian refiners are currently profitable in an accounting sense and indeed are more profitable than they have been for some time
- in terms of profitability indicators:
  - gross gasoline cracks are higher than they have been for some years and are likely to remain steady for the immediate future
  - net refining margins are currently also high relative to previous years for most refineries
  - utilisation rates at domestic refineries have improved and short-term returns on capital employed are generally stronger than they have been for some years
- other performance indicators, for example, return on capital employed were solid.

On this basis, the ACCC has concluded that the IPP-based pricing formula used by domestic refiners is currently working in their favour and enabling them to operate profitably in the Australian petroleum market.

The fact that Australian refiners are generally operating at higher cost than their regional counterparts raises the question of how domestic refiners are able to compete against imported products produced by more efficient international rivals.

In the ACCC's view, based on the evidence before the inquiry, a key reason that domestic refineries can remain competitive with other refiners in the Asia-Pacific region is because they enjoy certain advantages including a freight differential between the cost of landing crude oil compared with refined petrol and the quality premium charged by Australian refiners on all fuel sold.

However, while refiners are currently earning an accounting profit (and some are more profitable than others) the future may be less robust, given the picture provided to the inquiry of possible future trends:

- The quality premium may diminish as the supply of Australian grade petrol in international markets increases.
- International refinery capacity is expected to increase in the medium term as is international demand. If capacity expansion leads regional demand growth, as some inquiry participants predict domestic refiners may face stronger competition from imports of refined petrol.
- Efficiency gains have to be achieved by domestic refiners to remain competitive. However, it is unlikely that a new domestic refinery of world-class scale would choose to locate in Australia.

In the end, the ACCC has concluded that the IPP pricing policy currently enables domestic refiners to operate profitably and to compete with regional suppliers. Although future supply and demand conditions are not certain, none of the evidence suggested that there would be major changes in local refinery profitability in the foreseeable future.

Wholesale

With regard to the way in which wholesale prices are determined, the ACCC has developed the following understanding:

- Buy–sell arrangements effectively set the starting point for domestic wholesale prices. To ensure that refiners have an adequate supply of product in locations where they do not have a home refinery, buy–sell contracts are put in place. The contracts (typically six months in duration) set out the volume of product to be supplied, and the pricing formula to apply to these sales.

- Buy–sell prices can and do vary from location to location according to differences in freight and quality specifications. In some cases terms are identical. Essentially however, prices in buy–sell contracts are based on the import parity formula as outlined above. The buy–sell pricing formula does not contain an explicit margin component. Nevertheless, it is apparent that, in large volumes, buy–sell arrangements are profitable to the seller.
- The formula driven approach to buy–sell prices is common to every buy–sell agreement. In aggregate, the buy–sell arrangements set a substantially uniform price for refinery outputs that are supplied to, and from, Shell, Caltex, Mobil and BP. These arrangements govern a substantial percentage of each refinery's output.
- Crucially the evidence suggests that the buy–sell price is not available to independent resellers and is **lower** than prices that independent resellers are able to negotiate. The wholesale prices for independent resellers include additional components (wholesale margin for example). Buy-sell arrangements provide the refiners with a competitive advantage at the wholesale level by enabling them to obtain the fuel that they sell at wholesale in their non-refinery states at a lower price than any other reseller of fuel.
- The import parity formula, and effectively the buy–sell price, forms the basis of wholesale prices across the wholesale sector. In particular, those buy–sell prices effectively act as a floor below which wholesale prices will not fall and above which wholesale prices will be built up. For domestic refiners, petrol is transferred from the refining business to the marketing arm. The transfer price that applies to such transactions is generally the lowest applicable buy–sell price. Once the internal transfer has taken place, the wholesale division sets various prices for the supply of petrol to various customers.
- Shell, Caltex, Mobil and BP and a number of independent wholesalers (including Neumann, Liberty, Trafigura, Gull, Matilda and United) provided information to the inquiry about their wholesale price determination. The report provides some detail, within the constraints of confidentiality, of these practices.
- From this evidence, the ACCC could discern that wholesale prices for petrol are essentially made up of some combination of the following:
    - the buy–sell price or wholesalers own purchase price (which is based on the IPP formula)
    - plus delivery, brand, credit and equipment related costs (where applicable) and a wholesale margin
    - minus various applicable discounts.

In some circumstances price support is offered as an alternative to discounts.

- Different wholesalers use different mechanisms to set wholesale prices. Generally speaking, the wholesaler sets a certain 'list price' or 'reference price' (based on a formula built from the Singapore benchmark price, quality premium, freight and wharfage, insurance and loss, taxes and a marketing margin). However, the actual negotiated price depends on a number of factors. Volume sought to be purchased is the most important factor (Coles and Woolworths receive advantages here as large players).
- Relative negotiating strengths are very important—ultimately the price negotiated more closely reflects the customer's alternative supply options rather than the sellers' cost of sourcing the product.
- The role of terminal gate price (TGP) came to be questioned as a consequence of the review of wholesale pricing practice. Under the Oilcode, each wholesale supplier is required to publish

daily a TGP. The TGP is essentially the spot price that a purchaser who arrives at a wholesaler's terminal with a truck could expect to pay for a bulk purchase of wholesale petrol. It is similar in structure to the wholesale reference prices discussed above but with additional nuances. Most wholesalers generally use a wholesale list price as the basis for determining wholesale prices even if a TGP is also published.

- However, it became clear to the inquiry that currently few wholesale sales are actually made at the level of TGP and with the continued structural change in the industry, from a large number of small independents to a smaller number of larger independents, the demand for spot sales on a truck by truck basis is likely to diminish further.

The ACCC recommends that the appropriateness of the arrangements for terminal gate price publication should be reviewed as part of the scheduled review of the Oilcode by the ACCC and the Department of Resources, Energy and Tourism.

Drawing this evidence together with regard to price determination at the wholesale level the ACCC concludes that:

- Buy–sell arrangements in conjunction with the import-parity pricing policy enable the domestic refiners to effectively set and sustain uniform prices for a substantial percentage of their refinery output.
- Buy–sell arrangements create reciprocal benefits that are only available to other refiners thereby placing the Shell, Mobil, Caltex and BP in a position of competitive advantage even in non-refinery markets. In practice, the prices set by the buy–sell arrangements tend to be available only to the major oil companies giving them an advantage over independent wholesalers and resellers.
- As a general rule the difference in price (the higher price) which refiners supply to wholesale resellers is broadly reflected in the alternative available supply source for the wholesale reseller. In other words, the final wholesale price does not reflect the cost to the refiner of importing but rather the cost to the wholesale customer of importing that fuel.
- In applying IPP pricing policy, Australian refiners will seek to recover margin across every component of the IPP price formula.
- The exclusive supply arrangements between the supermarkets, Coles Express and Woolworths and their respective suppliers, Shell and Caltex, have diminished the supply options for many independent resellers.
- The evidence indicates that petrol wholesaling is a profitable activity. Nevertheless, it should be noted that wholesale margins are narrow.
- While competition to supply distributors, independent resellers and other commercial and industrial customers at times can be strong, overall wholesale competition is constrained for the reason stated above.

Retail

In the course of the inquiry, the ACCC heard evidence that variations in Singapore Mogas95 unleaded petrol explain a significant proportion of the variation in the price of petrol sold at retail. A one-week lag also has to be taken into account to allow for the time required for the Singapore benchmark price to make its way into the IPP-based formula price and for stock turnover to occur. Domestic retail prices also fluctuate because of local factors. These fluctuations may at times mask the relationship between international prices and domestic price movements.

While in general terms there is a strong relationship between domestic retail unleaded petrol prices and Singapore Mogas95 and no systematic divergence, two instances of divergence occurred between domestic prices and international prices in January and June 2007.

These relationships have been extensively explored and documented in the report. Different ways of looking at this relationship have been examined and the views of all the different parties considered. There were also differing views expressed regarding the appropriateness of the methodology used to highlight the alleged divergences.

Taking into account all this evidence, the ACCC does not consider that it has been provided with a satisfactory explanation of the divergences. At least in the period since January 2007, there appears to have been a degree of asymmetry in the response of retail petrol prices to decreases in Singapore Mogas prices compared with the response of retail prices to increases in Singapore Mogas prices.

The ACCC also looked into the general process of price setting at the retail level. Given their differences, retail prices in regional areas were examined separately (see below).

In setting prices at the retail level the following critical findings were made:

- The most important factor determining the retail price generally is the wholesale price at which the retailer purchased the fuel. Retail petrol prices in Australia will tend to reflect wholesale prices plus associated costs (such as branding and transport) plus a profit margin.
- Particular pricing strategies of different types of organisations (commission agent, franchise agent, owner-operated, supermarket alliance) also have an impact.
    - At owner-operated sites, the owner of the site determines the retail price. However, such owners may have agreements with their wholesale supplier that include price support. Price support agreements generally include provision for a maximum retail price for the period in which price support is supplied and in this way the wholesaler influences the setting of prices.
    - At commission agent sites, a site is managed on behalf of another organisation, typically a refiner-marketer. At such sites, the retail price will be set by the principal refiner-marketer.
    - At franchise-operated sites, the operator rents a site or number of sites and operates under a franchise agreement, under which fuel will generally be sourced from the owner (refiner-marketer) of the site. While the franchisee may be responsible for setting the retail price, the wholesale price is generally determined by the owner of the site and, in addition, the owner may influence retail prices through the provision of price support.
    - In relation to the supermarket alliances, the relevant refiner-marketer supplies fuel to the supermarket under a wholesale supply agreement, however, it is the supermarket that set the retail price. Again, price support may be a feature of such an arrangement.

- In addition to these supply and structural considerations retailers take into account a range of demand conditions in their markets. In response, they formulate a particular price setting strategy and this includes their reactions to the price cycles in their areas.
- Price support also has an impact on the final retail price. Price support is still used in varying degrees by Shell, Caltex, Mobil and BP to control or influence the setting of retail prices at certain retail sites. Evidence provided to the ACCC is obviously sensitive but some common elements can be disclosed:
    - Each company sets an internal reference price at which the relevant retailers purchase fuel (plus freight and other costs).
    - Each company also determines a margin that each of its retailers is entitled to obtain. The company monitors competitors' prices and provides price support to a level that allows the retailer to match the competitors' prices during periods of discounting, but still retain the margin above the internal reference price.
    - In some circumstances a recommended retail price is communicated to the retailer and the price support may be conditional on the retailer not pricing above this price. The retailer will generally follow the recommended price.
    - Price support tends to be given on the basis of a rebate at the end of a given period.
    - The major oil company decides at a given point in time to withdraw price support and informs the retailer.
- Price support arrangements are an important feature of the retail market. They are a significant tool used by the refiner-marketers to influence the market and enable retailers to match competitors' prices during periods of discounting. The withdrawal of price support is also significant in controlling the rapid upward movement at the commencement of each cycle.
- Responding to price cycles is a major component of pricing strategy at the retail level of the market. In Sydney, Melbourne, Adelaide, Brisbane and Perth where price cycles are regular and frequent (Canberra, Darwin, Hobart and rural areas still have some petrol price volatility in response to international movements in crude oil prices but they do not have persistent short- term price cycles). In participating/responding to price cycles there are patterns of behaviour among different types of retailers. For example:
    - While there may be individual differences in pricing strategy among the major refiner-marketers, it appears that in individual markets, it is generally a refiner-marketer that initiates price increases from the trough of a price cycle (Coles also tends to lead the market up in some locations). They are not aggressive discounters. The refiner-marketers operate very sophisticated strategies which allow them to adjust prices on a localised basis. They follow pricing strategies location by location that can extract the greatest benefit from the price cycles. Refiner-marketers with a significant retail presence in a particular location, often together with having a refinery in the area, generally lead prices up. A major oil company which uses price support measures decides at a given point in time to withdraw price support and informs the retailer. This inevitably results in a rise in retail prices generally.
    - The supermarkets were considered to be the first to reduce prices from the peak and the last to increase prices, following other retailers. However, this seems to have changed recently, with Coles often being more active in increasing prices from the trough of a price cycle and Woolworths increasing prices following an increase by competitors with a shorter lag.

    - Historically independents were aggressive discounters and lead prices down from the peaks. However, with the entry of the supermarkets and their shopper dockets schemes independent retailers appear to have stepped away from the role of leading prices down. Nevertheless many larger independents still maintain consistently low prices.
- In an examination of price cycles, the price monitoring service provided by Informed Sources seems to be influential in retail price setting. The data collected and collated by Informed Sources is made available to subscribers (primarily the refiners-marketers and supermarkets) through an internet service and covers about 3500 sites. Subscribers can generate reports based on data received. High transparency of competitors' prices effectively reduces the risk encountered by retailers who seek to lead prices up in a market. A price leader can tell whether its competitors follow the price rise or not. If not, then the price leader can drop its price back in line with the market within a short time.
- Price transparency is a critical issue for the industry and is explored more fully in the report.

With regard to retail price setting in regional areas the ACCC concluded that:

- Prices and retail margins in regional areas are generally higher and more stable than those in the largest capital cities of Australia. Focusing on the largest five cities, the average annual city–country differential over the last five years is 5 cpl (it should be noted that when Canberra, Hobart and Darwin are added to make a eight-city average the differential with regional areas is less).
- The reasons for this difference include smaller populations in country areas, which results in less competition and higher required margins and greater transport costs.
- There is also a lag effect to be considered. Prices in country areas tend to take longer to reflect the movements in international petrol prices often with a lag of around one to two weeks. In part this is because petrol stocks are replenished less often in country areas. This lag leads to city prices being closer to country prices during a rise in international prices and further apart during a fall in international prices. This causes the city–country differential to vary over the year.
- Apart from the differential between city and country prices, there is often a level of concern in the community about divergences between prices in different towns where people expect that prices should be similar. To better understand this some case studies were considered (for example, Wagga Wagga and Albury were compared). In general, price differentials in seemingly 'like' country towns may be explained by differing local competitive factors, including different population sizes, level of competition and the presence of discount retailers.

Drawing this evidence together the ACCC found that the state of competition at the retail level can be summarised in the following way:

- There is a significant degree of price competition at the retail level. The retail sector is substantially less concentrated than both the refining and wholesale level of the market. However, the strong presence of the refiner-marketers at the retail level of the market is evidence of a significant level of vertical integration at this level, most obviously through company-owned and supplied sites. The refiner-marketers also influence retail prices through price support.
- Retail margins have remained broadly constant over the last four years. Margins fell with increased competition from the supermarkets (between 2003–04 and 2004–5), before increasing to 2006–07. Retail margins are relatively small. Interested parties to the inquiry supported this view. The average gross indicative retail margin in the five largest metropolitan cities over the

last four financial years is 4.2 cpl. Margins in regional areas are generally higher than margins in metropolitan areas.

- However, it is important to note that while an understanding of margins is relevant to petrol pricing, an analysis of margins on a cent per litre basis may not, by itself, enable an accurate assessment of profitability to be made at individual sites for individual retailers. This is because overall profitability of individual sites will depend to a large extent on the volumes traded and the ability to achieve a successful balance between volume sold and margin. It is quite possible for a high margin, low volume site to be less profitable than a low margin, high volume site.
- Price cycles are a distinguishing characteristic of Australian metropolitan retail unleaded petrol markets. Generally these cycles are weekly in nature (Perth an exception) with higher prices from Wednesday afternoon to Friday evening and lower prices on Tuesdays and Wednesday morning. These are discussed further in the report and the ACCC's findings on price cycles are outlined below.

Price cycles

Given the impact of price cycles, the ACCC decided that further work should be undertaken at both the theoretical and applied level to understand the nature of price cycles as they operate in the various Australian markets for the sale of unleaded petrol. The report documents the results of the extensive theoretical and applied analysis undertaken.

From this work the following findings were made:

- There are a range of explanations for price cycles. Many of these are consistent with competitive market behaviour and the existence of price cycles does not provide any evidence of a lack of retail competition. It is clear, however, that compared to international experience, Australia's price cycles appear distinctive.
- There is little evidence to support the media claim that cyclical petrol price increases before public holidays are always higher than the cyclical price increases that occur at non-public holiday times.
- There is no evidence to suggest that price cycles are 'caused' by the activity of Shell, Mobil, Caltex and BP alone. The major oil companies usually lead the price hikes that commence each cycle while the supermarkets, independents and majors engage in competitive discounting over the following week. What is more difficult to pinpoint is the precise reason why the cycles are so regular and steep. The timing of the provision and termination of price support, as well as the amount of price support, may all reinforce regular price cycles. However, there is no evidence to suggest that the price support scheme itself is a cause of price cycles.
- Undoubtedly the existence of price cycles is contributed to by key players influencing/controlling retail prices through complex and sophisticated pricing strategies. Price support arrangements and Informed Sources price monitoring may have facilitated this.
- As for consumers, significant numbers of price sensitive consumers take advantage of the cycles, but others do not or cannot. On the whole it is not possible to say conclusively whether the cycles operate to the benefit of consumers or retailers. The rapid movement of the cycles and the speed of responsive movements by price followers makes it harder for some motorists to time their purchases to take advantage of any price movements.
- However, despite the extensive analysis undertaken, the conclusion has to be made that the causes of the well-defined price cycles in Australia's retail unleaded petrol markets are an enigma.

Retail price transparency

As the ACCC's work on price cycles has indicated, there is evidence that consumers can take advantage of price cycles but at the cost of time and some individual effort. This raises the issue of price transparency—a vexed issue for the consumer and one that has broader implications for market competition.

In reviewing the issue of price transparency, the ACCC formed the following views:

- There is currently an imbalance in pricing transparency between buyers and sellers of petrol in Australia. The imbalance allows sellers to react more quickly than buyers to price movements with likely negative effects on competition and consumer search costs. The more price transparency allows sellers to react more quickly than buyers to price movements the worse the situation generally is from a competition perspective. Price volatility in the form of intraday price movements and price cycles is one contributor to this imbalance.
- A second contributor to this imbalance in Australia is the Informed Sources price sharing service. This service provides a centralised exchange of retail petrol pricing information for its subscribers, primarily the major refiner-marketers and larger independent retailers. The depth of real time information available to Informed Sources subscribers is not available to consumers. This raises particular concerns for the relative levels of price transparency between retailers and consumers in the retail petrol market in Australia.

Price transparency is a complex issue and the ACCC gave considerable thought to measures that could be introduced to redress this imbalance, to both improve the workings of the market (by removing impediments) and to reduce consumer search costs.

The ACCC considered that the main options available to redress this imbalance are:

- **Reducing the potential for price information sharing among suppliers**. The petroleum market has many of the characteristics of a market where (tacit) price coordination is likely to be easier and profitable. In this context the Informed Sources service is of a particular concern given that there is there is very frequent, or near real time, exchange of price information between the relevant retailers—mainly the refiner-marketers and supermarket chains. Unless there is a net public benefit there is a case for removing such mechanisms from the market.
- **Adopting increased pricing information and price commitment rules—a national FuelWatch scheme**. The ACCC conducted its own preliminary assessment of FuelWatch, the Western Australian scheme incorporating increased price information and price commitment rules.
    - This included an econometric analysis indicating some reduction in relative pricing margins between Perth and the eastern capitals in the time following FuelWatch's introduction.
    - FuelWatch price commitment rules have introduced a level of intraday price stability that would generally reduce consumer search costs.

However, a number of critical issues were identified for examination before a national FuelWatch scheme could be contemplated:

- the increased potential for anti-competitive effects in rural and regional areas due to the more concentrated nature of the market there
- the potential for a reduction in the predictability of price cycles for consumers who have adapted to them
- significant dependence on the media if any of the proposed benefits are to be realised and the administrative costs of such a scheme are likely to be large.

- **Expanding the availability of pricing information to consumers either through Informed Sources or through the ACCC**. These options would increase the overall information available to consumers by giving them access to the same pricing information that the current Informed Sources subscribers have. However:
  - without price commitment or reduced price volatility it does not address the issue where a consumer can 'know' the price yet a short time later the price has changed
  - private provision of this real time information is yet to emerge and faces significant hurdles
  - public provision would require significant public funding.

In the end, the ACCC decided that in the time available it was not possible to fully review all the options with regard to their administrative implications, effects on competition or their likelihood of delivering the objective of increased price transparency. A detailed assessment addressing these issues would have to be made before government could confidently embark on any one of the suggested options.

Role of shopper dockets in the retail sector

Another market characteristic at the retail level that the ACCC examined closely concerns the emergence and impact of supermarket shopper docket arrangements. The emergence and expansion of shopper docket arrangements over the past 10 years has changed the competitive landscape for the retail supply of petrol:

- Woolworths introduced its shopper docket scheme in 1996. It routinely offers a 4 cpl discount on the price of fuel to customers who present a voucher which is obtained when a purchase of $30 or more is made at a Woolworths or Safeway supermarket, a Big W store or other Woolworths' subsidiaries. Other discount offers are also made from time to time.
- In August 2003 Woolworths and Caltex announced that they were proposing to enter into a joint venture for the retailing of motor fuel. Currently, Woolworths operates from 505 petrol outlets across Australia—371 outlets are owned and operated directly by Woolworths and the remaining 134 are owned by Caltex. All 505 outlets are branded with dual logos of Caltex and Woolworths. The petrol sold at these outlets is owned by Woolworths. Transactions for around 60 per cent of fuel sold at Woolworths service stations involve a shopper docket.
- In July 2003 Coles and Shell entered into an alliance under which Coles took over the management of Shell's core franchise network across Australia. The roll-out of the 'Coles Express' network was completed in March 2004. Currently around 600 'Coles Express' service station sites are in operation.
- Coles Express offers a 4 cpl discount on the price of petrol to customers who have purchased a minimum value of goods or services from Coles' supermarkets or other companies in the Coles Group. From time to time, Coles Express offers special promotions above the standard 4 cpl discount.

The key competition concern with regard to Coles' and Woolworths' shopper docket arrangements is the argument that supermarkets may have the ability to leverage their strong positions in the grocery sector into the petrol retailing sector, leading to anti-competitive effects in the market.

The inquiry sought to assess these concerns and made the following broad findings:

- The emergence and expansion of shopper docket arrangements over the past 10 years has changed the competitive landscape for the retail supply of petrol. Consumers have enjoyed the benefits of discounted fuel in increasing numbers.
- There is little doubt that the shopper docket arrangements have aided the establishment and expansion of supermarkets in petrol retailing, and have created significant challenges for those retailers not aligned with the supermarkets.
- The introduction of shopper docket arrangements had a significant impact on other retailers' sales volumes and market shares, and they are likely to have contributed to decisions by some to exit the industry.
- In recent times, a number of participants have substantially recovered their lost volume and market shares. Some independent chains have increased their size in terms of site numbers. Other participants appear to have halted their decline, but remain at a lower market share. There is no evidence to suggest that the arrangements over the past five years have increased the industry trend of rationalisation in the number of sites.
- Other retailers have responded to the introduction of supermarket shopper docket arrangements with a variety of strategies, including competitive promotions and a renewed focus on delivering consumer choice and convenience. In many respects, the arrangements have been a spur for competition of this nature to the benefit of consumers. However, while other shopper docket schemes have assisted competitors to recover some lost volume, the ACCC acknowledges no competing scheme can have the pulling power of those offered by the two main supermarkets.

To date, the general emergence of supermarket shopper docket arrangements has not had an anti-competitive effect but has delivered discounts to the benefit of consumers and promoted competition from other retailers. However, the ACCC will continue to consider developments as they arise, including any changes in the extent of the impact of shopper docket arrangements on competition.

3 Conclusions

From inquiry hearings, submissions and its own analytical work the ACCC gained a detailed understanding of the petroleum industry.

The ACCC has applied this understanding in assessing the state of competition within the industry. It has focused on refining, importing, wholesaling and retailing, all of which impact on the price which consumers ultimately pay for unleaded petrol at the pump.

The degree of competition in the wholesale market is primarily determined by the:

- vigour of competition between domestic refiners
- the competitive threat posed by independent imports of refined petrol.

The ACCC has reached following the conclusions.

Competition exists in wholesale petrol markets in Australia, but it is not fully effective

Competition is a matter of degree. In a fully competitive market, each participant's pricing, output and related commercial decisions are constrained by the activity, or potential activity, of other participants. In a less competitive market, the constraints are weaker. This may enable participants to exercise a degree of market power.

In assessing competition in wholesale petrol markets, the ACCC has examined the degree to which the wholesale pricing of individual refiners is constrained by other refiners and resellers, and the degree to which the wholesale pricing of resellers are constrained by refiners and other resellers.

A combination of factors has enabled domestic refiners to dominate wholesale petrol markets and has resulted in wholesale petrol prices above the levels that would be set if competition between domestic refiners was fully effective. These factors are the:

- highly concentrated ownership structure of domestic refineries
- commercial dependencies between domestic refiners arising from their buy–sell arrangements
- very small proportion (around 2 per cent) of the wholesale market supplied by independent imports
- limited prospect of large-scale importing of refined petrol
- extremely low likelihood of substantial new entry into domestic refining.

There are impediments to the most significant potential competitive threat to domestic refiners—the large-scale importing of petrol by an independent

The most significant potential competitive threat to the domestic refiners is the large-scale importing of refined petrol by a reseller or independent retailer. This seems unlikely in the foreseeable future. The major impediments to large-scale importing of refined petrol are the:

- lack of access to import terminal facilities of sufficient scale in the major markets
- large share of the retail petrol market held by the refiner-marketers and supermarket alliances—which limits the size of the retail customer base available to a large-scale importer
- state and national fuel standards—which make it difficult for independent importers to source sufficient and reliable supplies of competitively priced refined petrol suitable for the Australian market
- potential for domestic refiners to 'exclude' independent importers from buy–sell arrangements.

Impediments to importing are self-reinforcing—making the barriers to large-scale independent importing of petrol substantial

The impediments to large-scale importing of petrol are self-reinforcing. Most or all of the impediments must be addressed to make the threat of large-scale importing credible.

Independent petrol retailers are reluctant to commit to buy large volumes of petrol from a petrol importer unless the importer has an established record of reliable supply at prices competitive with those offered by the refiner-marketers.

Petrol importers cannot establish a record of reliable supply at prices competitive with those offered by the refiner-marketers without access to sufficient import terminal facilities in most major markets in Australia.

Owners of import terminal facilities are reluctant to invest in large-scale terminal capacity for an importer without some degree of certainty the importer will import sizeable volumes of petrol over a prolonged period.

This requires an independent petrol retailer to commit to an independent importer without an established supply record.

Buy–sell arrangements may have had the effect of lessening competition in wholesale petrol markets

Buy–sell arrangements between domestic refiners enable domestic refiners to efficiently supply fuel in wholesale and retail markets where they do not enjoy a refinery presence.

Nevertheless, buy–sell arrangements may have had the effect of lessening competition in wholesale petrol markets. In particular:

- the buy–sell arrangements in conjunction with the import parity pricing policy, have enabled the domestic refiners to effectively set and sustain a uniform price for a large part of the output from the domestic refineries and that price becomes the wholesale price floor
- the buy–sell arrangements create reciprocal commitments and obligations which may have reduced the incentives for domestic refiners to aggressively 'take each other on' in wholesale petrol markets
- the buy–sell arrangements create reciprocal commitments and obligations which may have reduced the incentives for individual refiners to consider alternative sources of supply in states where they do not have a refinery (such as importing refined petrol)
- in practice, the prices set by the buy–sell arrangements tend to be available only to Shell, Mobile Caltex and BP giving them an advantage over independent wholesalers and resellers. If this is the result of an exclusionary provision, the buy–sell arrangements have the potential to reduce the competitive threat of large-scale independent importing operations.

Having analysed the existing buy–sell agreements and relevant evidence, the ACCC considers that there is insufficient evidence at this stage to support a conclusion that the buy–sell arrangements contravene the Act. The ACCC proposes to continue to examine buy–sell arrangements and will closely monitor the operation and effect of those arrangements to ensure compliance with the Act.

Participants in buy–sell arrangements may well be advised to seek authorisation of these arrangements on public benefits grounds under s. 90 of the Act.

The use of import parity pricing

It is to be expected that wholesale petrol prices will be based on the cost that would be incurred by the domestic refiners in importing petrol.

A relevant question in this regard is whose import costs are relevant. In Australian wholesale petrol markets, the relevant import costs are the import costs of domestic refiners. As noted above, domestic refiners import around 13 per cent of the refined petrol sold in Australia. Imports by independents are around 2 per cent.

The ACCC has undertaken an examination of the refiner-marketers' buy–sell contracts and buy–sell prices with the aim of assessing whether the prices mirror the cost to the refiner-marketers of importing fuel at the same time and location. The analysis proved inconclusive. There are some factors, such as

the uniformity of approach that permeates the buy–sell pricing formulas, which give some cause for concern. On the other hand, there were no obvious signs that buy–sell prices are substantially above the refiner-marketers' actual costs of importing fuel.

Confidential evidence provided to the inquiry suggests that the refiner-marketers have been able to negotiate wholesale prices with resellers based on the resellers' costs of importing fuel rather than on the refiner's costs of importing the fuel. The evidence suggests that refiner-marketers have a very good idea of the full range of costs resellers would potentially incur in importing fuel and negotiate wholesale prices up to that limit.

Changes to the structure of wholesale petrol markets

Petrol markets are subject to continual change. Over the past two decades there have been significant changes to the structure of refining, wholesaling and retailing of petrol in Australia. A decade or so ago, eight refineries were operating in Australia with five different owners. Now there are seven refineries and four owners. Large supermarkets commenced retailing petrol a decade ago. They now sell around 40 per cent of the petrol sold in retail markets.

It is possible that changes to the structure of petrol refining, wholesaling and retailing in the future could alter the competitive dynamics in wholesale petrol markets. Some possible changes that have been raised during the inquiry are discussed below.

'Sponsorship' of a large-scale independent petrol importing operation by a supermarket

If one of the supermarkets shifted its wholesale petrol purchases to an importer, it may make the establishment of a large-scale importing operation viable. Before its alliance with Caltex, Woolworths sourced large volumes of petrol from importer Trafigura.

The alliance agreements between Coles and Shell, and Woolworths and Caltex do not end for some time. Moreover, evidence presented to the inquiry indicates Coles and Woolworths are unlikely to favour sourcing petrol from a large-scale independent importer over an alliance with a refiner-marketer.

Formation of buying groups among resellers

It is possible that resellers may form buying groups. Buying groups of a sufficient size would give resellers greater negotiating leverage with domestic refiners over wholesale petrol prices. Buying groups of sufficient size could also make the establishment of a large-scale importing operation viable and provide the necessary guarantees for large-scale investment in import terminal facilities.

Exit of a refiner-marketer from petrol retailing in Australia

If one of the refiner-marketers exited petrol retailing in Australia and an independent retailer purchased the retail sites, the retailer may be able to gain the volumes necessary to make the establishment of a large-scale importing operation viable and the necessary guarantees for large-scale investment in import terminal facilities.

Further consolidation of domestic refining capacity

Further consolidation of domestic refining capacity in Australia is possible. Such a circumstance could reduce existing competitive pressures in wholesale petrol markets. A reduction in the number of parties refining petrol in Australia would increase the degree to which the remaining domestic refiners depend on one another, possibly reducing the incentives for refiners to compete against one another in wholesale petrol markets.

Recommendation to reduce or minimise the impediments to competition in the wholesale petrol market

Without the entry of a large-scale petrol importer, the competitive pressure on wholesale petrol prices in Australia is unlikely to substantially increase. Moreover, further consolidation of domestic refining capacity (such as exit of one of the four refiner-marketers from refining in Australia) could reduce the competitive pressure. In response to this analysis and to protect and promote competition in wholesale petrol markets, the ACCC makes the following recommendations.

- The ACCC recommends a more detailed examination and on-going monitoring of buy–sell agreements to fully assess whether they are exclusionary in nature, or have the purpose or effect of substantially lessening competition in contravention of s. 45 of the Act.
- The ACCC recommends that, subject to meeting environmental policy objectives, Commonwealth and state governments endeavour to align Australian fuel standards with appropriate fuel standards overseas.
- The ACCC recommends a comprehensive audit of terminals suitable for importing refined petrol in Australia. The audit should cover current and future terminal capacity, current and future use of terminal capacity, and details of terminal leases and terminal sharing arrangements.
- The ACCC recommends that following the audit, there be on-going monitoring of the use, leasing and sharing of terminals suitable for importing refined petrol into Australia.

Given the ACCC's broad finding about price determination in the industry and its specific conclusions about impediments to competition in the wholesale petrol market the ACCC explored the options available under the Act. The relevant provisions include:

Prices surveillance and price monitoring (Part VIIA of the Act)

Under prices surveillance a declared company cannot increase the price of declared goods or services without first notifying the ACCC. Price notification is the central part of a prices surveillance function.

At the present time, ACCC formal prices surveillance is confined to services provided under monopoly structures such as Australia Post's ordinary letter service and Airservices Australia's provision of air navigation services. Submissions to the inquiry have not proposed or advocated a return to formal prices surveillance. Indeed they have suggested that regulatory intervention should be kept to a minimum.

The petroleum industry is not characterised as a monopoly structure and the impediments that have been identified do not warrant a return to formal prices surveillance under Part VIIA, at least not at the present time

Price monitoring occurs when the ACCC monitors the pricing in an industry, or the pricing behaviour of certain people in an industry. The petrol monitoring currently undertaken by the ACCC is outside this formal monitoring structure and instead is part of the 1998 reform package for the deregulation of petrol prices. The government has a stated intention to introduce formal monitoring under Part VII A of the Act.

There does appear to be general support for the ACCC to have some form of price monitoring role. However, some of the reasons advanced for price monitoring appear to be directed to improving consumer understanding of retail price movements, in particular price volatility. Measures to improve retail price transparency at the retail level of the industry are discussed in chapter 15.

Collective bargaining

Evidence has been heard during the inquiry that independent retailers are disadvantaged by a lack of bargaining power compared to the refiner-marketers and supermarkets. The ACCC recognises that small businesses may have greater power to negotiate over terms and conditions if, rather than negotiate individually, they combine with other small businesses to collectively bargain with wholesale suppliers. While competitors who act collectively in negotiations over price and other terms and conditions may be at risk of breaching competition laws, the Trade Practices Act provides several avenues through which protection can be afforded to such arrangements where it is in the public interest to do so:

- Since January 2006 the ACCC has made available a streamlined authorisation process for collective bargaining by small business.
- Amendments to the Trade Practices Act that commenced on 1 January 2007 have provided small businesses with an easier and faster process for obtaining protection from liability for collective bargaining. This protection is obtained by lodging a notification with the ACCC. At present, the protection automatically commences 28 days after the notification is lodged (unless the ACCC objects) and lasts for three years. In March 2007, regulations were made increasing this limit to $15 million for petrol retailers.

In the context of the petrol industry, these provisions potentially will allow some re-balancing to occur for the smaller independent retailers softening the effects of the structural impediments in the wholesale market

Part IV—Restrictive Trade Practices

Section 45—this section of the Act prohibits the making of, and giving effect to, anti-competitive 'contracts, arrangements and understandings'. It is generally considered that an 'understanding' is the lesser test and captures informal agreements. However, from the ACCC recent lack of success in the courts it seems clear that a narrow meaning has been given to the term 'understanding' to the extent that this interpretation of s. 45 is likely to have a detrimental impact on the extent to which the Trade Practices Act can address anti-competitive conduct in relation to petrol pricing.

The ACCC has recommended that amendments to this section be considered in order to ensure that the Act can be used effectively to guard against collusion in petrol and other markets.

Section 46—during the course of this inquiry Parliament enacted amendments to section 46 to address predatory pricing. Under s. 46 of the Act, corporations with a substantial degree of market power are prohibited from taking advantage of that market power for an anti-competitive purpose. A recent amendment to s. 46 (s. 46 1(AA)) prohibits a firm with a substantial market share from sustained below-cost pricing for an anti-competitive purpose.

These amendments have been the subject of widespread public comment and discussion. While there is some expectation that these provisions may be able to be used in the context of pricing practices in the petroleum industry judicial consideration will almost certainly be necessary before the effect of these amendments can be fully appreciated.

The key challenge for courts in implementing s. 46(1AA) will be to capture predatory pricing without reducing the incentives for legitimate competitive pricing. The purpose of the Act is to protect competition not competitors. The report provides some interpretation of the critical concepts used. Ultimately, the interpretation of the new concepts and how they relate to the question of purpose will be matters to be determined by the courts.

Section 47—the ACCC's involvement with shopper docket arrangements in the past has arisen primarily from the possible application of the third line forcing provisions of the Act and the consequential receipt of third line forcing notifications. The Act provides processes for obtaining immunity for parties proposing to engage in third line forcing conduct providing that the conduct is in the public interest.

Since 1996 the ACCC has received over 800 third line forcing notifications in relation to various forms of petrol shopper docket arrangement. These have included high profile arrangements of Woolworths and Coles.

However, amendments to the third line forcing provisions which came into effect on 1 January 2007 provide that related companies proposing to engage in third line forcing conduct are effectively treated as a single entity under the Act.

These amendments are relevant to shopper docket arrangements and as a result the ACCC will be limited in pursuing shopper docket arrangements involving the forcing of related company products through the newly amended third line forcing provision of the Act.

Taking stock and considering both recent amendments to the Act and the most recent experience in the courts, the ACCC concluded that if the relevant sections of the Act are there may be some scope to re-balance (strengthen) the position of small independents in the retail petroleum market. It is though too early to say whether the recent amendments to section 46 will have an impact upon retail practices. Strong arguments can be made for amendments to s. 45.

Amendments to section 45 of the Act

The ACCC recommends that an amendment to the Act to clarify the meaning of the term 'understanding' in s. 45 may well be appropriate in circumstances where its meaning has changed so significantly over time. The form of the amendment which is endorsed by the ACCC, is detailed in the report. It sets out a number of factual matters the court may take into account in determining whether an understanding has been arrived at and specifically provides that it is not a necessary element of an understanding that the parties to the understanding be committed to giving effect to it.

1 Background

1.1 Introduction

In early June 2007 the Australian Competition and Consumer Commission (ACCC), through its ongoing monitoring of petrol prices, detected a substantial divergence between movements in domestic regular unleaded petrol prices and movements in the international benchmark for unleaded petrol used by Australian refiners (i.e. the spot price for Singapore Mogas 95 unleaded). This divergence is discussed in more detail in chapter 2.

On 6 June 2007 the ACCC issued a media release on this issue.[1] It noted that towards the end of May 2007 the Singapore benchmark price significantly declined. While wholesale petrol prices declined, the average retail price at the bowser across the major capital cities continued to increase. The ACCC expressed concern that while the lower international prices were reflected at the wholesale level, they were not being passed on to consumers.

Subsequently, the ACCC wrote to the former Treasurer seeking his approval to an inquiry under Part VIIA of the *Trade Practices Act 1974* (the Act) into the price of unleaded petrol.[2] A copy of this letter is in appendix A.

On 15 June 2007 the former Treasurer responded agreeing to the ACCC's request. A copy of his response is in appendix B.

1.2 Terms of reference

The instrument attached to the former Treasurer's response stated:

> I, Peter Costello, Treasurer, noting the divergence over recent times between movements in domestic retail petrol prices and movements in international benchmark prices, hereby approve, pursuant to section 95H(2) the *Trade Practices Act 1974* (the Act) the holding of a price inquiry by the Australian Competition and Consumer Commission (the Commission) into the price of unleaded petrol.
>
> Matters to be taken into consideration by the inquiry shall include, but not be restricted to:
>
> - the current structure of the industry
> - the extent of competition at the refinery, wholesale and retail levels, including the role of imports
> - the determination of prices at each of these levels, including the methodology for determining wholesale prices
> - current impediments to efficient petrol pricing and possible methods to address them.
>
> This is not an inquiry in relation to the supply of petrol by particular persons.
>
> The inquiry is to be completed and a report submitted to me by 15 October 2007.

The inquiry commenced on Friday, 22 June 2007 with the publication of an inquiry notice in the *Gazette* and in newspapers.

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1 ACCC media release, *Fair Go—ACCC to Petrol Retailers*, 6 June 2007.
2 See, in particular, ss. 95G(3) and 95H(2) of the Act.

1.3 Outline of the inquiry process

As noted above, the inquiry into the price of unleaded petrol was held in accordance with Part VIIA of the Act. Part VIIA empowers the ACCC to conduct monitoring/surveillance activity and, where necessary, to conduct a public inquiry. It gives the ACCC powers similar to those of the Prices Surveillance Authority by introducing into the Act provisions that were formerly part of the *Prices Surveillance Act 1983*.[3]

This is the first inquiry conducted by the ACCC under these provisions. It is also the first price inquiry conducted by the ACCC since the inquiry into the petrol products declaration in 1996.

1.3.1 Submissions

The ACCC released an issues paper on 29 June 2007.[4] It outlined the issues on which the ACCC was seeking information and comments and described how submissions to the inquiry could be made. The ACCC received over 50 submissions from interested parties or persons. These persons ranged from the major oil companies to members of the general public. A list of parties who made submissions in response to the issues paper is in appendix C.

1.3.2 Request for information and documents

The ACCC also exercised the information gathering powers of the Act. Among other things, these provisions enable the ACCC to obtain information and documents (s. 95ZK of the Act) and summon a person to appear at an inquiry to give evidence and produce documents (s. 95S of the Act).

A list of the parties who provided information to the ACCC in response to a s. 95ZK notice is at appendix D.

Informed Sources Pty Ltd was the only party that provided documents to the inquiry in response to a summons issued under s. 95S.

While the inquiry was a public process, some parties sought to provide the ACCC with information on a confidential basis. In assessing requests for information not to be disclosed due to confidentiality, the ACCC considered whether it was desirable to conduct hearings or receive evidence in private or to maintain the confidentiality of evidence received. In doing so, the ACCC assessed whether disclosure would damage the provider's competitive position and/or whether disclosure would be in the public interest.

1.3.3 Hearings

As stated, the inquiry was conducted by the ACCC in public hearings. These hearing commenced on 21 August 2007 and finished on 15 November 2007. Twenty-five hearings were conducted across all Australian capital cities and in several regional towns.

3 These amendments were introduced in 2004.
4 ACCC, Inquiry into the price of unleaded petrol: issues paper, June 2007.

The ACCC engaged Counsel from the Victorian Bar to assist in the conduct of hearings. They were Mr Neil Young QC, Mr Simon Marks SC and Ms Fiona Forsyth.

Most witnesses who gave evidence to the ACCC were examined by Counsel assisting. Notwithstanding the public nature of the inquiry, hearings were conducted in private where evidence related to matters of commercial sensitivity. A list of the hearings is in appendix E.

Forty-eight organisations were represented at the public hearings and the inquiry heard from 94 witnesses. A list of organisations and the names of witnesses is in appendix F.

Many witnesses provided detailed information at the hearings, which was valuable to the inquiry. However, there were a number of witnesses—and in particular a number of commentators from some of the industry associations and motoring organisations—whose information was based on opinion or anecdotal events, rather than verifiable evidence. As a result, while these opinions were genuinely held, they were of limited value and in some cases have the potential to cause confusion.

1.3.4 Data requests

As well as taking into account the information provided in submissions and by interested parties, the ACCC also requested data from a couple of sources. It commissioned ANOP to undertake a survey on consumer attitudes to various petrol-related issues (such as the level of prices, price changes and price cycles). A summary of this survey is reproduced in appendix H. The inquiry also obtained detailed petrol price data on prices in Australia and overseas from Informed Sources.

1.3.5 Extension of the deadline

On 21 September 2007 the former Treasurer announced that he had extended the deadline for finalisation of the inquiry's report to 15 December 2007. This followed a request on 6 September 2007 from the Chairman of the ACCC, Mr Graeme Samuel, to the former Treasurer for an extension of time from the original reporting date.

A copy of the former Treasurer's media release, including the Chairman's letter to the former Treasurer and his response, is in appendix G.

1.4 The nature of petrol

This section examines the nature of petrol, demand for petrol and the particular 'psychology' of petrol prices that means that petrol prices are always in the 'news'.

1.4.1 The 'psychology' of petrol prices

Petrol is in some ways unique. Unlike most other goods or services sold in the Australian economy, there appears to be a consistently high level of concern in the community about the cost of petrol. It is the subject of talkback radio, features prominently in newspapers and on television news and is therefore a highly sensitive and political issue. This is not surprising, given that petrol may cost some consumers a substantial part of their weekly income and rising petrol prices translate into an appreciable reduction in their standard of living.

A unique feature of petrol prices, compared with the prices of other goods and services, is the regular price cycles in the larger metropolitan cities. The way that petrol prices go up and down by relatively large amounts over short time periods is often a cause of consumer concern. Petrol prices in the larger capital cities in Australia tend to move in regular weekly cycles. In Perth, these cycles generally last for two weeks. In Melbourne, Sydney, Brisbane and Adelaide daily average prices are typically lowest on a Tuesday and highest on a Thursday. The rise in each cycle is relatively fast after which the price tends to fall more gradually. Price cycles are discussed in detail in chapter 11.

Given the important and sensitive nature of petrol prices, it is an issue of concern to the ACCC that there is often a level of misinformation in the reporting about petrol prices. The regularity with which some of this misinformation is perpetuated has resulted in many consumers taking it as fact and, in turn, has placed pressure on governments to address concerns that are not substantiated by evidence. The ACCC has endeavoured to enhance the understanding in the community about petrol prices and correct any misperceptions about them. It has done this by providing information on its website and through its publications (such as the 2005 booklet *Understanding petrol pricing in Australia*).

It is a matter of real concern to the ACCC that some commentators on petrol prices continue to state opinions as fact, even when the evidence available does not support those views, as this perpetuates misunderstandings of the petrol market. The ACCC acknowledges the important role of representative bodies and other commentators in highlighting issues of genuine concern. However, it urges such commentators to use their positions of influence to increase consumers' understanding of petrol prices and to discourage myths and misapprehensions that are not supported by evidence.

1.4.2 The nature of petrol

Petrol has a number of characteristics that appear to make it susceptible to price volatility.

- Regular unleaded petrol is generally a very similar product with limited brand loyalty.[5] Competition is therefore based primarily on price. For the individual retailer, there is an incentive to discount prices to attract sales from competitors when demand is low.
- The price of petrol is highly visible, as it is prominently displayed on price boards at service stations. Petrol prices are more visible than the price of most other products. Therefore there is greater incentive to discount when demand declines.
- The refiner/marketers and other retailers receive comprehensive up-to-date information on their competitors' petrol prices at regular intervals during the day, which means they can quickly respond to price movements (both up and down).
- Service stations with shops attached may have lower petrol prices to attract customers who may then buy other products with a greater profit margin.

1.4.3 The nature of demand for petrol

The view has been expressed during this inquiry that consumers of unleaded petrol are highly price sensitive and are willing to switch the locations from which they buy petrol for a very small price difference. This may be because of the nature of petrol, as discussed above. It is a homogenous good with little non-price competition, despite the supply of some 'premium' petrol products. Highly visible prices and mobile consumers facilitate consumers shopping around.

5 This is mainly the case for regular unleaded petrol, which represents the majority of petrol sales. However, petrol retailers have attempted to differentiate their premium grades of petrol.

ANOP survey results

The ANOP survey commissioned by the ACCC and carried out in November 2007 found that 76 per cent of motorists who drive regularly and use unleaded petrol keep a close watch (33 per cent) or have a 'good idea' (43 per cent) of petrol prices. Seventy per cent of motorists always or usually try to buy petrol when it is cheapest, compared with 28 per cent of motorists who just buy when they need petrol.[6]

The issue that scored highest in terms of concern about petrol prices was the price variations before long weekends or holidays (68 per cent of motorists were extremely concerned). Chapter 11 provides the results of the ACCC's analysis into this issue, which shows that petrol prices do not always increase by more than usual just before long weekends or holidays, despite the perception that this is the case.

The issue that scored second highest in terms of consumer concern was the current price of unleaded petrol (50 per cent were extremely concerned), followed by price variations between different days of the week (49 per cent), and price variations during the same day (44 per cent).

Sixty-four per cent of motorists buy petrol on particular days, with Tuesday being the most popular day (and also usually the lowest price day). Fifty-five per cent of motorists buy on a particular day because petrol is cheaper on that day, with only 7 per cent buying on a particular day because it suits them to buy on that particular day.

Motorists are well aware that petrol prices vary over the week, with 83 per cent aware that petrol is more expensive on certain days of the week. Forty-one per cent nominated Thursday as the most expensive day and 43 per cent nominated Friday. Seventy-one per cent of motorists nominated Tuesday as the cheapest day to buy petrol.

Motorists were asked how much the price of petrol varies between the most expensive and the cheapest day. The mean response was 13.4 cpl, whereas it is generally between 5.0 and 10.0 cpl.

Further details from this survey are discussed in other chapters of this report.[7]

Views of market participants

It appears from the views of market participants that a segment of the market is highly price sensitive. These consumers tend to use shopper dockets to buy their petrol from the supermarkets or the independent suppliers and time their purchases to the troughs of the price cycles. Another segment is relatively price inelastic, buying fuel for business purposes during the week or for private purposes when they need to refuel, favouring the most convenient location and time to buy. This type of customer may use one of the oil company's fuel cards. The refiner-marketers appear to supply a relatively higher proportion of this segment of the market.

Australian Automobile Association

The AAA states that motorists are highly sensitive to changes in petrol prices and even a small increase in price over a few days can make an impact on household budgets. Based on the results of ANOP surveys, it states that the community is increasingly feeling the pressure of petrol price rises and that the practice of shopping around for the cheapest price is at an all time high (up from 41 per cent in 2005 to 49 per cent now).

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6 See appendix H.
7 See chapter 11 (price cycles); chapter 12 (shopper dockets) and chapter 15 (measures to improve retail price transparency).

Key findings from surveys commissioned by the AAA are that:

- 49 per cent of motorists try to buy when petrol is cheapest; 42 per cent just buy when they need it
    - urban motorists are more likely to shop around for price (56 per cent compared with 37 per cent for regional motorists)
    - price consciousness is higher among older motorists (55+), mothers, and those who use shopper dockets
- the use of shopper dockets has continued to increase, with 79 per cent of motorists in 2007 using them and 48 per cent of all motorists using shopper dockets at least most of the time
- highest regular docket use occurs among urban motorists, less frequent car drivers, among females and older motorists.[8]

Caltex

In its submission Caltex presents results from its research into the price sensitivity of petrol consumers. It found that about 60 per cent of consumers are price sensitive—about 15 per cent actively compare prices and only buy from the cheapest service station and about 40 per cent are generally aware of prices and buy from one of the cheapest service stations. About 35 per cent may or may not be aware of prices but do not use price as a factor in choice of service station.

Caltex states that the percentage of consumers taking price into account increases for a short period when prices increase, but over time there has only been a small increase in this percentage despite a large increase in prices.[9]

Mobil

Mobil states that experience has shown that many consumers respond promptly to changes in petrol prices and fuel discount offers and a particular retailer can loose significant volume quickly if its pricing is above the local competition.[10]

BP

BP states that petrol is a commodity product (particularly regular grade petrol), customers are highly mobile, prices are prominently displayed and there is a high degree of price elasticity of demand for the product (i.e. many customers are highly likely to make purchase decisions based on small differences in price). BP states that petrol retailers understand these factors and often choose (successfully) to reduce prices to capture extra custom.[11]

BP states that a significant proportion of fuel is purchased for business purposes or for travel to and from work and therefore occurs during the week rather than on weekends. It states that the price cycle tends to influence on which day of the week price sensitive consumers buy (rather than the other way around).[12]

Coles Express

Coles Express states that motorists are keenly aware of even the smallest price differential and most retailers invest in monolithic price boards. It states that most consumers see unleaded petrol as a homogenous good and have little brand loyalty if the price is not right.[13]

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8 AAA submission, pp. 2–3.
9 Caltex submission, p. 56.
10 Mobil submission, p. 9.
11 BP submission, p. 27.
12 BP submission, p. 33.
13 Coles submission, pp. 4 and 9.

Woolworths

Woolworths considers that petrol is largely regarded as a homogenous good by consumers with little brand loyalty. It states that price is therefore the key driver of competition in petrol retailing. While it considers that retailers have attempted to differentiate themselves with the introduction of premium fuels as well as food and convenience offers, pump price in its view remains a key decision point for motorists. It does not consider that non-price competition is a significant part of petrol retailing in Australia.[14]

Independent chains

Neumann states that a 2 cpl differential in board price will dramatically affect site sales activity and that it suffers from lost sales in not pricing below cost.[15]

United states that there are quite marked volume peaks on the day before the usual cycle day (Tuesdays and Wednesdays in Melbourne). It states, however, that Friday is historically its strongest day, which it imagines is the consumer preparing for the weekend. It also states that the daily volume peaks have flattened out over the week because it has lost many of the very price sensitive customers to the supermarkets.[16]

It considers that the price elasticity of demand has flattened and therefore a price differential now delivers a lesser volume benefit. It states that evidence to support a flatter demand curve includes that independents have not been able to win back volume from the supermarkets even by vigorous discounting; and that customers will at times redeem dockets and pay more for fuel at a supermarket site even though independents are cheaper.[17]

Others

The Northern Territory Government considers that demand for fuel is price inelastic because most motorists need to fill their car regardless of the cost. However, it considers that the mobile nature of cars mean that motorists in metropolitan centres can and do respond to variations in price.[18]

The Royal Automobile Association of South Australia states that recent survey results show that the motor vehicle is an integral part of most South Australians' lives and while they are extremely concerned about the rising cost of petrol, they are reluctant to forgo driving as a result.

1.5 Role of the ACCC in the petrol industry

The ACCC is responsible for administering the Trade Practices Act. The main purpose of the Act is to promote competition and efficiency in markets within Australia and to protect consumers from unlawful anti-competitive conduct and unlawful market practices.

The ACCC, previously the Prices Surveillance Authority and the Trade Practices Commission, has had a long involvement in the petroleum industry. This includes prices surveillance, informal price monitoring, education and enforcement of the Act.

Since 1 March 2007 the ACCC has been administering the Oilcode.

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14 Woolworths' submission, p. 10.
15 Neumann response to s. 95ZK request.
16 United response to s. 95ZK request.
17 United submission, p. 2.
18 Inquiry into fuel prices in the Northern Territory, May 2005, p.12, provided as attachment A to the Northern Territory Government submission.

1.5.1 Petrol price monitoring

The ACCC currently monitors:

- the retail prices of petrol, diesel and automotive liquefied petroleum gas in the capital cities and around 110 country towns
- the retail prices of E10 petrol in 20 locations across Australia
- international crude oil and refined petrol prices
- the published terminal gate prices of the oil companies and some independents
- the city–country retail price differential.

Before 1 August 1998 petrol prices were included in the prices surveillance provisions of the *Prices Surveillance Act 1983* (which as noted earlier were largely incorporated into the Trade Practices Act in 2004). Under these arrangements the ACCC used to establish the maximum wholesale prices for petrol of the major oil companies and establish freight differentials.

The Australian Government deregulated petrol prices from 1 August 1998 because the arrangements were considered to have an adverse effect on the retail petrol market. The government considered that the maximum endorsed wholesale price in the capital cities acted as a target for prices at the end of a discount cycle; and in the country the maximum endorsed wholesale price acted as a price floor underwriting the price paid by country consumers.

The ACCC price monitoring function is used to provide information to consumers—through its publications and website—and to assist it in administering the Act. It also helps the ACCC prepare analyses and reports for the Australian Government and Parliament.

1.5.2 Enforcement of the Act

The ACCC is responsible for administering the Act. As a part of this role it has investigated allegations of price fixing, predatory pricing and other anti-competitive activities in the petroleum industry. It has also considered proposed mergers in the petroleum industry and third line forcing notifications for the petrol shopper docket schemes.

Price fixing

Petrol retailers who get together to fix their prices are breaking the law. In the past, the ACCC has taken action in the courts against service station operators and oil companies for price fixing.

Recent examples include the following.

- In March 2005 financial penalties totalling $23.3 million were ordered by the Federal Court for price fixing conduct in the Ballarat petrol market. After the successful appeal by two respondents, the total penalty was reduced by $3.2 million. In September 2005 the ACCC sought special leave to appeal this decision to the High Court. This application was dismissed by the High Court in June 2006.
- In June 2005 the Federal Court made declarations based on admissions of price fixing conduct involving two service stations in the Brisbane area. In November 2005 the Federal Court imposed penalties totalling $470 000.
- On 29 May 2007 the Federal Court dismissed court proceedings against eight companies and 10 individuals, alleging that they fixed retail prices in the Geelong area in contravention of the Act.

Abuse of market power

Over the years the ACCC has received complaints from some service station operators that a competitor is engaging in predatory pricing, by which they generally mean that a competitor is keeping their retail prices low to drive them out of business.

Until recently, there was no provision in the Act that dealt specifically with predatory pricing. This issue was considered under s. 46(1) of the Act relating to the misuse of market power.

Section 46(1) prohibits a company with a substantial degree of market power from taking advantage of that power for a proscribed purpose. The proscribed purposes are:

- eliminating or damaging a competitor in that market or another market
- preventing entry to that or another market
- deterring or preventing competitive conduct in that or another market.

The ACCC has examined a number of claims of abuse of market power in the petroleum industry, but has been unable to find sufficient evidence to indicate a breach of s. 46(1) of the Act.

On 25 September 2007, as part of a number of amendments introduced to s. 46, a new predatory pricing offence came into effect. Under s. 46(1AA) a company that has substantial market share must not supply goods or services for a sustained period at below the relevant cost of supply for a proscribed purpose. The proscribed purposes are the same as those for s. 46(1).

Mergers

The ACCC investigates and reviews those mergers it becomes aware of that have the potential to raise concerns under s. 50 of the Act. Section 50 prohibits acquisitions that would have the effect or likely effect of substantially lessening competition in a substantial market in Australia, in a state or territory.

The most significant merger in the petroleum industry in recent times was the merger of the refining and marketing interests in Australia of Ampol and Caltex in 1995. This merger was allowed to proceed subject to legally enforceable undertakings that enhanced the position of independents in the industry to the benefit of consumers. These included the divestiture of oil terminals, distributorships, depots and retail sites to ensure supplies to independent retailers. These undertakings contributed to the subsequent growth of independents in all levels of the industry.

The ACCC considered that the Coles and Shell arrangements in 2003 and the Caltex and Woolworths joint venture arrangements in 2004 would not substantially lessen competition if they proceeded.

Notifications and shopper docket arrangements

The ACCC's past involvement with shopper docket arrangements has arisen primarily from the possible application of the exclusive dealing provisions of the Trade Practices Act and the subsequent receipt of third line forcing notifications.

Section 47 of the Act prohibits exclusive dealing conduct which, broadly, involves one person trading with another and imposing restrictions on the other's freedom to choose with whom, or in what, or where they deal. One form of exclusive dealing conduct is known as third line forcing. Businesses can gain immunity from legal action under the third line forcing provisions of the Act by lodging a notification.

The ACCC may remove the immunity provided by a third line forcing notification at any stage if it is satisfied that the likely benefit from the conduct will not outweigh the likely detriment to the public.

Generally speaking, the petrol shopper docket promotions enable consumers to receive a discount on petrol at certain outlets provided that grocery items of a specified value have been purchased from a third party, often a supermarket. Without notification, shopper docket arrangements may raise concerns under the third line forcing provisions of the Act.

In February 2004 the ACCC released its shopper docket report, which discussed the ACCC's consideration of a number of petrol and grocery related issues, including allowing a number of third line forcing petrol shopper docket notifications to stand (i.e. Coles and Woolworths).[19] In the report, the ACCC concluded that shopper docket petrol discount arrangements were likely to result in a net public benefit arising from lower prices for consumers, generation of a culture of discounting and increased non-price competition.

As of 30 September 2007 over 600 notifications concerning petrol discounting have been lodged since the ACCC released its 2004 report on shopper dockets.

Amendments to s. 47 came into effect on 1 January 2007, which means that related companies proposing to engage in third line forcing conduct are effectively treated as a single entity under the Act. This means that arrangements that involve the supply of goods by one company on condition that the purchaser also acquire goods from the company's related body corporate will not raise concerns under the third line forcing prohibitions. However the conduct may still be considered under other relevant provisions of the Act.

The amendments to the third line forcing provisions of the Act are relevant to shopper docket arrangements and related notifications.

Oilcode

On 1 March 2007 the Australian Government implemented the Trade Practices (Industry Codes-Oilcode) Regulations 2006 (the Oilcode). The Oilcode forms a part of the downstream petroleum reform package, which comprises the:

- repeal of the *Petroleum Retail Marketing Sites Act 198*0
- repeal of the *Petroleum Retail Marketing Franchise Act 198*0
- prescription of the mandatory Oilcode under s. 51 AE of the Trade Practices Act.

The purpose of the Oilcode is to regulate the conduct of suppliers, distributors and retailers in the downstream petroleum retail industry. The Oilcode encourages greater transparency of terminal gate pricing and fuel re-selling agreements, greater certainty for industry participants regarding the supply of petroleum products and provides tenure under fuel re-selling agreements. The Oilcode also provides an efficient and cost-effective way of resolving disputes for the industry.

The ACCC plays an important role in the downstream petroleum retail industry by promoting compliance with the Oilcode and the Act. It achieves this through education, providing access to information, and, where necessary, enforcement action.

19 ACCC, *Assessing shopper docket petrol discounts and acquisitions in the petrol and grocery sectors,* February 2004.

As a part of the ACCC's role to promote compliance with the Oilcode, it has developed and distributed the following compliance materials:

- *An overview of the Oilcode for fuel re-sellers*—A4 double-sided information sheet summarising the Oilcode in plain language
- *Guide to the Oilcode*—A5 booklet summarising the Oilcode in plain language
- *The Oilcode—How does it affect you?*—education DVD professionally produced outlining the key parts of the Oilcode
- *Oilcode compliance manual*—a plain language manual aimed at providing stakeholders with guidance on how to comply with the Oilcode and establish an effective compliance program. Contains informative flow charts and checklists, and a CD containing template disclosure documents.
- Oilcode fact sheets—A4 double sided information sheets on the following specific topics:
    - *What does the Oilcode say about fuel re-selling agreements?*
    - *What does the Oilcode say about terminal gate pricing?*
    - *I have a dispute under the Oilcode—what do I do?*
    - *Fuel re-selling agreements, disclosure and the Oilcode*
    - *What does the Oilcode say about the termination of a fuel re-selling agreement?*

The ACCC has also created an Information Network for stakeholders in the downstream petroleum retail industry to provide them with timely information about compliance with the Oilcode. The ACCC currently has 427 subscribers including representatives from service stations, oil majors, distributors, retail chains and state and Commonwealth governments.

1.5.3 Previous ACCC publications on the petrol industry

Over the past five years the ACCC has prepared various reports and publications on petrol pricing and the petrol industry. These include:

- *Reducing fuel price variability*, December 2001
- *Terminal gate pricing arrangements in Australia and other fuel pricing arrangements in Western Australia*, December 2002
- *Assessing shopper docket petrol discounts and acquisitions in the petrol and grocery sectors*, February 2004
- *Understanding petrol pricing in Australia—answers to some frequently asked questions*, August 2005
- *Submission to the Senate Economics Legislation Committee inquiry into the price of petrol in Australia*, July 2006.

The ACCC also provides information on petrol price cycles in Sydney, Melbourne, Brisbane, Adelaide and Perth on its website, as well as more general information on petrol issues.

1.6 Scope of the report

This report is structured as follows:

Chapter 2 discusses recent movements in petrol prices in Australia and ACCC monitoring of movements in Australian retail petrol prices compared with movements in international benchmark prices. Appendix I presents charts showing movements in retail prices in each of the five largest metropolitan cities compared with movements in international benchmark.

Chapters 3 to 5 provide information on the structure of the petrol industry at the refining and importing, wholesale and distribution, and retail levels respectively, and chapters 7 to 9 discuss price determination and competition at each of these levels. Appendix J provides information on gross indicative retail margins in each of the five largest metropolitan cities.

Chapter 6 examines regulation in the petrol industry at the Australian Government and state government levels.

Chapters 10 to 12 consider specific elements of the retail petrol market.

Chapter 10 looks at petrol prices in regional areas and appendix K provides information on city and country prices.

Chapter 11 examines petrol price cycles. Appendixes L to P provide further information on price cycle issues. Appendix L contains information on the nature of price movements over the period 1 July to 30 September 2007. Appendix M contains analysis of historical price cycle data by Informed Sources. Appendix N considers the issue of public holidays and price cycles in the first half of 2007. Appendix O provides a review of the economic literature on Edgeworth price cycle theory. Appendix P examines petrol sales over the days of the week.

Chapter 12 considers petrol shopper dockets and Appendix Q provides information on shopper docket arrangements notified to the ACCC.

Chapter 13 addresses impediments to competition in petrol refining, importing and wholesaling.

Chapter 14 addresses impediments to competition under the Trade Practices Act. Appendix R contains legal advice on s. 45 of the Act.

Chapter 15 addresses measures to improve price transparency and competition. Appendix S is an econometric analysis of petrol prices in Perth compared with the eastern state capitals.

2 Recent movements in petrol prices

2.1 Introduction

This chapter provides an overview of recent movements in petrol prices in Australia. It provides data on regular unleaded petrol prices between July 2006 and September 2007 in the five largest metropolitan cities (i.e. Sydney, Melbourne, Brisbane, Adelaide and Perth), the three smaller capital cities (i.e. Canberra, Hobart and Darwin) and around 110 regional and country towns.

It also provides data on average monthly petrol prices in the five largest metropolitan cities over a longer time period (i.e. between July 2002 and September 2007).

The data used is monthly average price data. This is because prices in the five largest metropolitan cities can vary significantly over a week, whereas prices in country towns are often more stable. Use of monthly price data smooths out the effect of price cycles in the major metropolitan cities and is a more appropriate method of comparison than daily or weekly data. It more clearly indicates longer term trends.[1]

The chapter also provides information on the latest comparison of petrol prices among member countries of the Organisation for Economic Cooperation and Development (OECD). This enables the retail petrol prices paid by Australian consumers to be considered in an international context.

Finally, the chapter discusses ACCC monitoring of the movements in the international benchmark price for refined petrol in the region (i.e. the spot price for Singapore Mogas 95 Unleaded) and retail petrol prices in Australia and the divergence that occurred in these prices in late May and early June 2007.

1 The ACCC receives daily average retail unleaded petrol price data for all capital cities and around 110 country towns from Informed Sources Australia Pty Ltd (Informed Sources). Monthly averages for the three categories in charts 2.1 to 2.3 have been derived by determining the monthly average for each city/town in each category and then determining the average of all cities/towns in each category.

2.2 Petrol price movements: July 2006 to September 2007

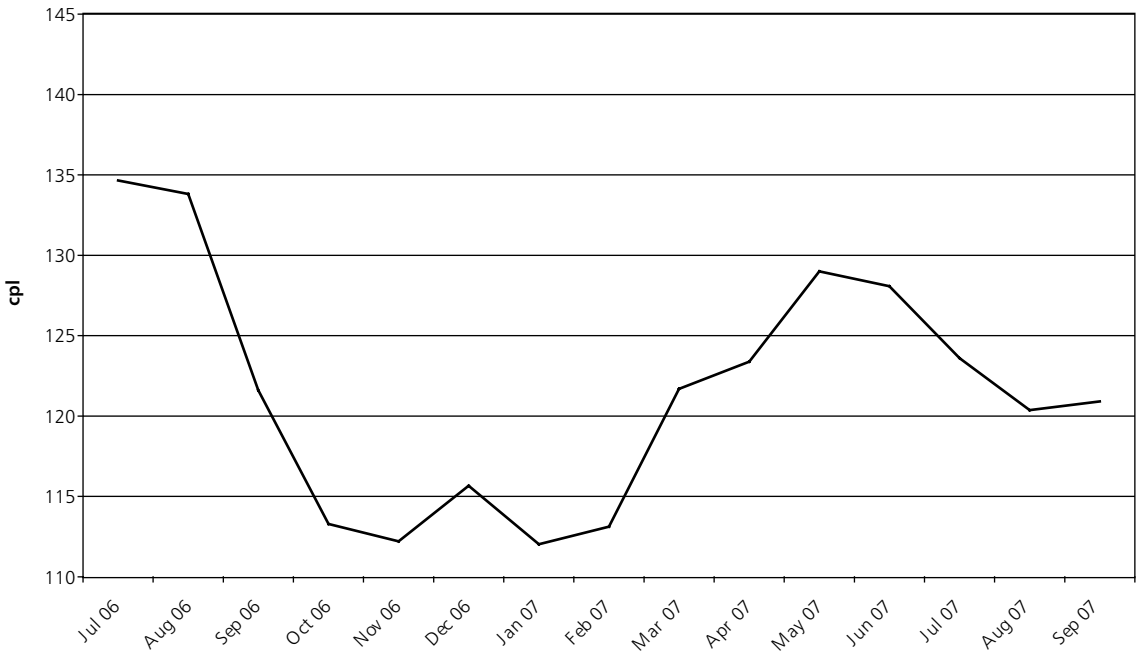
2.2.1 Five largest metropolitan cities

Chart 2.1 shows movements in average monthly prices over the period July 2006 to September 2007 for the average of the five largest metropolitan cities (i.e. Sydney, Melbourne, Brisbane, Adelaide and Perth).

The chart shows that average monthly prices:

- decreased from 134.6 cents per litre (cpl) in July 2006 to 112.2 cpl in November 2006—a decrease of 22.4 cpl
- increased in December 2006 to 115.7 cpl and decreased in January 2007 to 112.0 cpl
- increased to 129.0 cpl in May 2007; the increase in prices between January 2007 and May 2007 was 17.0 cpl
- decreased by 8.6 cpl to 120.4 cpl in August 2007
- increased by 0.5 cpl to 120.9 cpl in September 2007.

Chart 2.1 Five largest metropolitan cities, average monthly retail prices: July 2006 to September 2007



Source: ACCC and Informed Sources

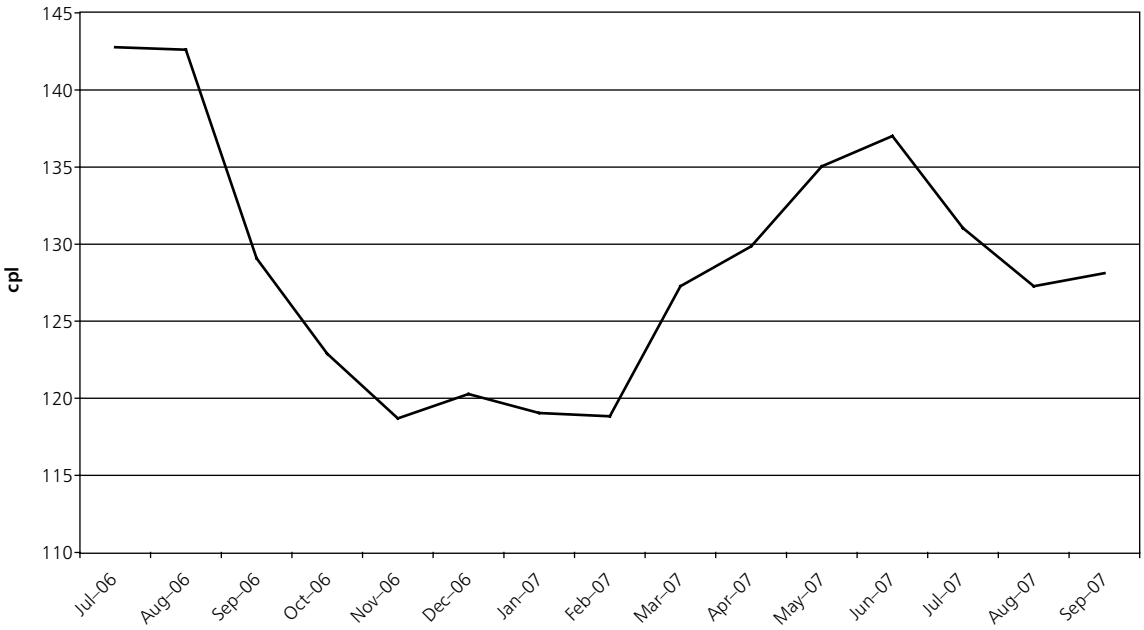
2.2.2 Canberra, Darwin and Hobart

Chart 2.2 shows movements in average monthly petrol prices over the period July 2006 to September 2007 for the average of the smaller capital cities (i.e. Canberra, Hobart and Darwin).

It shows that average monthly prices:

- decreased from 142.8 cpl in July 2006 to 118.7 cpl in November 2006—a decrease of 24.1 cpl
- increased in December 2006 to 120.3 cpl and decreased in January and February to 118.8 cpl
- subsequently increased to 137.0 cpl in June 2007—an increase of 18.2 cpl
- decreased by 9.7 cpl to 127.3 cpl in August 2007
- increased by 0.8 cpl to 128.1 cpl in September 2007.

Chart 2.2 Canberra, Darwin and Hobart, average monthly retail prices: July 2006 to September 2007



Source: ACCC and Informed Sources

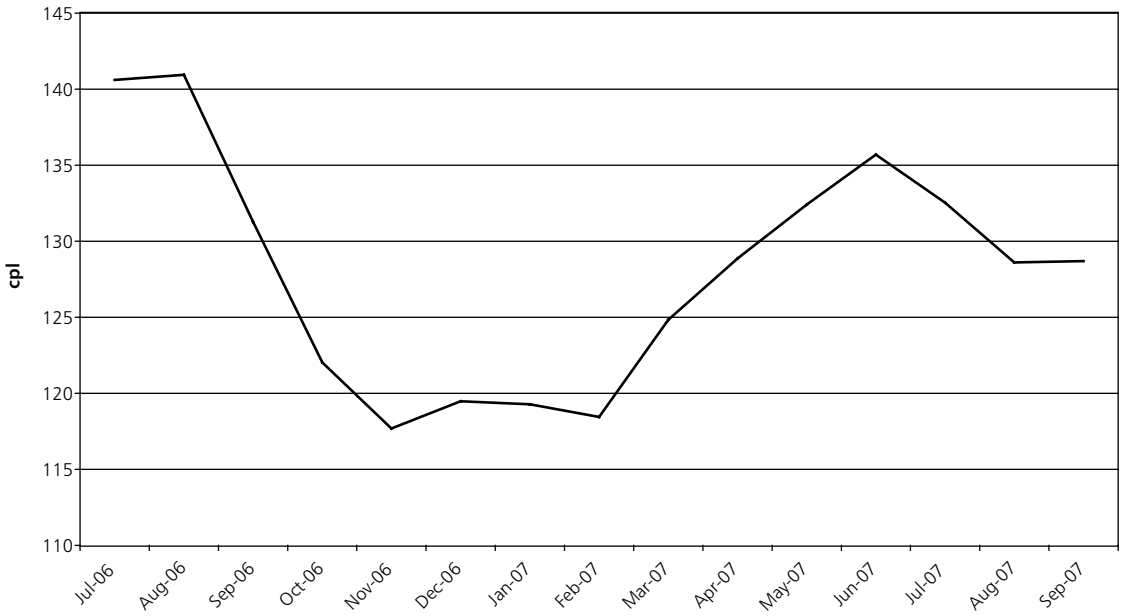
2.2.3 Country towns

Chart 2.3 shows movements in average monthly petrol prices over the period July 2006 to September 2007 for the average of around 110 regional and country towns across Australia.

It shows that average monthly prices:

- increased from 140.6 cpl in July 2006 to 140.9 cpl in August 2006
- subsequently decreased to 117.7 cpl in November 2006—a decrease of 23.2 cpl
- increased in December 2006 to 119.5 cpl and decreased in January and February to 118.4 cpl
- subsequently increased to 135.7 cpl in June 2007—an increase of 17.3 cpl
- decreased by 7.1 cpl to 128.6 in August
- increased by 0.1 cpl to 128.7 cpl in September 2007.

Chart 2.3 Country towns, average monthly retail prices: July 2006 to September 2007



Source: ACCC and Informed Sources

While the level of prices across these three categories of locations is different, the general pattern of price movements over the 15-month period is similar.

2.3 Longer term price movements

Chart 2.4 shows movements in average monthly petrol prices in the five largest metropolitan cities between July 2002 and September 2007.

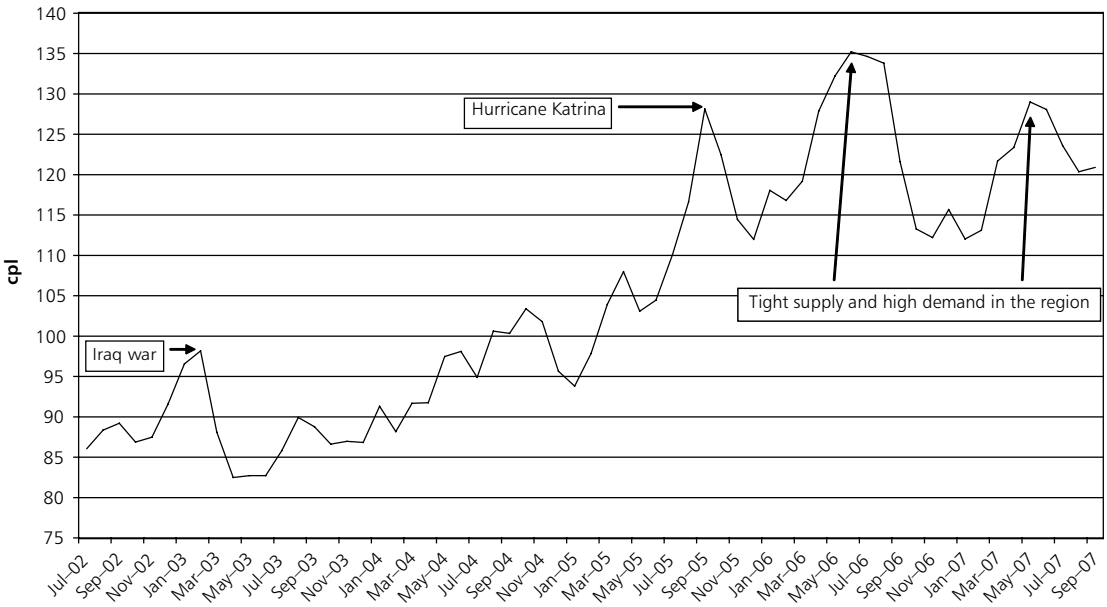
The chart shows the following:

- For the first two years of the five-year period petrol prices were broadly stable. They generally moved within a band ranging between 83.0 cpl and 98.0 cpl.
- Since around mid-2003 petrol prices have been trending upwards.
- The first month in which petrol prices were over $1.00 per litre was August 2004 and petrol prices have been consistently over $1.00 per litre since March 2005.
- In June 2006 petrol prices peaked at around $1.35 per litre.
- The peak price over the last year was in May 2007 when prices were around $1.29 per litre.

Likely reasons for various spikes in prices can be attributed to the following:

- In January and February 2003—anticipation of the war in Iraq (in March 2003).
- In September 2005—the impact of Hurricane Katrina.
- In June 2006 and May 2007—tight supply and increasing demand in the Asia-Pacific region.

Chart 2.4 Five largest metropolitan cities, average monthly retail prices: July 2002 to September 2007



Source: ACCC and Informed Sources

2.4 International petrol price comparison

Information on petrol prices in OECD member countries is provided by the Australian Government Department of Industry Tourism and Resources (DITR) on a quarterly basis. This data enables the retail petrol prices paid by Australian consumers to be considered in an international context.

The latest DITR data—for the March quarter 2007—is provided in chart 2.5. It shows that, among the 29 OECD countries surveyed, Australia had:

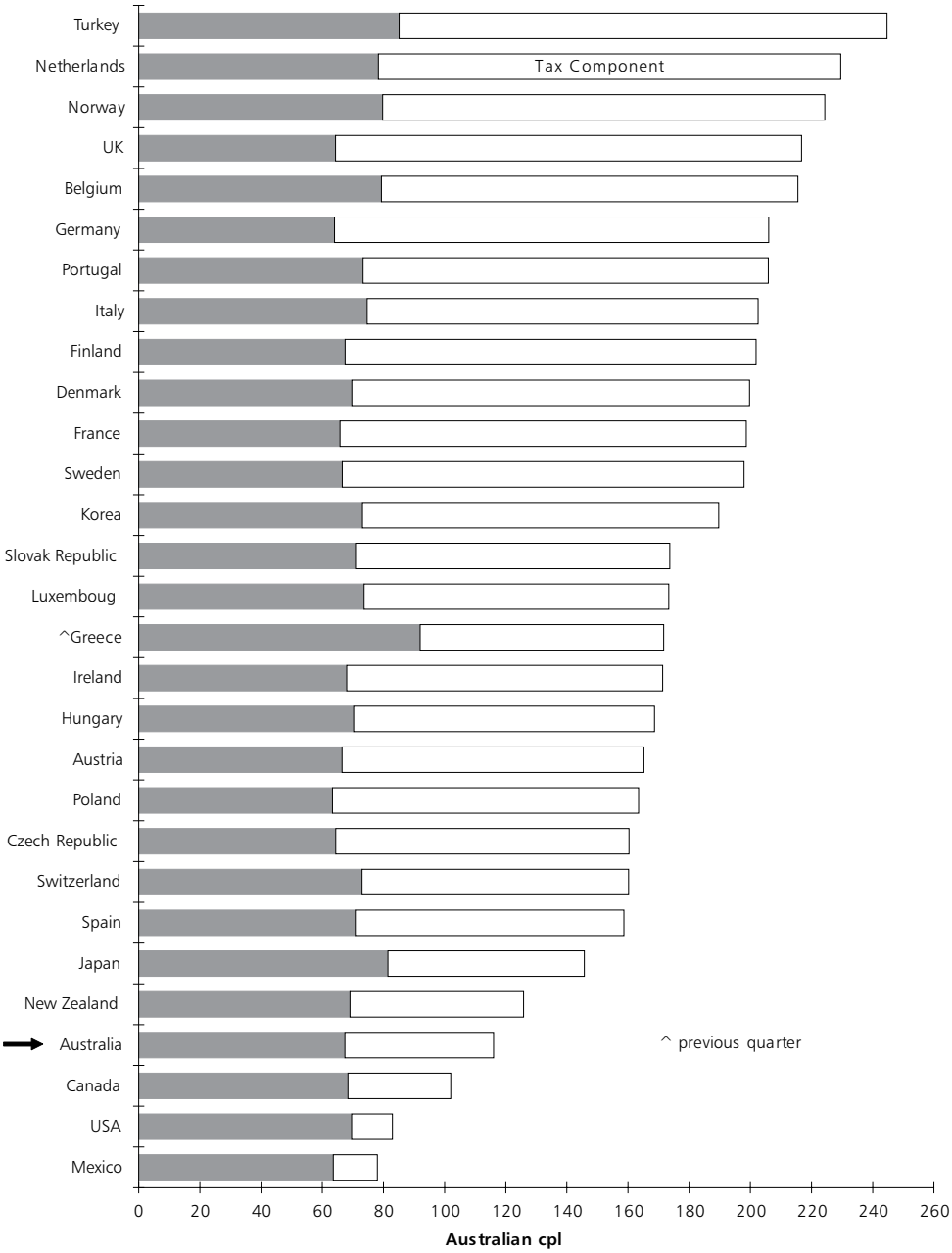
- the fourth cheapest petrol (after Mexico, the United States and Canada)
- the ninth cheapest pre-tax petrol (after Mexico, the Czech Republic, Poland, Austria, Sweden, France, Germany and the UK).

In the past the ACCC has commented that there are a number of methodological issues relating to the OECD data which need to be taken into account when making comparisons. These include that petrol quality varies across countries and that the data is based on metropolitan prices only. These issues are outlined in appendix J of the ACCC's 2001 report, *Reducing fuel price variability*.[2]

However, even taking these issues into account, the data indicates that Australian retail petrol prices are relatively low compared with prices in other OECD counties.

2 ACCC, *Reducing fuel price variability,* December 2001, pp. 259–61.

Chart 2.5 Petrol prices and taxes in OECD countries: March quarter 2007



Source: Australian Petroleum Statistics, September 2007—produced by the Department of Industry, Tourism and Resources.

2.5 Monitoring of movements in Australian retail prices compared with movements in international benchmark prices

2.5.1 ACCC monitoring

The refiner-marketers in Australia often state that movements in retail petrol prices in Australia closely follow movements in the international benchmark price for refined petrol in the region (i.e. the spot price for Singapore Mogas 95 Unleaded).

As part of its ongoing petrol price monitoring program, the ACCC compares the movements in these prices on a regular basis.

One approach taken by the ACCC is to examine movements in seven-day rolling average retail unleaded petrol prices in the five major metropolitan cities (i.e. Sydney, Melbourne, Brisbane, Adelaide and Perth) and seven-day rolling average prices for Singapore Mogas 95 Unleaded lagged one week in Australian cpl.

Seven-day rolling average prices for any day represent the average of the current day's price and the previous six days' prices. The ACCC uses a seven-day rolling average price because:

- it smooths out the influence of the regular price cycles that occur in the five major metropolitan cities
- it is relevant for examining the impact of Singapore Mogas 95 Unleaded prices on retail petrol prices in Australia because the terminal gate pricing formulas of some of the refiner-marketers use a seven-day rolling average of that price.

Singapore Mogas 95 Unleaded prices are lagged by one week to reflect the averaging formulas used by Australian refiners when setting their wholesale prices and the lag between changes in terminal gate prices and changes in retail prices.

The ACCC also examines movements in average retail unleaded petrol prices in other locations in Australia against movements in Singapore Mogas 95 Unleaded prices. In those cases a longer lag may be applied to these prices to reflect the fact that fuel stocks are replenished less frequently in country areas.

Factors taken into account by the ACCC when assessing divergences in movements between retail petrol prices and Singapore Mogas 95 Unleaded prices include the following:

- the time lag between a change in Singapore Mogas 95 Unleaded prices (lagged one week) and a change in retail prices
- the magnitude of the change in Singapore Mogas 95 Unleaded prices (lagged one week) that has not come through at the time of the assessment
- the magnitude of the change in Singapore Mogas 95 Unleaded prices that is in the pipeline
- the size of the difference between retail prices and Singapore Mogas 95 Unleaded prices (lagged one week)
- other mitigating factors (such as distorted price cycle patterns or significant periods of discounting in particular cities).

2.5.2 Divergence in price movements in June 2007

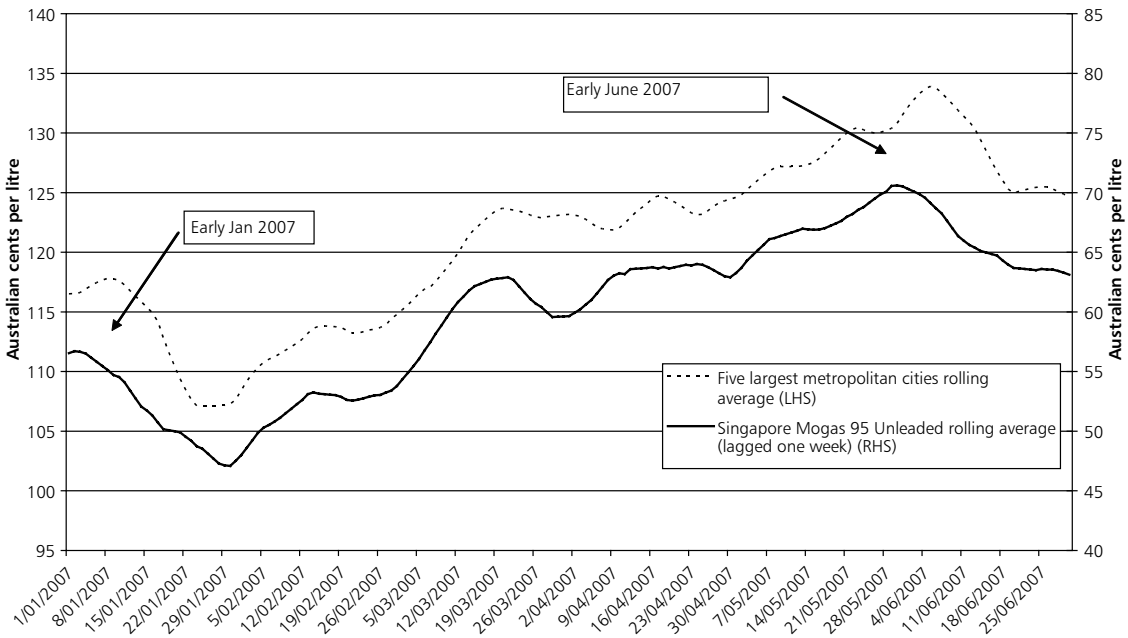
In early June 2007 the ACCC identified a substantial divergence between movements in retail petrol prices across the five largest metropolitan cities and in the price of Singapore Mogas 95 Unleaded.

Towards the end of May 2007 the price of Singapore Mogas 95 Unleaded had significantly declined. This decline was reflected in movements in Australian terminal gate prices (i.e. wholesale prices) but not in average retail prices, which continued to increase for a number of days.

The divergence between movements in retail petrol prices across the five largest metropolitan cities and in the price of Singapore Mogas 95 Unleaded over this period is presented in chart 2.6. The chart shows, for the period 1 January 2007 to 30 June 2007, seven-day rolling average retail unleaded petrol prices across the five largest metropolitan cities and seven-day rolling average prices of Singapore Mogas 95 Unleaded lagged one week in Australian cpl.

Note that domestic average prices are indicated on the left-hand side of the chart and Singapore Mogas 95 Unleaded prices are indicated on the right-hand side.

Chart 2.6 Seven-day rolling average retail unleaded petrol prices in the five largest metropolitan cities and seven-day rolling average Singapore Mogas 95 Unleaded prices (lagged one week): 1 January 2007 to 30 June 2007

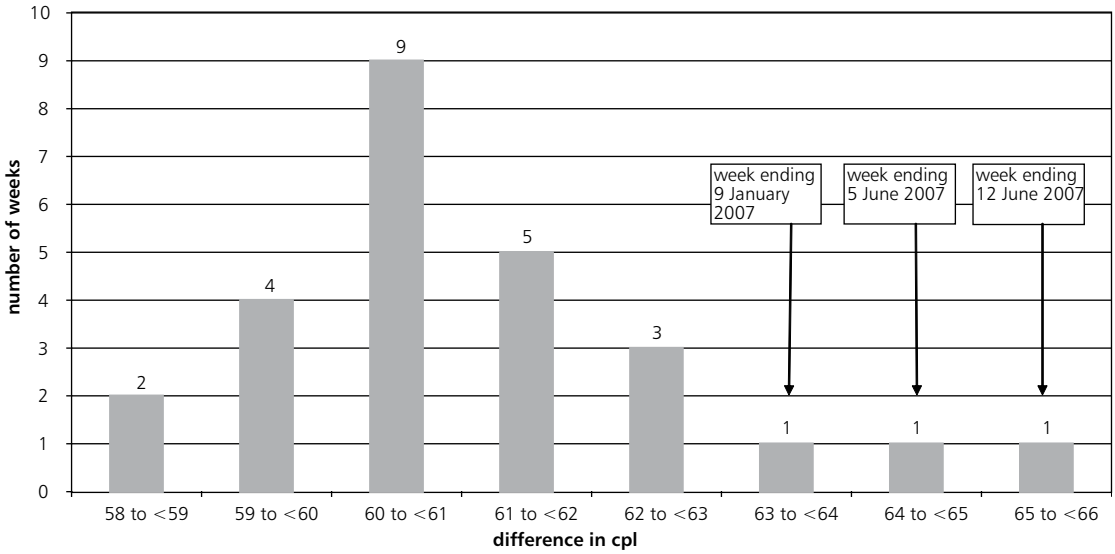


Source: ACCC, Informed Sources and Platts.

The chart shows average retail prices across the five largest metropolitan cities. A similar trend was generally occurring in each of the five largest metropolitan cities. Charts for the individual cities are provided in appendix I.

Another way of presenting the data in chart 2.6 is to examine the difference between weekly average retail prices in the five largest metropolitan cities and weekly average Singapore Mogas Unleaded prices in Australian cents per litre (lagged one week). The frequency of those differences for the period 1 January 2007 to 30 June 2007 is shown in chart 2.7.

Chart 2.7 Distribution of differences between average weekly five-city retail petrol prices and average weekly Singapore Mogas 95 Unleaded prices (lagged seven days): week ending 3 January 2007 to week ending 26 June 2007



It shows that the most common weekly difference between these two price series over the six-month period was between 60.0 cpl to 60.99 cpl. These occurred on nine occasions over the 26 weeks examined. There were six instances where the differences were lower than 60.0 cpl to 60.99 cpl. However, there were 11 instances where the differences were higher than 60.0 cpl to 60.99 cpl. The three largest differences all occurred around the time of the divergences in early January 2007 and June 2007.

The discrepancy in price movements in early June 2007 was assessed by the ACCC using the factors earlier. As a result, a media release was issued on 6 June 2007 highlighting the divergence between movements in retail petrol prices and Singapore Mogas 95 Unleaded prices. The Chairman of the ACCC, Mr Graeme Samuel, called on petrol retailers to '… immediately give Australian motorists a fair go and drop their pump prices in line with recent international price movements.[3]

After the ACCC's public comments, average retail petrol prices subsequently fell sharply and the movement in retail prices became more in line with movements in Singapore Mogas 95 Unleaded prices.

The divergence in early June 2007 was not unique. There was a similar divergence in early January 2007. This also can be seen in charts 2.6 and 2.7. The ACCC commented publicly at the time of that divergence.

The possible causes of the divergence in early June 2007 are considered in chapter 9 of the report.

3 G Samuel (ACCC Chairman), *'Fair go'—ACCC to petrol retailers,* media release, 6 June 2007.

3 Industry structure—refining and importing

3.1 Introduction

The Australian petroleum industry operates at three broad levels: refining and importing, wholesale and distribution, and retail. The refining and importing elements of the industry are outlined in this chapter and then discussed in more detail in chapter 7. Wholesale and distribution are discussed in chapter 4, and retail is discussed in chapter 5.

Unleaded petrol sold in Australia is either refined from crude oil in Australian refineries, or imported as a finished product from overseas refineries or blending operations.

3.2 Refining

3.2.1 Companies refining in Australia

There are four integrated refiner-marketers operating refineries in Australia: BP Australia Pty Ltd (BP), Caltex Australia Limited (Caltex), Mobil Oil Australia Pty Ltd (Mobil) and the Shell Company of Australia Limited (Shell).

BP is a wholly owned subsidiary of BP plc (UK), which is a major international energy explorer, producer and marketer. While BP in Australia is primarily involved in refining and marketing, it also produces solar cells on a commercial scale and is involved in the export of liquefied natural gas.[1]

Caltex is an Australian publicly listed company. While Chevron Corporation (US) is a 50 per cent shareholder, Caltex is not a subsidiary and all decisions are made by Caltex's board and management in Australia. Caltex is a refiner-marketer, but has no oil or gas exploration interests.[2]

Mobil is an operating company of ExxonMobil Corporation (US). ExxonMobil is involved in oil and gas production and refining and marketing in Australia through a number of operating companies including Mobil Oil Australia Pty Ltd and Esso Australia Pty Ltd.[3], [4]

Shell is part of Royal Dutch Shell plc. In addition to importing, refining, wholesaling and retailing unleaded petrol in Australia, Shell is involved in the development and sale of liquefied natural gas, the supply of aviation and marine fuels and lubricants, bitumen and chemicals.[5]

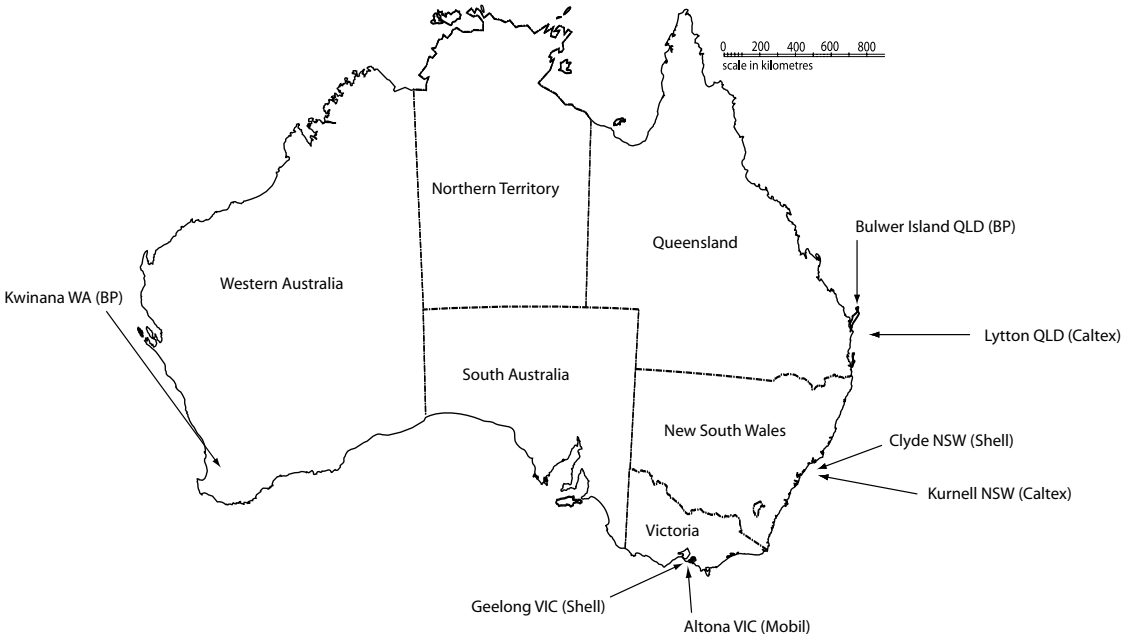
1 BP plc, *BP in Australia*, viewed 3 October 2007, www.bp.com/sectiongenericarticle.do?categoryId=180&contentId=2000584.
2 Caltex submission, p. 6.
3 Among other things, Esso operates the offshore gas and oil fields in Bass Strait.
4 ExxonMobil, Operations in Australia, viewed 3 October 2007, www.exxonmobil.com/Australia-English/PA/Operations/AU_Operations.asp.
5 Shell, *What we do*, viewed 3 October 2007, www.shell.com/home/content/au-en/about_shell/2006/what_we_do/dir_what_we_do.html.

3.2.2 Number and location of refineries

Chart 3.1 shows that the refiner-marketers operate seven refineries in Australia:

- BP operates the Bulwer Island refinery in Queensland, and the Kwinana refinery in Western Australia.
- Caltex operates the Lytton refinery in Queensland, and the Kurnell refinery in New South Wales.
- Mobil operates the Altona refinery in Victoria.
- Shell operates the Clyde refinery in New South Wales, and the Geelong refinery in Victoria.

Chart 3.1 Location of refineries in Australia



As chart 3.1 demonstrates, there are two refineries in each of New South Wales, Victoria and Queensland and one in Western Australia. Tasmania, South Australia and the Northern Territory do not have operating refineries and source unleaded petrol through imports from domestic or international refineries.

Before 1 July 2003 Mobil's Port Stanvac refinery operated in South Australia. Mobil decided to discontinue operations at the South Australian refinery as it was one of the smallest refineries in the South-East Asian region, and the refinery found it difficult to compete.[6] The Port Stanvac refinery was 'mothballed' on 1 July 2003 but has been maintained in a condition that would enable Mobil to restart operations if the refinery becomes viable again in the future.

The South Australian Government is seeking a decision from Mobil by 2009 concerning its intentions for the future of the Port Stanvac refinery. Mobil has made no decision about the future of the refinery at the present time and it appears that it will not do so before 2009.[7] Mobil submits that while there has been an improvement in the international refining business environment, there is insufficient certainty

6 Exxon Mobil, *History of operations in Australia*, viewed 3 October 2007, www.exxonmobil.com/AustraliaEnglish/PA/Operations/AU_Ops_CompanyInfo_History_Mobil.asp.
7 Mobil, response to notice issued pursuant to s. 95K of the Act (non-confidential), p. 7.

for it to undertake the investment necessary to comply with the Australian fuel standards and other operational requirements to re-open the facility at this time.[8]

3.2.3 Capacity of refineries in Australia

Refineries produce a number of petroleum products in addition to unleaded petrol, such as diesel, jet fuel, fuel oil, liquefied petroleum gas, lube oils, bitumen, heating oil and other products.

The total 'nameplate' or theoretical capacity of Australian refineries for the production of all petroleum products is 734.3 thousand barrels per day (KBD). The nameplate capacities reflect the output that would be produced if the refineries were running at optimum utilisation. In practice, refineries do not operate at their nameplate capacity throughout the year due to scheduled shutdowns for maintenance, or unscheduled shutdowns due to refinery failure.

Table 3.1 shows the nameplate capacity of refineries in Australia.

Table 3.1 Nameplate capacity for all petroleum products at Australian refineries[9]

Company	Location	Capacity KBD	Capacity Million litres/day*
BP	Bulwer Island, Brisbane Qld	84.0	13.4
BP	Kwinana, WA	131.0	20.8
Caltex	Lytton, Brisbane Qld	108.6	17.3
Caltex	Kurnell, Sydney, NSW	130.7	20.8
Mobil	Altona, Melbourne, Vic.	80.0	12.7
Shell	Clyde, Sydney, NSW	90.0	14.3
Shell	Geelong, Vic.	110.0	17.5
Total		734.3	116.7

* Note: Refinery capacity figures are presented in KBD and have been converted into million litres per day for ease of comparison with other volume data presented in the report.

Source: Public submissions provided by Mobil, Shell, BP and Caltex.

The suite of products produced at Australian refineries varies between each refinery and depends on the type of crude oils processed. For example, Caltex submitted that as its Lytton refinery generally used lighter and sweeter crude oils it tends to produce a higher proportion of petrol and diesel products. Caltex also noted that at its refineries petrol accounted for around 50 per cent of production, diesel accounted for around 25 per cent, jet fuel accounted for 13 per cent, and various other minor products made up the balance.[10]

Australian refining capacity has declined over recent years. In particular, total refining capacity was 874.5 KBD in 2003.[11] This is due to a number of reasons, for example the 'mothballing' of Mobil's Port Stanvac refinery in South Australia in 2003, which had a nameplate capacity of approximately 72 KBD. In addition, capacity at some other refineries was reduced with the need to re-configure to meet the

8 Mobil submission, p. 3.
9 There is also a small refinery with a capacity of 1.5 KBD located at Eromanga in the far west of Queensland operated by IOR Energy. IOR Energy, *Refining*, viewed 21 November 2007, www.ior.com.au/refining.html.
10 Caltex submission, p. 15.
11 Australian Institute of Petroleum, *Downstream Petroleum 2003*, p. 5.

Australian fuel standards that have progressively been introduced since January 2002.[12] In particular, Mobil submitted that it completely restructured its Altona refinery to meet the new fuel standards and to remain competitive in the future. The restructure reduced the capacity of Mobil's Altona refinery by approximately 50 KBD.[13]

Despite declining Australian refining capacity in recent years, refining capacity in the Asia-Pacific region has been increasing. At the same time, demand for petroleum products has been growing strongly in Asia, led by China.[14]

Growth in capacity in the Asia-Pacific region appears likely to continue as several refineries are still under construction. For example, Reliance Industries Ltd is building a refinery at Jamnagar on India's northwest coast. It is planned to be at full production by 2009–10 with a refining capacity of 1200 KBD.[15] This will be almost double that of all seven operating refineries in Australia combined.[16]

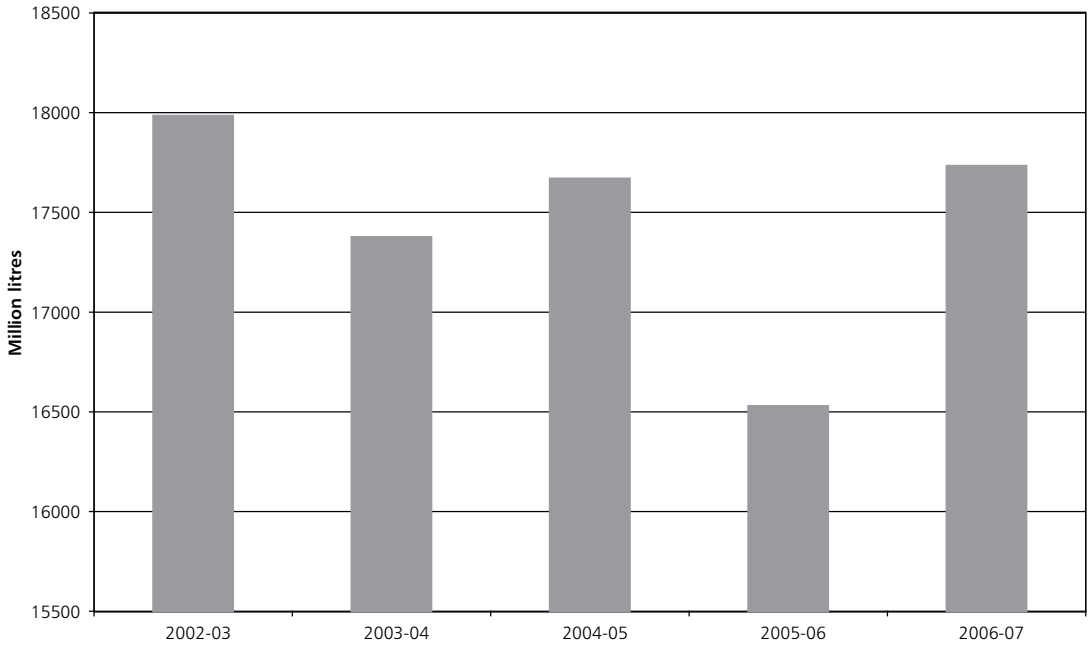
3.2.4 Production of petrol

In 2006–07 total production of petroleum products at Australian refineries was 38 795 ML.

Chart 3.2 shows production of petrol in Australia for the period 2002–03 to 2006–07. [17]

The chart shows that production of petrol in Australia has fluctuated over the past five years but generally declined from 2002–03 to 2005–06. Production of petrol in 2006–07 was 17 732 ML or around 46 per cent of total production at Australian refineries. This is around 1 per cent less than domestic production of petrol in 2002–03 (17 984 ML).

Chart 3.2 Australian production of petrol: 2002–03 to 2006–07



Source: Australian Petroleum Statistics, Department of Industry, Tourism and Resources

12 See chapter 6 for more discussion of Australian fuel standards.
13 Mobil submission, p. 3.
14 Caltex submission, p. 17.
15 ibid., p. 16. Refinery capacity converted from million to thousand barrels per day.
16 ibid.
17 'Petrol' includes unleaded, premium unleaded, proprietary brand, lead replacement petrol and ethanol blended fuel.

3.2.5 Share of unleaded petrol production by refiner-marketers

The ACCC received data from the refiner-marketers on the production of unleaded petrol at Australian refineries for the period 2002–03 to 2006–07 under s. 95ZK of the Act.[18], [19]

Table 3.2 shows the shares of total production of unleaded petrol for each refiner-marketer for the period 2002–03 to 2006–07.

Since 2002–03 there has been a slight redistribution in shares of unleaded petrol production. Caltex has increased its share of production from 26 per cent in 2002–03 to around 33 per cent in 2006–07. Shell and BP have not significantly increased their share of production; however BP's market share rose slightly between 2002–03 and 2004–05 and then fell in 2005–06. Mobil has reduced its share of production from 18 per cent in 2002–03 to around 12 per cent in 2006–07.

In 2006–07 Caltex was the leading producer of unleaded petrol with around 33 per cent share of total unleaded petrol production. BP was the second largest producer of unleaded petrol with 30.3 per cent share, followed by Shell with 24.5 per cent and Mobil with 12.3 per cent.

Table 3.2 Share of total unleaded petrol production by refiner-marketer: 2002–03 to 2006–07

	2002–03 %	2003–04 %	2004–05 %	2005–06 %	2006–07 %
Caltex	26.0	27.4	28.4	30.8	32.9
Shell	25.3	26.2	24.9	26.6	24.5
BP	30.8	32.7	32.7	29.3	30.3
Mobil	18.0	13.8	14.0	13.4	12.3

Source: ACCC from data supplied under s. 95ZK of the Act.

Table 3.3 shows the Herfindahl-Hirschman Index (HHI) for domestic refining for the period 2002–03 to 2006–07.[20]

The HHI over the period 2002–03 to 2006–07 suggests that domestic refining is fairly highly concentrated. In particular, the HHI has not changed significantly over the past five years and is consistent with an industry of around four firms of approximately equal size.

Whether this is consistent with weak or intense competition will depend on other indicators of competition, including price competition, profitability and the height of barriers to entry. These will be considered in chapter 7.

18 The data compiled by the ACCC from information provided by the refiner-marketers on production includes all grades of unleaded petrol (i.e. 91, 95, 98 RON) and ethanol blended petrol but excludes lead replacement petrol. One refiner-marketer provided information on a calendar year basis, which had to be converted by the ACCC into financial year data.

19 The compiled data was compared with production data reported by DITR. The comparison indicated that the data compiled by the ACCC was higher over the period 2002–03 to 2006–07. However, both the ACCC and DITR figures showed similar trends in production over time.

20 The HHI is a measure of the size of firms relative to the industry and is an indicator of the degree of competition between the firms. It is defined as the sum of the squares of the market shares of each firm and can therefore theoretically range from 0 (a large number of firms with infinitesimally small market shares to 1 (a monopoly). Competition is generally weaker, the larger the HHI. In the US for example, the threshold for high concentration is 0.18, or the equivalent of around 5.5 firms of roughly similar size.

Table 3.3 HHI for petroleum refining: 2002–03 to 2006–07

2002–03	2003–04	2004–05	2005–06	2006–07
0.2584	0.2692	0.2693	0.2690	0.2752

Source: ACCC from data supplied under s. 95ZK of the Act.

3.2.6 Sources of crude oil used for unleaded petrol refining

Crude oil is the major input into petrol refining. Although Australia produces crude oil, a significant volume of crude oil is imported for refining in domestic refineries. This is because Australian crude oils tend to be lighter and sweeter, and therefore more expensive than imported crude oils.[21] The quality of a crude oil determines the level of processing and upgrading necessary to achieve the required mix of output. Refineries therefore attempt to use an optimal mix of crude oils. This mix depends on the refinery's equipment, the desired output mix and the relative price of available crude oils.[22]

The proportion of crude oil supplied from Australian oil fields to domestic refineries has declined over time—from around 34 per cent in 2004–05 to around 28 per cent in 2006–07.[23]

Shell noted that over the last five years it had sourced approximately 40 per cent of its crude oils from Australian oil fields on the North West Shelf and in Gippsland. While Shell's Geelong refinery had been fairly reliant on Gippsland crude, the use of this crude at the refinery was reduced due to a change in character of the crude oil from heavy, waxy crude to a light crude.[24]

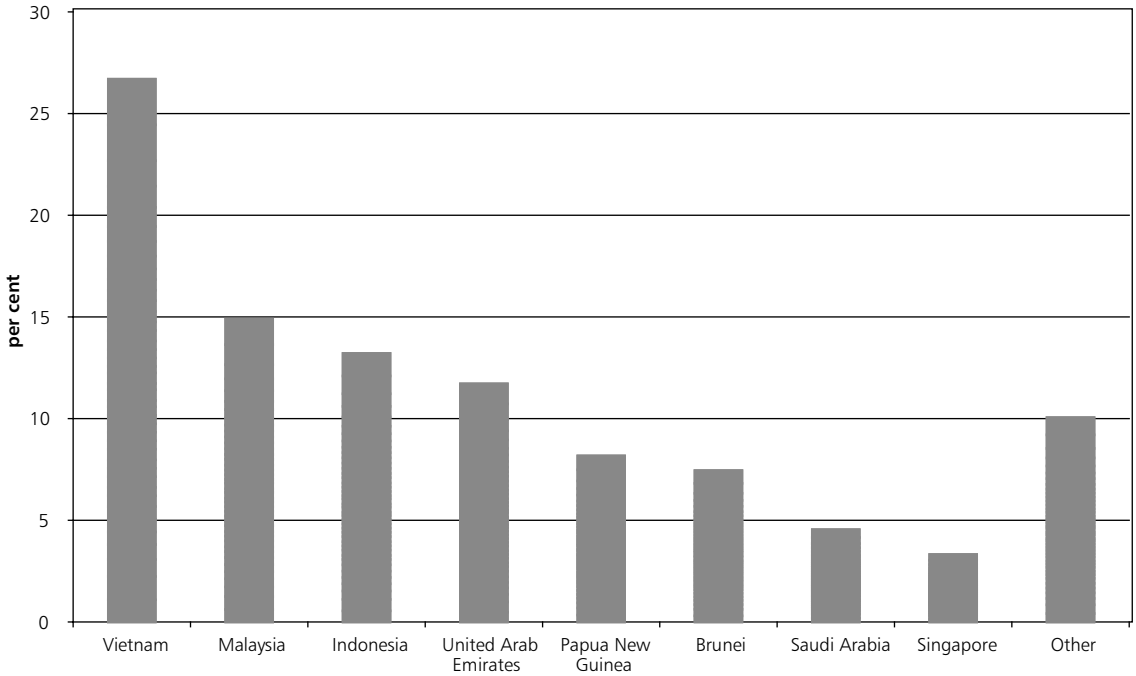
Approximately half of the crude oil used by Mobil in its Altona refinery is produced in Australia. Mobil indicated that the decision as to whether to use domestic compared with international crude oil as feedstock for its refinery depended on the relative cost of the crudes and on the value of the products that its refinery could produce from the crudes.[25]

The inquiry also heard evidence that some Australian refineries have a diet of light sweet crude oil. It was noted that a decline in the availability of light sweet crude oil would attract higher premiums from suppliers, which would reduce refinery margins.

Chart 3.3 shows the sources of crude oil imported into Australia in 2006–07. It can be seen that the main sources of imports of crude oil used in Australian refineries were Vietnam, Malaysia, Indonesia, the United Arab Emirates, Papua New Guinea, Brunei, Saudi Arabia and Singapore. Imports from these countries accounted for 90 per cent of Australia's total imports of crude oil in 2006–07.

21 Australian Institute of Petroleum, *Submission to the inquiry into the Price of Petrol in Australia Federal Parliament (Senate Economics Committee)*, August 2006, p. 2.
22 ibid., p. 6.
23 Department of Industry, Tourism and Resources, *Australian Petroleum Statistics*, Issue 131, June 2007.
24 ACCC, public hearing transcript, 13 September 2007, p. 14.
25 ACCC, public hearing transcript, 19 September 2007, pp. 19–20.

Chart 3.3 Source of imports of crude oil in Australia: 2006–07



Source: Australian Petroleum Statistics, Department of Industry, Tourism and Resources.

3.3 Imports and exports

3.3.1 Importers

All of the refiner-marketers import petrol into Australia. There are also independent importers who import petrol for wholesale within Australia from time to time. These independent importers include Trafigura in Victoria, Gull in Western Australia, and Neumann in Queensland. However, they only import small volumes and source most of their product from the refiner-marketers in Australia.

Mobil submitted that it is currently the largest importer of petroleum fuel into Australia, and is a net supplier of fuel to the industry (both to other refiner-marketers and independent operators). The primary destinations for Mobil's imports are the markets in South Australia and Western Australia, but some is supplied to Sydney and Melbourne. Mobil sources fuel that is compliant with the Australian standards from the ExxonMobil Asia Pacific P/L refinery in Singapore.[26]

Shell sources its imports from either the Shell refinery in Singapore (Bukom) or third parties in Korea, Taiwan and the Middle East. Shell's imports are all sourced through Shell Trading International Eastern Company in Singapore.[27] In 2006, 44 per cent of Shell's imports of unleaded petrol came from third parties.

BP has an open supply arrangement with several regional refiners, for example, Chevron in South Korea.[28]

26 Mobil submission, p. 4.
27 ACCC, public hearing transcript, Melbourne, 13 September 2007, pp. 18–9.
28 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 10.

Caltex is also a significant importer of petrol. Caltex submitted that it had been importing fuel compliant with the new national fuel standards from Korea, Singapore and Taiwan since January 2006.[29]

Trafigura imports into the Hastings terminal in Victoria. However, it only does so every three to four months. It is no longer a significant importer. The Hastings terminal was offered for sale in 2006 through an expression-of-interest process, open to all interested parties.[30]

Neumann Petroleum indicated that while it had imported cargoes of unleaded petrol before the changes in the Australian fuel standards, the change in the standards increased its cost of importing. Neumann Petroleum stated that it was unable to compete by directly importing because it had to import a more expensive higher octane product compared with the local market and therefore it now sources petrol from local refineries. While it noted that the price of importing petrol was not currently attractive, it considered that it would be able to source supplies of fuel from Korea, and possibly Japan, consistent with the Australian fuel standards if the price became attractive in the future.[31]

Gull currently imports some cargoes of unleaded petrol compliant with the Australian standards into its terminal facility at Kwinana in Western Australia.

3.3.2 Terminals

Terminals are large storage facilities where vehicles gain access to supplies for distribution to distributors, retailers and end users. They are commonly located near sources of supply such as ports and refineries.

The majority of terminals capable of receiving import cargoes are owned and operated by the refiner-marketers. There are also import terminals owned or leased by independent importers (such as Neumann and Trafigura) and terminals operated by independent liquid bulk logistics companies (such as Coogee Chemicals, Marstel, Terminals West and Vopak). The independent bulk logistics companies provide storage to both the refiner-marketers and to independent importers.

In addition to owning and operating their own terminals and leasing capacity at terminal owned and operated by a bulk logistics company, the refiner-marketers access each others' terminal facilities through hosting arrangements, joint venture arrangements or through 'borrow and loan'.

A hosting arrangement allows for a guest to store product and have it loaded onto a tanker at the host's terminal. Hosting arrangements can either be on a 'spot' or a 'term' basis, but are typically used to cover short periods of product shortage or during maintenance periods.[32] BP noted that the provision of hosting services has allowed the industry to reduce duplication of infrastructure, and so reduce costs.[33]

Under a joint venture arrangement, a number of companies have equity interests in a terminal. One of the equity holders takes on responsibility for operation of that terminal on behalf of the joint venture. For example, Caltex and Mobil have a joint terminal arrangement at the Gladstone terminal in Queensland under which Caltex operates the terminal.[34] The inquiry heard evidence that generally joint terminals are set up with the intention of sharing tankage and typically there is no stipulation of reserved capacities for either party.

Participants in borrow and loan arrangements each own and or operate a number of terminals around

29 Caltex submission, p. 25.
30 Caltex submission, p. 36.
31 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 11.
32 Additional material provided by Caltex, 19 October 2007.
33 BP submission, p. 18.
34 Additional material provided by Caltex, 19 October 2007.

Australia. Under borrow and loan, the host:

(a) receives and stores products for the guest at each host terminal in accordance with the borrow and loan agreement and

(b) returns the products back to the guest at each host terminal in accordance with the borrow and loan agreement.[35]

Terminals owned or leased by the refiner-marketers

BP

In **Victoria**, BP does not operate any terminals capable of receiving imports of unleaded petrol. However, it does import unleaded petrol into the Yarraville terminal through a joint terminal arrangement. The Yarraville terminal is operated by Mobil.

In **Tasmania**, BP operates terminals at Burnie and Hobart that are capable of receiving imports of unleaded petrol.

BP does not operate any terminals capable of receiving imports of unleaded petrol in **New South Wales**. BP does, however, import unleaded petrol into the Vopak facility at Port Botany.

In **Queensland**, BP operates terminals capable of receiving cargoes of unleaded petrol at Gladstone, Mackay, Townsville and Cairns. While BP has a terminal at Whinstanes in Brisbane, it is fed by local refineries.

BP does not operate any terminals in the **Northern Territory,** but it does import unleaded petrol at Vopak's terminal in Darwin.

BP operates a number of terminals in **Western Australia** capable of receiving cargoes of unleaded petrol. These include Esperance, Geraldton, Port Hedland and Broome. While BP has a terminal at Kewdale, it is fed by BP's Kwinana refinery and only receives imports if the Kwinana refinery cannot meet local demands due to maintenance issues. BP also has a terminal in North Fremantle, but it does not store motor spirit.

BP operates the Larg North terminal in **Adelaide** that is capable of receiving imports of unleaded petrol.[36]

Caltex

Caltex has access to 22 seaboard terminals around Australia, some of which are owned and operated by Caltex and others are in some form of joint operating arrangement with other parties. Caltex did not indicate at which of these terminals it could import cargoes of unleaded petrol.[37]

In **Victoria** Caltex has capacity for the storage of refined products at the Newport terminal, which it owns and operates. Caltex also has a hosting arrangement with Shell at its Corio terminal.

In **New South Wales**, Caltex owns and operates terminals at Banksmeadow and Newcastle. It also has storage capacity at the Silverwater terminal, which is operated by Mobil through a joint venture. However, the Silverwater terminal is supplied via pipeline by the Kurnell refinery and Shell's Clyde refinery.

35 Additional material provided by Caltex, 19 October 2007.
36 Additional material provided by BP, 12 November 2007.
37 Caltex submission, p. 34.

Caltex owns and operates terminals at Lytton, Cairns and Mackay in **Queensland**. However, the Lytton terminal is supplied via pipeline only. It also has access to storage facilities that are supplied by ship under joint venture arrangements with Shell at Townsville, and with Mobil at Gladstone. Under these joint venture arrangements Shell operates the Townsville terminal, and Mobil operates the Gladstone terminal.

In the **Northern Territory**, Caltex has capacity at the Vopak terminal in Darwin.

Caltex owns and operates terminals at Albany and Port Hedland in **Western Australia**. Caltex accesses a terminal in Fremantle operated by Shell through a joint venture. Caltex also has hosting arrangements with Mobil at Coogee, with BP at Kewdale and Geraldton, and with Shell at Esperance.

In **South Australia** Caltex owns and operates terminals in Adelaide and Port Lincoln.

Caltex accesses terminals through joint venture arrangements at Devonport and Hobart in **Tasmania**. The Devonport terminal is operated by Shell, and the Hobart terminal is operated by Caltex.

Mobil

In **Victoria** Mobil frequently imports cargoes into its Yarraville terminal. Mobil operates the Yarraville terminal through a joint terminal arrangement with BP. The capacity of the Yarraville terminal is 31 ML.[38]

Mobil stated that it supplies its product requirements in **Tasmania** from Shell under buy–sell arrangements whereby fuel is generally sourced from Shell's Geelong refinery.[39] Mobil uses BP's terminals at Burnie and Hobart and Marstel's Bell Bay terminal under joint ownership or long-term throughput arrangements.[40]

In **New South Wales** Mobil imports into the Vopak terminal via a throughput arrangement. Mobil has a joint terminal arrangement with Caltex for access to a terminal at Silverwater. However, Mobil stated it does not import into the Silverwater terminal because it is supplied via pipeline by Caltex's Kurnell and Shell's Clyde refineries. Mobil also has a joint terminal arrangement with Shell at Newcastle, but does not import into that terminal because it is supplied via pipeline from Sydney.[41]

Mobil does not regularly import into **Queensland** because it sources supply from BP and Caltex under buy–sell arrangements. Mobil has throughput arrangements with BP in Cairns, Townsville and Mackay, and with Caltex at the Gladstone terminal. Mobil has a joint terminalling arrangement with BP at Whinstanes terminal in Brisbane. However, as mentioned above the Whinstanes terminal is not an import terminal and is supplied via pipeline by the Caltex and BP refineries. [42]

In **Western Australia** Mobil imports into the Coogee Chemicals terminal in Perth.[43]

In **South Australia**, Mobil accesses the Birkenhead terminal under a joint venture arrangement with Shell, under which Mobil operates the terminal.[44] Mobil also has access to a terminal under joint ownership or long-term throughput arrangements with Shell at Port Lincoln. Shell operates the Port Lincoln terminal.[45]

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38 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 55.
39 ACCC, public hearing transcript, Melbourne, 19 September 2007, pp. 57–8.
40 Mobil submission, p. 5.
41 ACCC, public hearing transcript, Melbourne, 19 September 2007, pp. 60–1.
42 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 62.
43 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 62.
44 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 63.
45 Mobil submission, p. 5.

In the **Northern Territory**, Mobil imports into the Vopak terminal in Darwin via a throughput arrangement. Mobil's supplies in Darwin are sourced from Shell under buy–sell arrangement.[46]

Shell

Shell sources most of fuel in **Victoria** from its Geelong refinery; however it may import cargoes of fuel into Geelong if there is a problem with production at the refinery. Outside the Geelong refinery, Shell can also import fuel into the Newport terminal. Shell noted that the Newport terminal had a significant capacity, but that it was barely adequate to meet their operating needs.[47]

In **New South Wales** Shell sources most of its fuel from its Clyde refinery. Shell noted that it was difficult to import fuel into the Clyde refinery because it is land-locked and logistically difficult to import clean products through. Shell has storage space at the Vopak terminal in Port Botany, but indicated that this was not a substantial storage space for petrol and diesel, but mainly stored jet fuel.[48]

Shell has a terminal at Newcastle that is connected via pipeline to the Caltex's Kurnell refinery and Shell's Clyde refinery. The Newcastle terminal is a joint terminal with Mobil.[49]

In **Queensland** Shell indicated that its supplies of fuel in Brisbane predominantly come from its buy–sell negotiations with the other refiner-marketers. Shell indicated that it could import into its Pinkenbah terminal in Brisbane; however, it noted that it was not a principal export destination for petrol. [50]

Shell also has terminals in Cairns, Mackay, Gladstone and Townsville (a joint terminal with Caltex). Shell noted that there was limited storage space for gasoline at these terminals.[51]

Shell imports fuel into the Vopak terminal in Darwin in the **Northern Territory**.[52]

Shell stated that it primarily sourced supply in **Western Australia** through buy–sell arrangements, and that it conducted minimal importing into Perth. Shell noted that the capacities at Fremantle, Geraldton, Esperance, and Port Hedland were very small, and that these terminals were predominantly there for gas or diesel demand for those areas driven by mining and offshore operations.[53]

Shell considered that it could obtain access to third party storage at the Coogee Chemicals terminal in Kwinana, and from Verve who are associated with Western Power and have tanks in Perth. [54]

In **South Australia**, Shell supplies its customers through a combination of buy–sell arrangements and imports. Shell imports fuel into the Birkenhead terminal in Adelaide. The Birkenhead terminal is operated by Mobil under a joint venture with Shell.[55]

The majority of Shell's product requirements in **Tasmania** are generally sourced from its Geelong refinery. Shell has a joint terminal arrangement with Caltex at the Devonport and Hobart terminals.[56]

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46 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 64.
47 ACCC, public hearing transcript, Melbourne, 13 September 2007, pp. 34–5.
48 ibid., pp. 37–8.
49 ibid.
50 ibid., pp. 39–41.
51 ibid., pp. 39–40.
52 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 44.
53 ibid., p. 41.
54 ibid., pp. 41–2.
55 ibid., pp. 42–3.
56 ibid., pp. 34–5.

Terminals owned or leased by independent importers

Neumann Petroleum

Neumann owns a seaboard terminal located at Eagle Farm, Brisbane. Neumann sources its petroleum products from both domestic and international refineries and sells them to service stations, primary producers, and commercial end users.[57] The vast majority of Neumann's petroleum needs are satisfied from its arrangements with local refiners.

The total capacity of the Eagle Farm terminal is 43 ML. This capacity is used to store a number of petroleum products, including unleaded petrol, 95 octane petrol, diesel and ethanol blended fuel.[58]

Trafigura

Independent importer Trafigura currently owns a terminal in Hastings, Melbourne. The storage capacity of this facility is just over 90 ML.[59]

Before Woolworths' decision to source supply from Caltex from January 2004, Trafigura had access to 100 ML of storage capacity at Vopak's Port Botany terminal of this, 65 ML was leased to Trafigura directly, and 35 ML was leased to Woolworths and then sub-leased to Trafigura.[60] Trafigura's lease of storage capacity at the Port Botany facility ended in August 2004.[61]

Terminals owned or leased by bulk liquid logistics companies

Vopak

Vopak is a Dutch-owned international storage handing company. Vopak's Australian operations are handled through its regional head office in Singapore. The primary focus of Vopak's business is bulk liquid storage, of which the storage of petroleum products is a component. Vopak also stores other bulk liquids such as chemicals and vegetable oils.[62]

Vopak has two terminals in Australia for the storage of petroleum products—one in Sydney and the other in Darwin.

Vopak's Port Botany terminal in Sydney currently has a storage capacity of 180 ML, and Vopak has commenced construction of an additional 75 ML of storage capacity at this facility.[63] Vopak's customers at the Port Botany terminal are BP, Shell, Mobil and Kuwait Petroleum Corporation. Capacity is currently fully used at the terminal.[64]

Trafigura previously leased 65 ML of storage capacity at the Port Botany Terminal. Trafigura's lease expired in July 2004. Vopak negotiated to lease this storage capacity to Shell for the storage of jet fuel and petrol.

57 Neumann Petroleum Terminals Limited website, viewed 11 November 2007, www.neumannpetroleum.com.au.
58 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 7; p. 35.
59 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 14.
60 ibid., pp. 6–8.
61 ibid., p. 22.
62 ACCC, public hearing transcript, Darwin, 27 August 2007, p. 3.
63 ibid., p. 3.
64 ibid., p. 17.

At the time, the ACCC considered whether to intervene in the lease of Trafigura's storage capacity to Shell. Market inquiries revealed that independent importers had become less viable as major independent retailers had sought longer term contracts with the refiner-marketers to protect their operations. The change in the fuel standards was also cited as a factor influencing the ability of the independents to obtain certainty of supply. The ACCC decided not to intervene because it considered that Vopak/Shell arrangements would not substantially lessen competition for the purposes of the Act.[65]

Vopak's Darwin terminal was established to rationalise the petroleum storage facilities on the Darwin waterfront into a single location. Vopak's Darwin terminal is a co-mingled facility in which the fuels imported by different operators are stored in the same tanks. Vopak's Darwin terminal has a total petroleum storage capacity of 115 ML.[66] Approximately five per cent of the total capacity at the Darwin terminal is spare, 4 ML of this capacity could be used to store diesel, and 2 ML could be used to store unleaded petrol.[67]

Vopak's major customers at its Darwin terminal are BP, Caltex, Mobil, and Shell.[68]

Marstel

Marstel is a bulk liquids storage company that specialises in handling hazardous bulk liquids and focused on growing its petroleum, vegetable oils and tallow terminalling.[69] Marstel entered the Australian market in 2000 when it bought a fuel distribution depot in Altona. Marstel also constructed a marine terminal in Coode Island in Victoria in 2002.

While Marstel's business was primarily focused on handling hazardous chemicals, Marstel has a business strategy to diversify into handling fuels.[70] Marstel made its first significant step in diversifying its business into handling fuels by buying Mobil's Bell Bay terminal in Tasmania on 1 July 2007. Marstel is currently in the process of recommissioning tanks at this terminal with a capacity of 40–45 ML, 30 ML of which can be used to store unleaded petrol. There is spare storage capacity available at this facility. United is Marstel's key customer at the Bell Bay terminal.[71]

Terminals West

Terminals West stores cargoes of fuel imported by independent importer Gull at its Kwinana terminal in Western Australia. The total capacity of Terminals West's Kwinana terminal is 58 ML.[72]

Coogee Chemicals

Coogee Chemicals is a privately owned company that produces a wide range of industrial, agricultural and mineral processing chemicals for supply to Australian and international markets.[73] Coogee Chemicals has a terminal in Kwinana. Mobil stated that it imported fuel into this terminal on a regular basis.[74]

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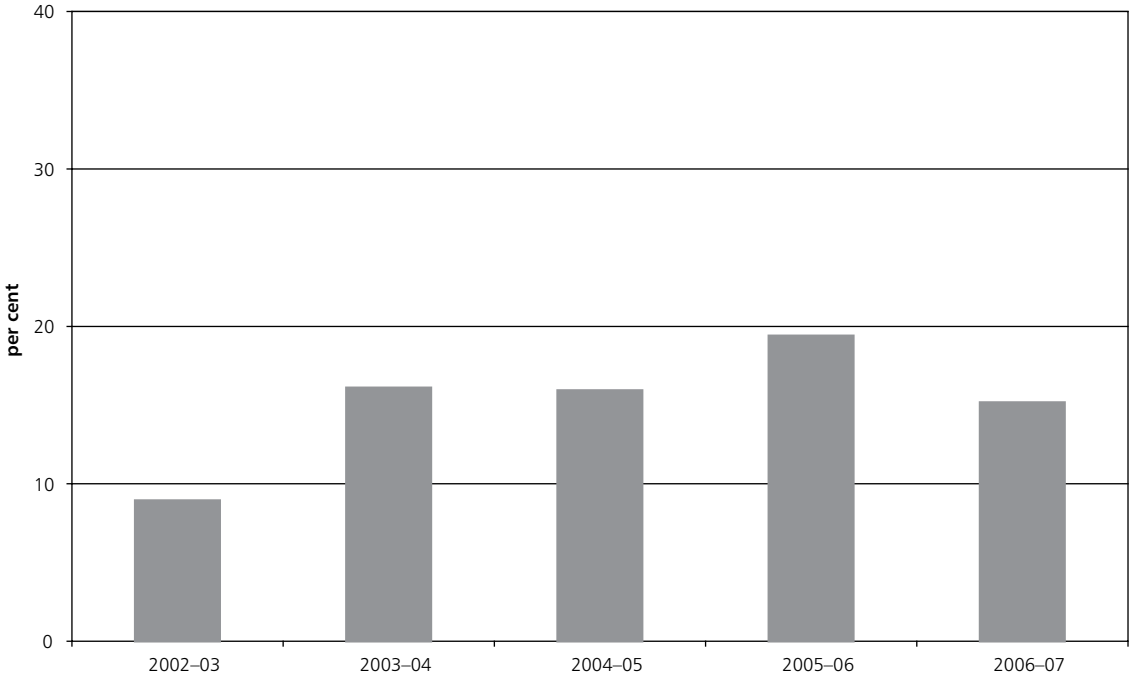
65 G Samuel (ACCC Chairman), *No ACCC action over Vopak Port Botany lease,* media release, 24 August 2004.
66 ACCC, public hearing transcript, Darwin, 27 August 2007, p. 5.
67 ibid., pp. 15–6.
68 ibid., p. 7.
69 Tim Gunning, (General Manager, Marstel Terminals), *Marstel announce acquisition of Mobil Bell Bay terminal*, media release, Marstel, 2 July 2007.
70 ACCC, public hearing transcript, 10 October 2007, Melbourne, p. 51.
71 ibid., p. 58–60.
72 Gull, *Terminal Operations,* viewed 11 November 2007, www.gullpetroleum.com.au/html/terminal_operations.htm.
73 Coogee Chemicals, *Our Company*, viewed 11 November 2007, www.coogee.com.au/who_comp.htm.
74 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 47.

3.3.3 Volume of imports

The recent reduction in Australian refinery capacities over the last four years has meant that existing demand for petrol cannot be met solely through domestic production.

Chart 3.4 shows imports as a proportion of sales of petrol in Australia over the period 2002–03 to 2006–07. In 2006–07 imports of petrol were 2920 ML. This represented around 15 per cent of sales of petrol in 2006–07. Imports as a proportion of sales of petrol almost doubled between 2002–03 and 2003–04 increasing from around 9 per cent to around 16 per cent. The increase in imports during this period was significant, the consequence of the mothballing of Mobil's Port Stanvac refinery in South Australia.

Chart 3.4 Imports as a proportion of sales in Australia: 2002–03 to 2006–07



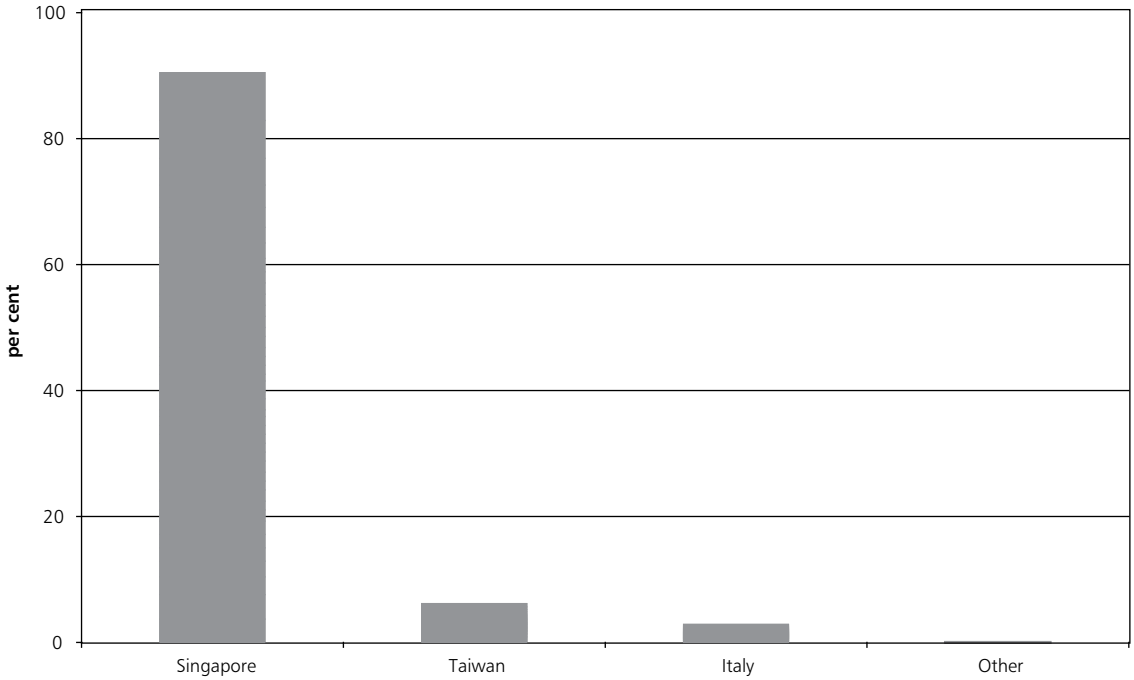
Source: Australian Petroleum Statistics, Department of Industry, Tourism and Resources.

3.3.4 Sources of imports of petrol

Chart 3.5 shows the sources of imports of petrol into Australia for 2006–07.

It can be seen that the major source of Australia's petrol imports was Singapore (2668.4 ML, which represented 90 per cent of total imports). Other key sources of petrol included Taiwan (6 per cent) and Italy (3 per cent).

Chart 3.5 Sources of imports of petrol into Australia: 2006–07



Source: Australian Petroleum Statistics, Department of Industry, Tourism and Resources.

3.3.5 Share of imports

The ACCC received data on imports of regular unleaded petrol from the refiner-marketers and independent importers (Trafigura, Neumann and Gull) for the period 2002–03 to 2006–07 under s. 95ZK of the Act.[75], [76]

Chart 3.6 illustrates the relative share of total imports of petrol by the refiner-marketers and the independent operators.

It can be seen that independent imports have declined over the period 2002–03 to 2006–07. In particular, while independent imports accounted for around 52 per cent of total imports in 2002–03, they fell to around 14 per cent in 2003–04. Independent imports have fluctuated in the intervening years and accounted for 9 per cent of total imports in 2006–07.

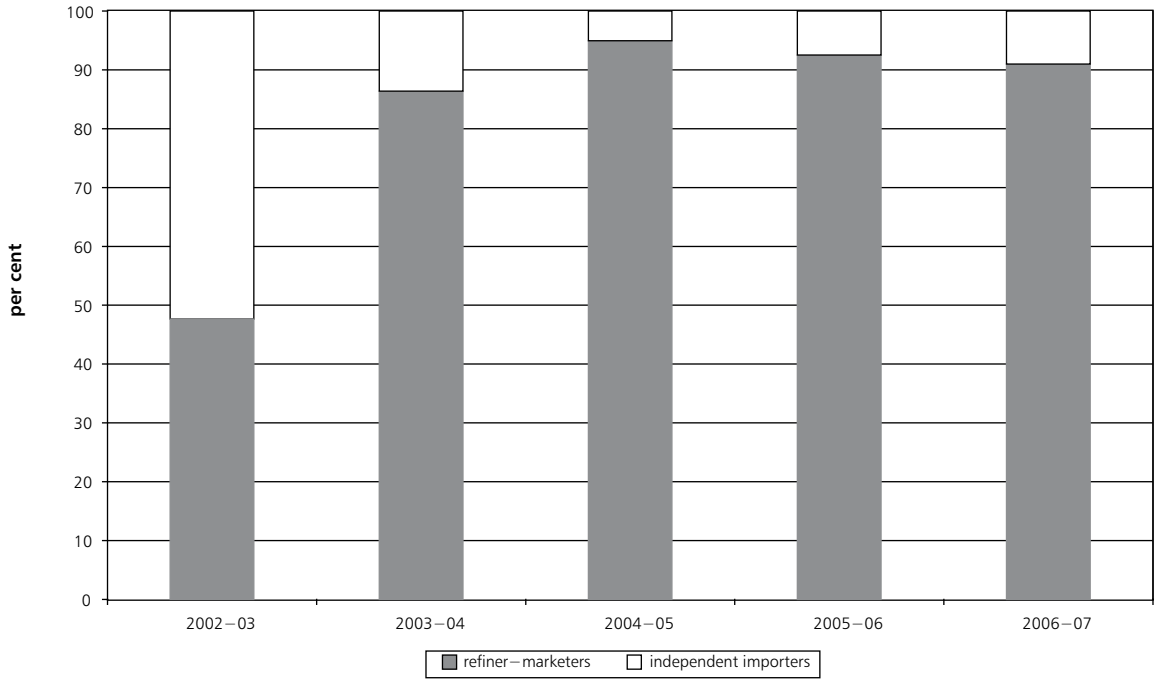
Commensurate with this decline, the refiner-marketer's share of imports increased substantially between 2002–03 and 2003–04. The change in import shares is attributable to both an increase in imports by refiner-marketers, (Mobil's imports increased substantially after the closure of the Port Stanvac refinery) and a decline in independent imports (when Woolworths ceased to obtain petrol from Trafigura from January 2004).

75 The data compiled by the ACCC includes imports of regular unleaded petrol. Calender year data provided by one refiner-marketer has been converted into financial year data.

76 The data on imports of regular unleaded petrol compiled by the ACCC is consistently lower than with imports of automotive gasoline reported by DITR for the period 2002–03 to 2006–07. A portion of this difference is attributable to the inclusion of premium unleaded, proprietary brand, lead replacement petrol and ethanol blended fuel in addition to regular unleaded petrol in the DITR data.

The share of independent imports increased in 2004–05 and 2006–07. The increase in the share of imports in 2005–06 for the independent importers was the result of an increase in the volumes imported by the independents, whereas the increase in 2006–07 was attributable to a reduction in the volumes imported by the refiner-marketers.

Chart 3.6 Percentage of imports of regular unleaded petrol refiner-marketers and independent importers: 2002–03 to 2006–07



Source: ACCC from data obtained under s. 95ZK of the Act.

3.3.6 Exports of unleaded petrol

Chart 3.7 shows total Australian exports of petrol as a proportion of domestic supply (i.e. production plus imports) for 2002–03 to 2006–07. It can be seen that total exports of petrol was a very small proportion of domestic supply over the period 2002–03 to 2006–07. This accounted for on average around 4 per cent of domestic supply over the period 2002–03 to 2006–07.

In 2006–07, 776 ML of petrol were exported. The major destinations for these exports were New Zealand and Singapore, which accounted for 81 per cent and 19 per cent of total petrol exports respectively.

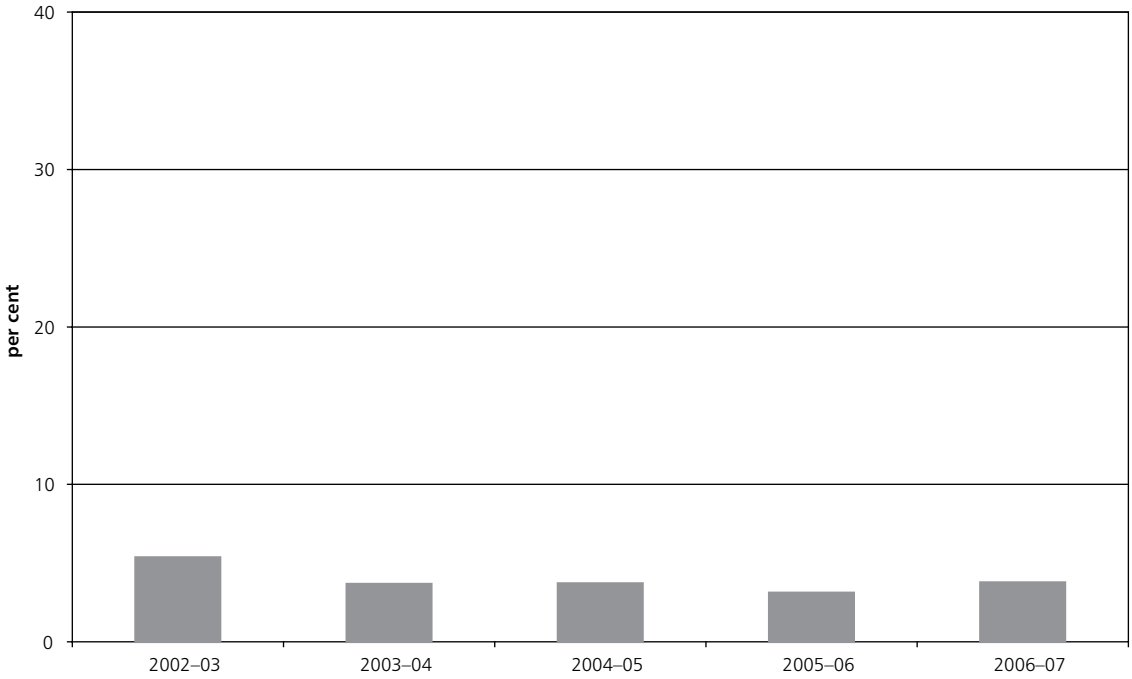
It was put to the inquiry that there were a range of reasons for the export of domestically produced petrol.

Caltex noted that petrol can be exported from Australia when refineries are going through a maintenance period in which key pieces of equipment are shut down and small volumes of non-Australian grade fuel is produced.[77]

77 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 62.

It was also put to the inquiry that a range of options were available to the refiner-marketers to sell product in circumstances in which they had excess supply. These include selling the product on the local market, exporting to New Zealand, and exporting to Singapore (generally at a lower fuel specification and at reduced freight rates).

Chart 3.7 Exports of petrol for Australia as a proportion of domestic supply: 2002–03 to 2006–07



Source: Australian Petroleum Statistics, Department of Industry, Tourism and Resources.

3.3.7 Buy–sell arrangements

To supply markets in which they do not operate refineries Caltex, BP, Mobil and Shell contract to buy product from a local refiner in what are known as 'buy–sell' agreements. The buy–sell feature of these agreements refers to the pairing of supply contracts between refiners who supply to each other simultaneously in different markets. However, there are discrete buy and sell contracts between the buy–sell partners and there is no requirement for the partners to buy or sell equal quantities from each other.[78]

Buy–sell agreements typically feature rolling contracts renewed every six months.[79] Prices are negotiated on renewal but tend to follow import prices. Mobil submitted that the buy–sell arrangements it negotiates with other companies are negotiated independently on commercial terms off a transparent import parity pricing basis, which broadly includes the cost involved in buying product on the Singapore spot market, plus a quality premium for local standards, freight, wharfage, and other charges to deliver that product to Australia.[80]

78 Caltex submission, p. 20.
79 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 9.
80 Mobil submission, p. 4.

Buy–sell agreements commenced in 2002 and replaced the previous industry practice of 'refinery exchange' under which suppliers would agree to supply equal amounts of product to each other in different markets. Shell explained that it moved away from refinery exchange arrangements because buy–sell arrangements are more transparent.[81] BP submitted that reciprocal arrangements with the same company were not always the most efficient way to source products in each location.[82]

The two key elements of the buy–sell contracts are that they specify the amount of each product that one refiner-marketer will buy from the other for a six-month period, and the price at which the product will be sold is based on the Singapore MOPS benchmark price.

Buy–sell partners

The ACCC sought details from each of the refiner-marketers about the nature of their buy–sell arrangements over the past five years under s. 95ZK of the Act.

Although the terms and conditions of these arrangements are commercially sensitive, a number of general observations can be made about the sale of petrol between the refiner-marketers:

- on average BP and Mobil were net sellers of petrol (sales of petrol less purchases) from 2002–03 to 2006–07, while Shell and Caltex were net purchasers
- in those states with refineries, the refiner-marketers that own refineries are the largest sellers of petrol in that state.

The effect of buy–sell arrangements on prices and competition in downstream petrol sectors has been a key issue for this inquiry. In particular, the inquiry has considered whether such arrangements are consistent with effective competition. This issue is examined in chapter 13.

81 ACCC, public hearing transcript, 13 September 2007, p. 53.
82 BP submission, p. 15.

4 Industry structure—wholesale and distribution

4.1 Wholesale

The refiner-marketers operate at the wholesale level and some have equity in distributor operations. Some independent companies—such as Liberty, United, Gull, Neumann and Trafigura—also operate at the wholesale level.

The independent wholesalers source fuel primarily from the refiner-marketers. However, they also obtain some supply from imports. For example, Liberty buys petrol domestically from Mobil and Caltex[1], while Neumann sources petrol from BP.[2] United Petroleum has supply contracts with Shell and Mobil, and has recently commenced importing fuel for the Tasmanian market through the international brokerage firm, Masefield.[3] Gull supplies its wholesale customers via imports and domestic sources.

These supply arrangements are considered in more detail in chapter 8.

At the retail level, the refiner-marketers supply to retail operations they own and operate, commission agent sites, franchisees and independent operators (both branded and unbranded). Independent wholesalers, such as Liberty, United, Gull and Neumann, supply their own and other independent retail sites.

Further details about the business structures prevalent in the retail market and the supply of retail operations by the refiner-marketers and independent wholesalers are contained in chapter 5.

4.2 Distribution

The supply of fuel from terminal to retailer is conducted by distributors. The refiner-marketers and independent wholesalers supply wholesale customers through a mix of their own operations and independent distributors (and distributors in which they have an equity interest). Distributors supply businesses such as primary producers, commercial and industrial, aviation, mining, and the service station network.

Depending on the proximity of wholesale customers to the wholesaler's terminals, distributors either supply wholesale customers directly, or from inland depots. In general, metropolitan areas are supplied directly from the terminal by the operations of refiner-marketers while regional areas are supplied by distributors.

Australian distributors are analogous to jobbers in the United States in that they distribute petrol to their own or independent retail sites. However, while distributors in Australia predominantly buy fuel through long-term supply agreements with either a refiner-marketer or independent wholesaler, jobbers in the United States generally buy fuel on a spot basis.

1 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 89.
2 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 3–4.
3 ACCC, public hearing transcript, Sydney, 3 September 2007, pp. 5 and 12.

The Australian Petroleum Agents and Distributors Association (APADA) submitted that there were differences in the approach to distribution between the refiner-marketers. In particular, APADA noted that BP and Caltex have equity interests in some distributors and also use independently owned operations. In contrast, Shell has no independent 'full line' distributors and supplies into regional areas from its Shell Direct subsidiary. Mobil has recently sold its equity interest in distribution operations, and relies on independent distributors.[4]

APADA submitted that the total number of distribution operations remains around 130.[5] There has been a significant decline over recent years—there were 7000 distributors in 1970, about 400 in 1996 and around 140 in 2002. Achievement of economies in supply (such as reduced transport costs from the use of higher volume trucks and lower handling costs through more direct deliveries from storage terminals) and improved logistics (matching supply and demand) have contributed to the declining number of distributors.

The number of distributors in Australia is expected to continue to decline with the ongoing rationalisation that is occurring throughout the supply chain and among retail sites.

4.3 Wholesale market shares

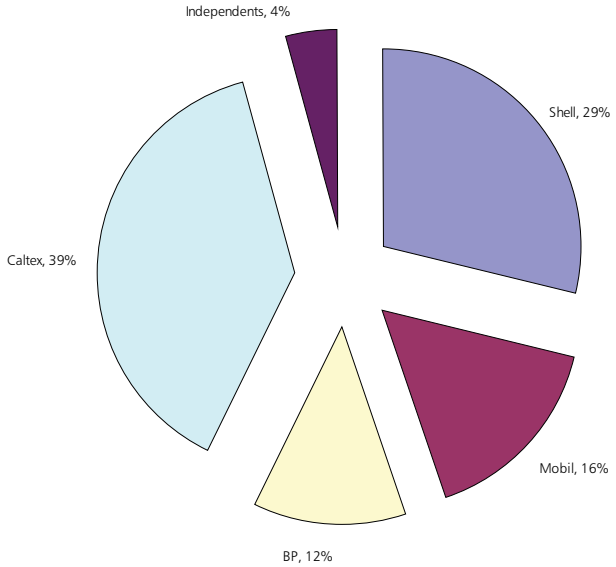
The ACCC received data from the refiner-marketers and the major independent wholesalers (United, Liberty, Gull, Neumann, Matilda and Trafigura) on wholesale volumes of unleaded petrol for the period 2002–03 to 2006–07 under s. 95ZK of the Act.[6, 7]

Chart 4.1 illustrates the shares of total volume of wholesale sales in 2006–07 of the major Australian wholesalers for the refiner-marketers and the independent wholesalers.

It can be seen that Caltex was the market leader with 39 per cent of total wholesale volumes in 2006–07. The chart shows that the four refiner-marketers had 96 per cent of the wholesale market with independents (Liberty, United, Matilda, Trafigura, Gull and Neumann) having the remaining 4 per cent in 2006–07.

4 APADA submission, p. 3.
5 ibid., p. 2.
6 The data compiled by the ACCC from information provided by the refiner-marketers and major independent wholesalers includes all grades of unleaded petrol (i.e. 91, 95 and 98 RON) but excludes ethanol blended petrol and lead replacement petrol. One refiner-marketer provided information on a calendar year basis, which had to be converted by the ACCC into financial year data.
7 There are a number of methodological issues to note about the compilation of this data. Firstly, some sales at the wholesale level occur between wholesalers (predominantly between the refiner-marketers and the independent wholesalers). The ACCC did not have sufficiently disaggregated information to be able to exclude these sales from the analysis. Therefore, total sales at the wholesale level will be overstated to the extent that these sales occur. Secondly, the data has been compiled from information provided by only 10 wholesalers rather than all market participants (albeit the major ones). Therefore, the data compiled by the ACCC will understate total sales at the wholesale level in Australia.

Chart 4.1 Share of total volume of wholesale sales of unleaded petrol of the major Australian wholesalers: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act.

Table 4.1 shows shares of total wholesale volumes of unleaded petrol of the refiner-marketers and the independents for the period 2002–03 to 2006–07.

Table 4.1 Share of total volume of wholesale sales of unleaded petrol for the major Australian wholesalers: 2002–03 to 2006–07

	2002–03	2003–04	2004–05	2005–06	2006–07
	%	%	%	%	%
BP	12	11	11	12	12
Caltex	30	33	37	38	39
Mobil	22	18	15	14	16
Shell	24	27	30	31	29
Independents	11	11	6	4	4

Note: Percentages may not sum to 100 due to rounding.

Source: ACCC from data supplied under s. 95ZK of the Act.

It can be seen that the refiner-marketers share of wholesale sales has increased relative to the independent wholesalers over the period 2002–03 to 2006–07. In 2002–03 the refiner-marketers had 89 per cent of wholesale sales volumes compared with a share of 11 per cent.

Of the refiner-marketers, Caltex has significantly increased its market share from 30 per cent in 2002–03 to 39 per cent in 2006–07. Shell also increased its market share (from 24 per cent to 29 per cent) over the same period of time. In contrast, Mobil's share has declined from 22.1 per cent in 2002–03 to 16 per cent in 2006–07. BP's share remained relatively constant over the period (11 to 12 per cent).

Independent wholesalers' market share has declined from 11 per cent in 2002–03 to 4 per cent in 2006–07.

The national results for shares of wholesale sales by volume of unleaded petrol of the major Australian wholesalers are broadly reflected in the state and territory results. In 2006–07 Caltex had the largest share of wholesale sales volumes in all states, except for Victoria (where Shell had the highest share). Shell and Caltex had the two highest shares of wholesale sales by volume in all states and territories for 2006–07. BP and Mobil had the next highest shares of wholesale volume in all states during 2006–07. BP had a higher share of volumes than Mobil in Queensland, Western Australia, Tasmania and the Northern Territory, while Mobil had a higher share of wholesale volumes than BP in New South Wales, Victoria and South Australia.

The share of wholesale sales volumes in 2006–07 for independent wholesalers whose operations are concentrated in particular states were significantly higher than the national market shares.

Table 4.2 shows the HHI by wholesale volumes of unleaded petrol for the period 2003–03 to 2006–07. [8]

Table 4.2 HHI of wholesale volumes of unleaded petrol: 2002–03 to 2006–07

2002–03	2003–04	2004–05	2005–06	2006–07
0.2193	0.2322	0.2650	0.2798	0.2752

Source: ACCC from data supplied under s. 95ZK of the Act.

The table indicates that the wholesale market for unleaded petrol has become more concentrated over the period. The HHI in 2002–03 was 0.2193 while the in 2006–07 it was 0.2752.

The HHI for wholesale volumes of unleaded petrol is similar to the HHI for domestic production of unleaded petrol, despite the larger number of participants in the wholesale market. This is attributable to Caltex's larger share of wholesale sales compared with its share of domestic production, and BP's relatively smaller share of wholesale sales compared with its share of domestic production.

This suggests that the independent wholesalers place little competitive constraint on the refiner-marketers wholesaling activities. This is discussed in more detail in chapter 8.

8 The HHI is descrided in section 3.2.5.

5 Industry structure—retail

5.1 Industry structure

Petrol retail sites in Australia can be separated into four broad categories on the basis of ownership and wholesale supply arrangements. These are:

- refiner-marketer owned sites
- refiner-marketer branded independent and distributor-owned sites
- supermarket operated sites
- independent operator sites selling their own brands.

Retail sites within these categories are operated in one of the following ways:

- Owner operated—the owner of the site is free to choose its wholesale supplier and determine its retail price. An independent owner-operator may choose to align its site with the brand of fuel sold by a particular wholesaler, by receiving branding (signage identifying that site as sourcing its fuel from a particular wholesale supplier).
- Commission agent—an individual manages a site (owned by a refiner-marketer or independent chain), and compensation is generally in the form of a commission based on the quantity of product sold.
- Franchise operated—an individual rents a site or a number of sites, (generally owned by a refiner-marketer) and operates under a franchise agreement. At these sites, fuel is sourced from the owner of the site and branded accordingly.

Franchise operated sites may receive price support from their wholesaler. Price support enables the wholesaler to influence the retail prices set by the operator of the site.

Owner-operated sites may receive price support from their wholesaler. The operation of price support is outlined in more detail in chapter 9.

The business structures observed in the retail market largely reflect the operation of two pieces of recently repealed legislation:

- the *Petroleum Retail Marketing Sites Act 1980* (the Sites Act), which placed a quota on the number of retail sites that the refiner-marketers could operate directly or on a commission agent basis
- the *Petroleum Retail Marketing Franchise Act 1980* (the Franchise Act), which specified minimum terms and conditions for franchise arrangements.

The Sites Act was designed to counteract the dominance of the petrol retail market by the refiner-marketers by restricting oil companies from operating or controlling more than 5 per cent of total retail sites. The Franchise Act set out minimum terms and conditions governing a franchise agreement in the retail petrol market and covered all retail outlets selling above a certain minimum quantity of petrol a year. In response, the refiner-marketers adopted other marketing strategies (including multi-site franchising).

Under the Downstream Petroleum Reform Package, the Sites Act and the Franchise Act were repealed and a mandatory code (the Oilcode) under the Trade Practices Act (the Act) was introduced. The

Oilcode, among other things, provides wholesalers and fuel resellers with specific rights and obligations in relation to fuel reselling arrangements. The Oilcode is discussed in more detail in chapter 6 of this report.

5.1.1 Refiner-marketer owned sites

The refiner-marketers own and operate their own sites, have commission agent sites, and market their fuel through single or multi-site franchise operations. The refiner-marketers determine prices at company owned and commission agent sites. While prices are determined by franchisees at franchise sites, the refiner-marketers may influence prices at these sites through the provision of price support.

BP owns and operates approximately 260 retail sites, most of which are located in major metropolitan areas in and around capital cities.[1] There are a further 10 sites supplied by BP under a temporary agency arrangement under which BP sets the retail price. BP also supplies a 'handful' of BP branded sites under longstanding single site franchisee agreements under which the franchisees set prices, but receive price support.[2]

BP has a franchise agreement to operate 14 BP branded truck stops, which predominantly sell diesel and provide specialist services to heavy road transport operators. Under its truck stop franchise arrangement with the independent operator BP sets the retail price.[3]

Excluding the Woolworths joint venture sites, **Caltex** owns a total of 778 retail sites. Of these sites, 43 are owned and operated by Caltex, 28 are operated by commission agents and 332 are operated by franchisees. There are also 299 Caltex branded sites owned by Caltex that are either owned or supplied by distributors, and a further 76 Caltex owned sites that are either distributor owned or operated, which are independent branded.[4]

Before the alliance with Coles Express, **Shell** owned approximately 600 branded sites that were operated by franchisees. As part of the alliance with Coles Express, Shell transferred the operation of virtually all of its franchisee-operated sites to Coles Express. Shell retains ownership of these sites.[5]

Shell also owns 41 sites as part of its commercial vehicle refuelling network which are located mainly in regional areas to service large fleets travelling throughout Australia. At these sites 85 per cent of the fuel sold is diesel. Shell sets the prices of the sites in Shell's commercial vehicle refuelling network and most of the sites are owned by Shell.[6]

Mobil owns or leases approximately 280 retail sites. All but one of these sites is operated by a single multi-site franchisee, Strasburger Enterprises (Properties) Pty Ltd (SEP), which is 50 per cent owned by Mobil. SEP owns or leases a further 30 sites which are Mobil branded.[7]

5.1.2 Refiner-marketer branded independent operators and distributor-owned sites

Independent operators tend to own their site but retail the fuel of one of the refiner-marketers. There are also distributor-owned sites that do this. The price of fuel at these sites is determined by the operator.

1 BP submission, p. 21.
2 ibid., p. 26.
3 ibid., p. 25.
4 Caltex submission, p. 54.
5 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 5.
6 Shell submission, p. 7.
7 Mobil submission, p. 1.

Distributor-owned sites are run by a local fuel distributor, some of which are owned or part-owned by the refiner-marketers and others which, like branded independent operators, use their own site and equipment and have a brand and supply agreement with a refiner-marketer. These sites tend to be located in rural and regional areas.

BP supplies fuel to 333 privately owned sites operated under the BP brand and a supply agreement under which prices are determined on the basis of a TGP. The operators of these sites make their own retail pricing decisions.[8]

BP also supplies 860 sites (predominantly located in rural Australia) that are either owned by distributors or independent third parties, are supplied by BP distributors and operate under the BP brand. In particular, BP supplies fuel at the wholesale level to its distributors (on the basis of TGP) who then on-sell to rural operators. The price of fuel at these sites is determined by the site operator.[9]

Caltex supplies fuel to 100 Caltex branded sites that are independently owned and operated and to 441 Caltex branded sites that are independently owned and either distributor owned or supplied.[10]

Shell supplies fuel to 350 Shell branded sites that are dealer owned and operated. The dealer owner sets the price of fuel at these sites. Shell supplies fuel to these sites on a TGP basis, plus a fee for branding rights and credit charges and, where applicable, delivery charges. Shell also makes its Shell Card facility available for use at dealer owned and operated sites. Prices at these sites are determined by the dealer owner.[11]

Mobil supplies fuel to a large number of independent branded distributors in regional Australia. While these independent branded distributors supply 500 branded and unbranded service stations in Australia, the number of Mobil branded sites is not known. In addition to supplying Mobil branded and unbranded service stations, the Mobil branded distributors also supply fuel directly to farmers and other small rural and regional businesses.[12]

5.1.3 Supermarket operated sites

The two major supermarket chains in Australia—Coles and Woolworths—operate sites which have shopper docket discount schemes linked to grocery sales at their supermarkets. These are the Coles Express and Caltex/Woolworths joint venture sites. Prices at these sites are determined by Coles Express and Woolworths. The supermarket operations, including the operation of the shopper docket discounts, are discussed in more detail in chapter 12.

Caltex/Woolworths

Caltex supplies fuel to approximately 505 sites which are supplied under an arrangement with Woolworths' supermarkets. Of these sites, approximately 134 are co-owned under a joint venture between Caltex and Woolworths with the remainder wholly owned by Woolworths.[13]

Under the supply arrangement between Woolworths and Caltex, Woolworths owns the petrol sold at all 505 outlets. Woolworths also sets the pump price at these outlets.

8 BP submission, p. 21.
9 ibid.
10 Caltex submission, p. 54.
11 Shell submission, pp. 6–7.
12 Mobil submission, p. 1.
13 Woolworths submission, p. 2.

Shell/Coles Express

Shell supplies fuel and branding rights to a network of approximately 600 Coles Express and Shell branded sites, located predominantly in metropolitan and large regional areas. While Coles Express operates and determines the prices at these sites, it also receives price support from Shell.[14]

5.1.4 Independent operator sites selling their own brands

Independent operators selling their own brands range from the large independent chains to small one- to two-site operations. There are also independent operators that buy fuel from independent wholesalers and align themselves with that independent wholesalers' brand.

Independent chains generally purchase fuel in bulk from local refiner-marketers and sell it through their company-owned sites. Sites are generally operated on a commission agency basis. The smaller independent operators tend to use their own site, equipment and brand name and purchase fuel on an ad hoc or contractual basis from local refiner-marketers or independent wholesalers.

Liberty supplies 140 Liberty branded independently owned sites around Australia.[15] It also supplies fuel to a number of independent service stations that operate under their own brand. The major unbranded sites supplied by Liberty are Refuel Zone, which has four sites and Oz Zone, which has seven sites.[16]

United owns and determines the retail price at 189 retail sites across Australia. These sites are operated under commission agency arrangements. United also supplies fuel to approximately 100 independent resellers that sell under their own brand.[17] It also supplies approximately 200 United branded independent sites. At these sites the owner determines the retail price.[18]

Gull owns 55 sites that are operated on a commission agency basis. Gull determines the retail price at these sites.[19] It also supplies 25 Gull branded sites that are independently owned. The owner of the site determines the retail price at these sites. [20]

Neumann Petroleum has four company operated sites and 44 Neumann branded retail outlets under a brand supply arrangement with independent operators. Neumann sells fuel to independent branded resellers on the basis of its TGP.[21] Neumann also supplies fuel to a number of smaller independent distributors and resellers on a spot basis in northern New South Wales and country south-east Queensland. [22]

7-Eleven owns 182 sites in Australia at which fuel is sold by a commission agent. 7-Eleven determines the retail price of fuel at these sites.[23]

Matilda operates at the retail level in Queensland. Matilda owns 19 sites and has a head lease on a further 18 sites. Matilda operates these sites on a commission agency basis and determines the retail price at these outlets. Matilda also supplies fuel to four sites at the wholesale level. Matilda does not determine the retail price of fuel at these sites.[24]

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14 ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 25.
15 ACCC, public hearing transcript, Melbourne, 5 September 2007, pp. 86–7.
16 ibid., p. 87.
17 ACCC, public hearing transcript, Sydney, 3 September 2007, pp. 3–4.
18 ibid., p. 4.
19 ACCC, public hearing transcript, Perth, 28 August 2007, p. 46.
20 ibid., pp. 46–7.
21 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 16.
22 ibid.
23 ACCC, public hearing transcript, Melbourne, 7 September 2007, pp. 41–2.
24 ACCC, public hearing transcript, Brisbane, 22 August 2007, pp. 43–7.

Of the refiner-marketers, **BP** supplies 11 privately owned unbranded sites.[25] **Caltex** supplies 13 independently owned sites that have their own brand. It also supplies 167 independently owned sites that are either distributor operated or supplied which have their own brand. **Mobil** supplies over 500 Mobil branded and unbranded service stations across Australia. It also supplies fuel to an even larger number of independent resellers across Australia.[26]

5.2 Market shares

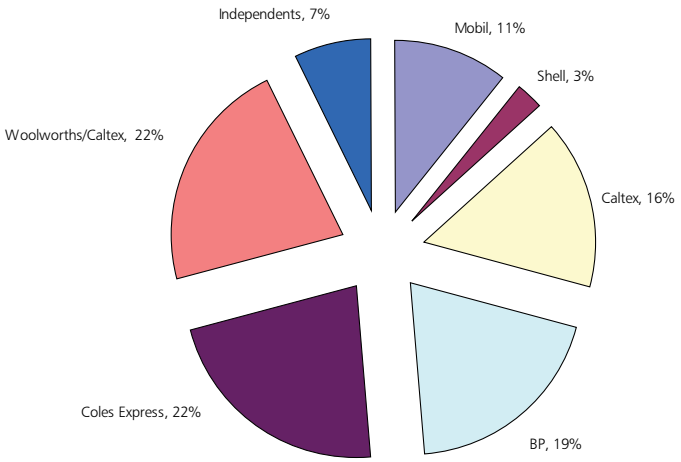
The ACCC received data from the refiner-marketers, the supermarkets and Liberty, United, 7-Eleven, Neumann, Matilda and Gull on sales volumes of unleaded petrol at branded retail sites for 2002–03 to 2006–07 under s. 95ZK of the Act.

The ACCC has used this data to compile retail market shares.[27] These shares have been compiled on the basis of the brand of the retail site.[28,] As the market share data compiled by the ACCC does not include information from the smaller independents in the retail market, the total market will be understated.[29] These independents represent only a small part of the market and therefore their absence will have only marginal influence on the results.

Chart 5.1 illustrates the market share of retail sales by volume by brand in Australia for 2002–03 to 2006–07.

25 BP submission, p. 21.
26 Mobil submission, p. 1.
27 The data compiled by the ACCC from information provided by these companies includes all grades of unleaded petrol (i.e., 91, 95 and 98 RON) and ethanol blended petrol but excludes lead replacement petrol. One refiner-marketer provided information on a calendar year basis, which had to be converted by the ACCC into financial year data.
28 Therefore, the sales by a franchisee or commission agent operating a site on behalf of a refiner-marketer would be classified as the sales of that refiner-marketer. Similarly, the sales of an independent that owns and operates a site but sources its fuel and branding from a refiner-marketer would also be classified as the refiner-marketer's sales.
29 The compiled data was compared with total retail sales data reported by DITR. The comparison indicated that the data compiled by the ACCC was lower for 2002–03 to 2006–07. This is likely to be attributable to the methodological issues associated with the compilation of the data noted above.

Chart 5.1 Market share by sales volume by brand, Australia: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act.

It can be seen that Woolworths/Caltex and Coles Express were the market leaders in 2006–07, both with 22 per cent shares of retail sales by brand nationally. BP had the highest retail market share of the refiner-marketers at 19 per cent, followed by Caltex at 16 per cent, Mobil at 11 per cent and Shell at 3 per cent. In 2006–07 the combined retail market share of the supermarkets was 44 per cent, which was 4 per cent lower than the combined market shares of the refiner-marketers (49 per cent). The independents had a 7 per cent share.

Table 5.1 shows shares of retail sales by volume by brand in Australia for 2002–03 to 2006–07.

Table 5.1 Shares of retail sales by volume by brand in Australia: 2002–03 to 2006–07

	2002–03	2003–04	2004–05	2005–06	2006–07
	%	%	%	%	%
BP	20	20	18	19	19
Caltex	24	22	18	16	16
Coles Express	0	16	25	25	22
Mobil	19	17	12	11	11
Shell	20	3	3	3	3
Woolworths/Caltex	10	14	18	20	22
Independents	6	7	6	6	7

Note: Percentages may not sum to 100 due to rounding.

Source: ACCC from data supplied under s. 95ZK of the Act.

The key trend shown in table 5.1 is the change in the nature of petrol retailing associated with the alliances between the supermarkets and Shell and Caltex.

Under the alliance between Coles Express and Shell, Coles Express took over the management of Shell's core franchise network across Australia from July 2003. This is reflected in Coles' initial market share of 16 per cent and the corresponding sharp decline in Shell's market share between 2002–03 and 2003–04 from 20 per cent to 3 per cent.

In August 2003 Woolworths and Caltex announced that they were proposing to enter into a joint venture for the retailing of motor fuel through up to 450 petrol retail sites. Longer term arrangements (involving up to 500 sites) were announced in 2004. In contrast to the sharp shift in retail market share from Shell to Coles Express, Caltex's market share of retail volumes by brand declined from 24 to 22 per cent between 2002–03 and 2003–04, while Woolworth's market share increased from 10 to 14 per cent.

The market shares of the refiner-marketers that did not participate in an alliance with the supermarkets (BP and Mobil) have declined over the period. Mobil's market share declined more sharply than BP's market share. Mobil's market share declined from 19 per cent in 2002–03 to 11 per cent in 2006–07 while BP's market share has fallen marginally from 20 per cent in 2002–03 to 19 per cent in 2006–07.

The independent retailers' market share has not substantially changed over the period. It was 6 per cent in 2002–03 and was 7 per cent in 2006–07.

Table 5.2 shows the HHI of retail sales by brand in Australia over the same period. The HHI of shares of sales volume by brand is substantially lower than the HHI of wholesale sales volumes. [30]

The HHI of shares of retail sales volume by brand in Australia has declined from 0.1872 in 2002–03 to 0.1738 in 2006–07. This indicates that shares of retail sales volume by brand have become less concentrated from 2002–03 to 2006–07.

The HHI of the share of retail sales of unleaded petrol volume by brand in 2006–07 of 0.1738 compares with the HHI of production of unleaded petrol of 0.2752, discussed in chapter 3, and

30 The HHI is the sum of the market shares of each individual firm. The HHI ranges from 0, which indicates a high number of firms with small market shares, to one, which reflects a monopoly.

the HHI of wholesale sales volumes of unleaded petrol of 0.2752, discussed in chapter 4. This indicates that the Australian retail market is significantly less concentrated than the refining sector and the wholesale market.

Table 5.2 HHI of share of sales volume by brand in Australia: 2002–03 to 2006–07

	2002–03	2003–04	2004–05	2005–06	2006–07
HHI	0.1872	0.1668	0.1737	0.1772	0.1738

Source: ACCC from data supplied under s. 95ZK of the Act.

5.3 Changes in the nature of petrol retailing

5.3.1 Site rationalisation

There are currently around 6500 retail sites in Australia. There has been continual rationalisation of retail sites in Australia over the past 30 years. In 1970 there were 20 000 sites, in 1980 there were 12 500 sites and in 2000 there were 8000 sites. Service station rationalisation has been a feature of most developed countries over recent decades.

While rationalisation of service stations has occurred for many reasons, changes in underlying supply and demand factors in the petroleum market have been important contributors.

On the **supply** side, lower operating costs have been achieved with the development of high volume service stations, the use of self-service technology, and the availability of complementary goods and services (such as the sale of convenience goods) with petrol. The entrance of large independent chains, convenience stores and, more lately, supermarkets into the market has provided greater competition.

At the same time, **demand** has changed for service stations. Motorists have different driving patterns because of the development of highways and major arterial roads to accommodate higher traffic volumes. Consumers desire longer shopping hours and more convenient arrangements for purchasing goods and services (such as the inclusion of ATMs at service stations). The small service station with one or two pumps is being replaced by more modern sites—generally located on major thoroughfares—with multiple pumps, a shop and other facilities.

There is likely to be further rationalisation in service station numbers as the industry continues to respond to the above forces.

5.3.2 Increasing importance of non-fuel competition

A number of industry participants indicated that, while the board price was an important component of the competitiveness of a retail site, there was an increasing focus on deriving revenue from non-fuel products and services.

Mobil submitted that competitive pressure on fuel margins has led retailers to focus on developing sites that are capable of delivering very high fuel throughput, as well as additional margin from non-fuel offerings such as convenience stores, car washes and repair facilities. Mobil noted that, while price competition on fuel is important, there is non-fuel price competition through factors like brand and product differentiation, site facilities, customer service, and site condition and appearance.[31]

31 Mobil submission, p. 7.

While Coles Express considered that price was the key competitive measure at the retail level, it also stressed the importance of non-price competition to differentiate its retail offer. In particular, Coles Express noted that it differentiated its fuel offer with the supply of Shell premium quality fuels, loyalty programs—such as fly buys and retail offers—and prime site locations.[32] Coles Express identified that other fuel retailers have different models, some co-locating with other businesses on their sites, such as fast food stores, mechanical services and car washes.[33]

Coles Express also noted that the proportion of revenue it sourced from convenience stores as compared with fuel had increased since the commencement of the alliance with Shell. In particular, Coles Express noted that at the start of its alliance, approximately 60 per cent of its revenue came from fuel and 40 per cent came from convenience stores. Coles Express stated that this balance was changing over time, and the proportion of revenue sourced from fuel sales and convenience stores was now closer to 50:50.[34]

Woolworths noted that petrol retailers have taken advantage of the location of their sites by driving non-fuel sales and that the majority of gross profit comes from the selling of products other than fuel.[35]

BP submitted that the proportion of shop revenue compared with petrol sales over the last five years has increased from 40:60 (shop, petrol respectively) to 50:50. BP noted that it had made significant investment in its company network to drive growth in both fuel and non-fuel categories and to differentiate BP from its competitors. BP considers that investment in the non-fuel side of the business can and does influence fuel sales performance.[36]

Caltex noted that its service stations were more convenience retailers than fuel retailers given that shop sales at its service stations on average account for 70 per cent of gross margins.[37]

5.3.3 Bundling with groceries—shopper dockets

The shopper docket schemes, first introduced in Australia by Woolworths in 1996, provide consumers with an incentive to link their purchases of groceries to a particular petrol retailer. Coles Express matched Woolworth's shopper docket scheme when it entered the market in July 2003.

The use of shopper dockets by motorists has increased significantly. The 2007 ANOP survey commissioned by the ACCC found that 77 per cent of motorists had used shopper dockets.[38] This compared with only 52 per cent of motorists in 2003. The survey also found that 49 per cent of those motorists that use shopper dockets claim to use dockets 'at least most of the time' they buy petrol.

Since February 2004, and as at 30 September 2007, more than 600 shopper docket notifications have been lodged with the ACCC covering over 1100 service stations. The majority of these notifications involve localised arrangements with independently owned major branded sites or independent fuel retailers. While these schemes initially focused on the two major supermarket chains, they have extended to include the Metcash/IGA group, Foodland group, Dimmeys department stores and the Servo Saver scheme.

32 Coles Group Limited submission, p. 5.
33 Coles Group Limited submission, p. 3.
34 ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 4.
35 Woolworths submission, pp. 5–6.
36 BP submission, p. 36.
37 Caltex submission, p. 50.
38 A summary of the 2007 ANOP survey commissioned by the ACCC is attached at appendix H.

The ACCC has also received a number of notifications involving fuel discount arrangements that are alternatives to the shopper docket schemes. For example, these arrangements may provide consumers with a discount on fuel when they use credit card or telecommunication services.

The ACCC considered the impact of the introduction of the shopper dockets on the retail market in its 2004 shopper docket report.[39] The impact of the shopper dockets on competition in the retail petroleum market is considered in detail in chapter 12 of this report.

39 ACCC, *Assessing shopper docket petrol discounts and acquisitions in the grocery and petrol sectors*, February 2004.

6 Regulation in the petrol industry

This chapter examines current regulations in the petrol industry. As noted in the summary, the petrol industry has been subject to significant degrees of regulation at various levels over the years.

Before 1 August 1998 the Australian Government regulated the wholesale prices of BP, Caltex, Mobil and Shell under the price notification provisions of the then *Prices Surveillance Act 1983*. This regulation is considered in more detail in chapter 14.

Currently, at the Commonwealth level, regulation is applied to specify standards for domestic fuel supply and to regulate the conduct of market participants at various levels of the supply chain. Some states also stipulate fuel standards and have introduced measures that are intended to improve price transparency at the retail and wholesale level and reduce price volatility. There are also taxes and subsidies that are applied at the Commonwealth or state level.

6.1 Fuel quality standards

Fuel quality standards are applied at both the Commonwealth and state levels.

6.1.1 Commonwealth fuel standards

In 2001 the Australian Government announced new fuel standards for Australia.[1] These were progressively introduced between January 2002 and January 2006. The standards included limits on the amount of olefins, methyl tertiary-butyl ether (MTBE), sulfur, aromatics and benzine in petrol. The fuel standards were largely based on the European 'Euro 3' specification. However, there was one significant exception: under the Euro 3 specification the amount of MTBE in petrol can be up to 15 per cent, whereas the Australian fuel standards allowed for only 1 per cent.

In July 2004 further changes to the fuel standards were announced with the amount of sulfur in premium unleaded petrol to be limited to 50 parts per million from 1 January 2008.[2]

Table 6.1 shows the changes in the fuel standards for Australian grade petrol over the last few years, as described in the Caltex submission to the inquiry.[3]

1 Senator the Hon. Robert Hill, Minister for the Environment and Heritage, *New fuel quality standards to put the brake on car pollution*, media release, 8 May 2001. Senator the Hon. Robert Hill, Minister for the Environment and Heritage, *Hill announces national fuel standards*, media release, 15 July 2001.

2 Senator the Hon. Ian Campbell, Minister for the Environment and Heritage, *Cleaner fuels: cleaner air and a healthier Australia*, media release, 22 July 2004.

3 Caltex submission, p. 28.

Table 6.1 Changes in Commonwealth fuel standards for Australian grade petrol: 2002 to 2009

Parameter	Grade	Units	2002	2004	2005	2006	2009
Sulfur	ULP/LRP	ppm	500		150		
	PULP	ppm	150		150		50
	SPULP	ppm					50
RON	ULP		91 RON max				
	PULP		95 RON min				
	LRP		96 RON min				
	SPULP				98 RON min		
Benzene		%				1.0	
Aromatics		%	45		42	42 max	
Olefins		%		18 max	18 max		
Distill FBP		°C	228 max		210 max		
Lead		g/l	0.005 max				
Oxygen		v/v%	2.7 max				
Phosphorous		g/l	0.0013 max				
Ethanol		%		10 max			
MTBE		%v		1.0 max			
DIPE		%v	1 max				
TBA		%v	0.5 max				

Notes: Grey areas designate possible specifications that have not yet been regulated
v/v% is percentage by volume.

Source: Caltex submission.

Comparison of Australian standards with Platts benchmarks

The Australian standards for petrol differ from the standard of petrol used in the Singapore benchmark price (based on the Platts reported price).

This is shown in table 6.2. It provides information from the Caltex submission which compares the gasoline specifications for the Platts benchmark price with the Australian specifications for Sydney and Brisbane.[4] It can be seen that the Australian gasoline specification has higher limits than the Platts benchmark price in a number of items, such as lead, benzene, MTBE and sulfur levels.

4 Caltex submission, p. 29.

Table 6.2 Comparison of Platts Singapore benchmark gasoline specification with the Caltex Australia gasoline specification for Sydney and Brisbane

Property (Sydney/Brisbane)	Platts FOB Singapore gasoline specifications	Caltex Australia gasoline specifications
Research Octane Number (RON)	Min 92, Min 95, Min 97	Min ULP 91
Motor Octane Number (MON)	None specified	Min ULP 81
Lead content, gpb/l	Max 0.013	Max 0.005
Density at 15°C, kg/l	Report	Report
Reid Vapour Pressure (PSI)	Max 10.0	Summer Max 9 NSW, 9.7 Qld
Distillation °C		
Initial Boiling Point	Report	Report
10% evaporated	Max 74	Max 60-65
50% evaporated	Max 127	Max 110-115
90% evaporated	Max 190	Max 180-183
Final Boiling point	Max 225	Max 210
Residue, % vol	Max 2.0	Max 2
Loss, % Vol	Max 2.0	
Odour	Marketable	Marketable
Existent gum, mg/100ml	Max 4.0	Max 5
Benzene content, % vol	Max 5.0	Max 1.0
Sulfur, %wt	Max 0.10	Max 0.015
Doctor test	Negative	Negative
Or Mercaptan sulphur, ppm	Max 15	Max 15
Mercaptan sulphur, %wt	Max 0.0015	Max 0.0015
Copper corrosion (3 hours at 50°C)	Max 1.0	Max 1
Ag Strip		Max 2
Induction period, minutes	Min 240	Min 360
MTBE content, % vol	Max 10.0	Max 1
Aromatics, % vol	Report	Max 42 over 6 month period
Colour undyed	Undyed, light yellow	ULP Purple
Alcohol	No additions of any alcohol	No additions of any alcohol
Driveability index	NA	ULP report

Source: Caltex submission.

6.1.2 State fuel standards

Some states had taken an individual approach to fuel standards and introduced their own fuel standards ahead of the Australian Government. These were: Western Australia (in January 2000), Queensland (in July 2000) and South Australia (in March 2001). Each state introduced differing standards, which restricted their ability to import fuel, both from overseas and from other states.

Since January 2006 the Australian Government standards have been generally similar to those in the states. The exception is Western Australia, which has even tighter limits than the national standards on the amount of MTBE permitted in petrol (only 0.1 per cent by volume). An implication of the tighter Western Australian standards is that a premium is added to the terminal gate price in Western Australia to reflect that fuel standards are higher there than elsewhere in Australia.

Most fuel parameters are regulated nationally under the *Fuel Quality Standards Act 2000*. However, there are some parameters—such as volatility, which is measured as Reid vapour pressure (RVP)—which continue to be regulated by the states and territories. All states except Tasmania have a RVP limit which typically is set by a regulation under the relevant state environment protection act. The 2005 *Report of the biofuels taskforce to the Prime Minister* noted that the Australian Government was in dialogue with the states on how to regulate fuel parameters, including RVP, that are not regulated nationally under the *Fuel Quality Standards Act 2000*.[5] The ACCC understands that work is continuing in this regard.

6.1.3 Implications of Australian fuel standards

The divergence between Australian and international fuel standards has had a number of effects on both prices and competition. These include increases in prices to reflect the higher quality of Australian fuel and, for independent importers, greater difficulties obtaining overseas refined petrol that meets the Australian specifications.

These effects are considered in greater detail in chapter 13.

6.2 Oilcode

The Oilcode came into effect on 1 March 2007 as a prescribed mandatory industry code of conduct under s. 51AD of the *Trade Practices Act 1974*. The Oilcode regulates the conduct of suppliers, distributors and retailers in the downstream petroleum retail industry. The ACCC is responsible for promoting compliance with the Oilcode and conducting enforcement action for breaches of the Oilcode where it is necessary.

The purpose of the Oilcode is to:

- improve transparency in wholesale pricing and provide better access to declared petroleum products at a published terminal gate price (TGP)
- assist industry participants to make informed decisions when entering, renewing or transferring a fuel reselling agreement through the disclosure of specific information
- improve the operating environment for all industry participants by providing access to a cost-effective and timely dispute resolution scheme as an alternative to litigation.

6.2.1 Terminal gate pricing

The Oilcode provides a nationally consistent approach to terminal gate pricing arrangements between wholesale suppliers and their customers.

A wholesale supplier under the Oilcode is a person who sells declared petroleum products such as unleaded petrol and diesel from a wholesale facility such as an oil refinery, a shipping facility, a facility connected by a product transfer pipeline to an oil refinery or shipping facility, or a facility connected by a pipeline to a shipping facility. A customer is simply a person engaged in the business of buying declared petroleum products from a wholesale supplier.

There are a number of requirements for terminal gate pricing under the Oilcode. Broadly, these include a requirement on wholesale suppliers to:

- make their TGP publicly available each day on a website

5 ***Report of the biofuels taskforce to the Prime Minister***, August 2005, p. 15; p. 147.

- provide transaction documentation at the time of delivery and within 30 days of delivery if necessary
- make their declared petroleum products available at the TGP except in a limited number of circumstances where it would be not unreasonable to refuse supply
- ensure that their customers are complying with applicable health and safety responsibilities.

6.2.2 Fuel reselling businesses

The Oilcode establishes minimum standards for parties involved in a fuel reselling business. This aims to help parties to make informed decisions when entering, renewing, extending, transferring and operating under a fuel reselling agreement.

Under the Oilcode, a fuel reselling agreement is between suppliers and retailers where the:

- supplier grants the retailer the right to conduct a fuel reselling business
- supplier is able to exert substantial control over that business
- fuel reselling business will be associated with a trademark, commercial symbol or advertising that is owned, used, licensed or specified by the supplier
- retailer is required to pay, or agree to pay, a fee before starting the fuel reselling business
- supplier reasonably believes that the amount of fuel that will be sold under the agreement will not be less than 30 000 litres per month.

If a commission agency meets these criteria, except the requirement to pay or agree to pay a fee, it would still be specifically identified as a fuel reselling agreement.

In relation to fuel reselling agreements, the Oilcode requires a supplier to:

- ensure the agreement has a minimum duration of five years except in certain circumstances (for example, where the upfront initial investment is less than $20 000)
- create and provide a disclosure document to a prospective retailer at least 14 days before the agreement is entered into
- make allowances for a specified cooling-off period at least seven days after entering into the agreement of paying any money under the agreement
- provide leasing documentation to the retailer
- not prohibit a retailer from associating with other retailers for a lawful purpose
- disclose materially relevant facts such as the finalisation of certain court proceedings and bankruptcy as the supplier becomes aware of them
- follow certain procedures where a renegotiation, variation or transfer of the fuel reselling agreement is sought
- follow certain procedures where it is sought to terminate the agreement because of a breach by the retailer or other special circumstances outlined in the Oilcode
- follow certain procedures before the expiry of the agreement or the parties agree to terminate it early.

6.2.3 Dispute resolution

The Oilcode provides for a dispute resolution scheme, the objective of which is to provide the industry with an effective and inexpensive way of resolving disputes. The scheme includes the appointment of the Dispute Resolution Adviser (DRA).

The scheme covers disputes:

- where a wholesale supplier fails to supply a declared petroleum product to a customer
- arising between parties to a fuel reselling agreement
- arising from any provision of the Oilcode covering TGP or fuel reselling agreements.

The Oilcode provides separate procedures for dealing with disputes about supply of products at a TGP and disputes unrelated to a failure to supply. This is because the Oilcode takes into consideration the potential for commercial damage that may flow as a consequence of a failure to supply declared petroleum products. Consequently the Oilcode provides for disputes about supply to be promptly dealt with by the DRA.

6.3 State government regulation to improve transparency and competition

Some state governments have introduced regulatory arrangements that are intended to improve transparency and competition at either the wholesale or retail level.

6.3.1 Western Australia[6]

FuelWatch

FuelWatch is a fuel monitoring service created by the Western Australian Government in January 2001 in response to the parliamentary select committee report *Getting a fair deal for Western Australian motorists*. This report investigated the then intra-daily price changes and the city–country price differential in 2000.

FuelWatch is administered by the Western Australian Department of Consumer and Employment Protection (DOCEP). Its legislative powers derive from the *Petroleum Products Pricing Act 1983*. This Act gives the government broad powers to provide price transparency and to set maximum prices at the wholesale and retail level.

FuelWatch undertakes daily monitoring of prices for petrol, diesel and automotive LPG within metropolitan Perth and 52 regional locations across Western Australia (representing approximately 80 per cent of retail outlets in the state). Western Australian motorists are able to access this information through both the FuelWatch website and phone service.

It is intended that FuelWatch will improve price transparency and knowledge of fuel prices in both the wholesale and retail sectors of the industry.

The key arrangement at the retail level is the so-called 24-hour rule (under the *Petroleum Products Pricing Regulations 2000)*. This rule legally requires retailers to give the Prices Commissioner notice by 2pm daily of the next day's retail price. The retailer changes prices at 6am daily and these must remain unchanged for the next 24 hours. In addition, country retailers are required to display their prices on price boards.

6 This summary is based on information contained in www.fuelwatch.com.au/about/dsp_fuelwatch_background.cfm and www.fuelwatch.com.au/about/dsp_fuelwatch_legal_info.cfm, accessed October 2007.

FuelWatch maintains that these arrangements have abolished intra-day fluctuations in Western Australia.

The prevalence and consequence of retail petrol price variability (both intra-day and intra-week) has been a key issue for this inquiry, including the extent to which measures to promote greater transparency on the demand side may address search costs associated with price variability. Consequently, the ACCC has taken particular interest in the FuelWatch scheme and its impact on both price cycles and price levels. These issues are explored in more detail in chapters 11 and 15.

Wholesale arrangements

At the wholesale level, there are two main requirements in Western Australia:

- Under the Petroleum Product Pricing (Maximum Terminal Gate Price) Order 2002, published by the Prices Commissioner, suppliers selling wholesale fuel from a terminal must set a wholesale price that complies with the formula-based TGP (which is based on an import parity pricing model).
- The so-called 50:50 rule under the *Petroleum Retailers Rights and Liabilities Act 1982*. This rule is intended to increase competition at the wholesale level. It gives retailers the right to buy up to 50 per cent of their fuel supplies from a supplier other than their primary contract supplier. In exchange, retailers have obligations to properly label the fuel and store it separately.

6.3.2 Victoria[7]

The Victorian Government has also legislated to increase transparency in the pricing of petrol and diesel in Victoria via the *Petroleum Products (Terminal Gate Pricing) Act 2000*. The aim of that Act is to increase the transparency of petrol and diesel pricing in Victoria and to provide access to product at terminals at competitive wholesale prices for all distributors and retailers.

The main elements of the Victorian arrangements are that:

- terminal gate prices must be based on a specified formula
- terminal gate prices must be publicly available and change no more than once in 24 hours
- prices specified for contractual purchases should be based on terminal gate prices
- there are no constraints on discounting from terminal gate prices.

6.3.3 South Australia

In South Australia the Petrol Products Regulation Act allows new retail petroleum licences to be withheld if the new licence holder would provide 'unfair and unreasonable competition' to sellers in the area immediately surrounding the proposed new outlet. The Petroleum Products Retail Outlets Board administers the licensing system.[8]

7 This summary is based on information obtained from www.consumer.vic.gov.au in Shopping Trading & Pricing/Fuel Pricing/Fuel and diesel pricing, accessed November 2007.

8 National Competition Council, *Assessment of governments' progress in implementing the National Competition Policy and related reforms: 2005*, p. 15.17.

6.3.4 Temperature correction arrangements

Fuel expands and contracts with changes in temperature. Temperature correction is the process of converting a volume of fuel at ambient temperature to a volume in litres that fuel would occupy if its temperature was 15 degrees Celsius. Temperature correction forms part of broader trade measurement regulation.[9]

Temperature correction regulation commenced in Australia with the introduction of the Trade Measurement (Fuel Measurement) Regulations 2002, which came into effect in Victoria from 1 December 2002. Other states and territories followed Victoria's lead in 2003 with very similar regulation. These regulations were introduced to improve certainty and transparency in the volume measurement of petrol and diesel.

The Oilcode which, as noted earlier, commenced on 1 March 2007, includes a provision that the TGP is the price for a wholesale sale of a declared petroleum product (such as unleaded petrol or diesel) worked out on a 15°C temperature-corrected basis and expressed in cents per litre. The Oilcode provides a nationally consistent approach to terminal gate pricing arrangements. This approach improves transparency in the wholesale pricing of declared petroleum products and allows customers to access these products at the TGP.

6.4 Taxation

Excise duty is payable on petrol and the level is currently capped at 38.143 cents per litre. It is levied on the domestic production of petrol and there is a corresponding customs duty which is levied on imported petrol. The rate of excise was frozen in 2001 at the current level, so in real terms the level of petrol excise is reducing over time.

In addition, the goods and services tax is charged at the standard rate of 10 per cent.[10]

6.5 State subsidies

Some state governments provide subsidies at the retail level that lower the final price of petrol to consumers. These are described in more detail below.

Two state government subsidy schemes were abolished during the last six months. The Tasmanian Government used to provide a subsidy of 1.95 cents per litre for petrol at the retail level. This ceased on 1 October 2007.[11]
Similarly, the Victorian Government used to provide a subsidy of 0.43 cents per litre at the wholesale level. This was abolished from 1 July 2007.[12]

9 This section is based on information on the Caltex website, 'Temperature correction', www.caltex.com.au/pricing_temp.asp, accessed November 2007.
10 The Senate petrol inquiry report (The Senate Standing Committee on Economics, *Petrol prices in Australia*, December 2006) examined the issue of taxation of petrol in chapter 6.
11 Tasmanian Government submission, p. 5.
12 Office of the Treasurer, *$178m in cuts for Victorian motorists*, media release, 27 April 2007.

6.5.1 Queensland

Under the Queensland fuel subsidy scheme—established under the *Fuel Subsidy Act 1997* (FSA)—a subsidy is payable to licensed fuel retailers on eligible fuel sold. The subsidy payable on each eligible retail sale is 8.4 cents per litre. Retailers must pass on 8.354 cents per litre of this amount by reducing the retail sale price of the fuel. The balance may be retained by retailers to offset against their subsidy administration costs. In August 2007 a Queensland Treasury Fuel Subsidy Task Force report concluded that a portion of this fuel subsidy may not be reaching retail customers.[13] The task force's finding lead to the establishment of the Fuel Subsidy Commission of Inquiry on 23 August 2007.

The commission of inquiry released its report on 21 November 2007. It found that, while under s. 16(1) of the FSA each fuel retailer was supposed to reduce the sale price by the amount of the subsidy, this had not happened. Instead the subsidy was being paid to all eligible retailers, without their showing the sale price charged was less, by the amount of the subsidy, than would have been charged if there were no subsidy. It concluded that the present system of paying subsidies should not be continued. Instead, the FSA should be amended, to incorporate provision for reference prices to be published as suggested in the inquiry report, or else the FSA should be repealed.[14]

With respect to the reference price, the Queensland inquiry report noted that the consulting economists who advised on the benchmark price system commented '… it is important not to underestimate the difficulty in establishing appropriate benchmark prices and the risk that the intervention of the scheme may impact adversely on competition in a number of ways …' [15] The ACCC shares these concerns and notes that in 1998 the Australian Government announced the deregulation of petrol prices because the arrangements were having an adverse effect on the retail petrol market.

6.5.2 New South Wales

The New South Wales Government provides a subsidy for petroleum products in five geographic zones within the state extending south from the Queensland–New South Wales border. The amount of the subsidy ranges from 1.67 cents per litre to 8.35 cents per litre, with the subsidy highest in zones closest to the Queensland border. In the rest of New South Wales, including Sydney, no subsidy is payable. The subsidy scheme is designed to ensure that New South Wales sellers of eligible petroleum products are able to compete fairly with Queensland petroleum re-sellers whose on-road fuel is subsidised by the Queensland Government.[16]

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13 Queensland Government, Office of State Revenue, *Report by the Commissioner of State Revenue to the Deputy Premier, Treasurer and Minister for Infrastructure, summary of findings of the Fuel Subsidy Task Force investigation of fuel retailers' compliance with their obligations under the Fuel Subsidy Act 1997 to pass on the benefit of the Queensland fuel subsidy to retail consumers of unleaded petrol*, August 2007, www.osr.qld.gov.au/forms_publications/fuel/info_bulletins/fuel_subsidy_report.pdf.

14 Queensland Fuel Subsidy Commission of Inquiry Report, part A, www.fuelsubsidycommission.qld.gov.au/documents/PagesfromJAG6417Reportfuelsubsidy_Web_PartA_000.pdf.

15 ibid., paragraph 252.

16 New South Wales Office of State Revenue, Petroleum products subsidy scheme—Northern New South Wales, fact sheet, March 2006 www.osr.nsw.gov.au/pls/portal/docs/page/downloads/other/petrolfacts.pdf.

6.5.3 South Australia

The South Australian Government pays a subsidy to two zones within the state ranging from 0.82 cents per litre to 3.3 cents per litre under the *Petroleum Products Regulation Act 1995*. The amount of subsidy paid varies according to distance from the Adelaide GPO. In the remainder of South Australia, including Adelaide, no subsidy is paid.[17]

6.5.4 Northern Territory

The Northern Territory Government provides a subsidy of 1.1 cents per litre for petrol under its Fuel Subsidy Scheme.[18]

17 www.revenuesa.sa.gov.au/ accessed November 2007.
18 www.nt.gov.au/ntt/revenue/fuel_subsidies.shtml, accessed November 2007.

7 Price determination and profitability—refining and importing

Petrol sold in Australia is either refined from crude oil in Australia or imported as a finished refined product from overseas refineries or blending operations. This chapter examines how the prices of both imported refined petrol and petrol refined in Australia from imported or domestically produced crude oil are determined. In this context, the ACCC also examines the current profitability and sustainability of refining operations in Australia.

As explained in chapter 3, both the oil majors and independent suppliers such as Trafigura, Gull and Neumann sell wholesale fuel sourced from local production and imports. The oil majors source the fuel they sell to the wholesale and/or retail sectors from three main sources—own refinery output, buy–sell arrangements with other refiners and imports. Independent suppliers source most of their fuel from domestic refiners with the remainder supplied by imports. The pricing of sales from refiners to independent wholesale suppliers is considered in chapter 8.

7.1 Refinery prices

Currently around 80 to 85 per cent of ULP sold in Australia is produced locally. Despite this, prices at all stages of the petrol supply chain are heavily influenced by the spot price at which petrol is traded in Singapore together with the landed costs of shipping that petrol to terminals in Australia. The Singapore spot price plus the costs of transporting and landing that fuel is known as the import parity price (IPP). In essence, IPP is the cost that would apply if the same product was bought at the nearest market and then transported to Australia and delivered into local storage facilities.[1]

Many inquiry participants submitted that as some imported petrol is necessary to meet Australian demand, domestically refined petrol must be, and is, priced by reference to IPP rather than by reference to the underlying costs of domestic refining.[2]

The principle of import parity pricing was used by the ACCC when petrol prices were regulated at the wholesale level to determine maximum wholesale petrol prices. Since deregulation in August 1998, the oil majors have continued to price petrol according to the IPP formula throughout the supply chain, whether it was produced locally or not. Although the details of the pricing formula used to derive refinery prices varies from party to party, the IPP-based formula for any petroleum product can generally be expressed as[3]:

IPP-based domestic refinery price = a benchmark refinery price (e.g. MOPS 95) + quality premium + shipping costs + wharfage + insurance and loss

It is useful to briefly describe each of the components of the IPP formula.

1 BP submission, p. 11.
2 Caltex submission, p. 2.
3 BP submission, p. 11.

7.1.1 Benchmark refinery price

The use of a price benchmark based on ULP spot sales in Singapore is a long-standing practice in Australia. Singapore is the most relevant market for the Australian petrol industry due to its liquidity and close proximity.[4] Singapore is also the most likely source of imported petrol into Australia and is the biggest refiner in the Asia-Pacific region.

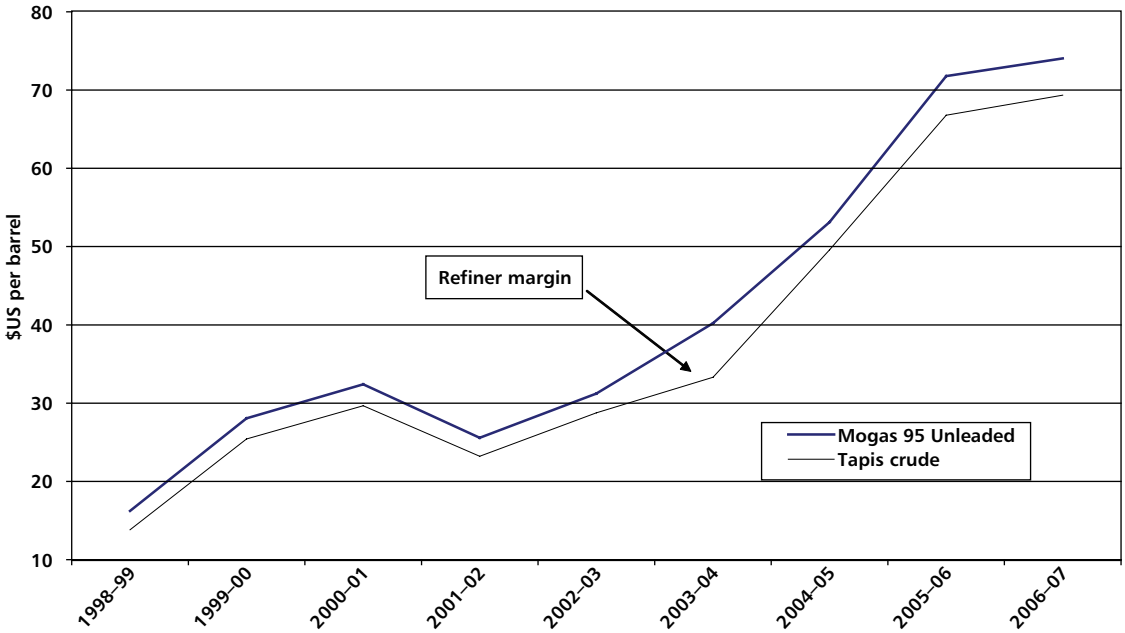
The benchmark used in the Australian IPP-based formula for ULP is the Platts quote for a particular specification of petrol, most commonly Mogas 95, although prices may also be quoted based on Mogas 92.[5] The benchmark price is known as MOPS 95 or 'Mean of Platts Singapore' for Mogas 95, or MOPS 92 for Mogas 92. This is the average daily spot price for petrol of the particular specification traded in Singapore. The Platts quote is a free-on-board (fob) price based on a trader making a 30 000 tonne cargo available to be lifted in a lifting window (a period of five days) by another trader out of Singapore.[6]

Because crude oil must be bought to produce refined petrol, the MOPS quotation is closely linked to international crude oil prices. This can be seen in chart 7.1, which shows average annual movements in benchmark prices of Mogas 95 and Tapis crude oil from 1998–99 to 2006–07.[7] The difference between the two lines represents therefiner margin or 'gasoline crack' (which in Australian refineries is a key component of the refiner margin derived by those refiners). This is discussed in more detail in section 7.3.2.1 of this chapter.

Throughout this report, this element of the IPP formula will be referred to as the Singapore benchmark price.

4 BP submission, p. 11.
5 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 12.
6 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 19.
7 The average annual figures have been derived from daily numbers to smooth out fluctuations.

Chart 7.1 Average Mogas 95 unleaded and Tapis crude oil prices: 1998–99 to 2006–07, $US per barrel



Source: ACCC and Platts

Chart 7.1 shows that both Mogas 95 and Tapis crude oil prices have increased rapidly since 2001–02. Since 1998–99, the price of Tapis crude oil has increased by 474 per cent, or at an average annual growth rate of 19.6 per cent. During the same period, the price of Mogas 95 has increased by just over 400 per cent at an average annual growth rate of 18.4 per cent.

7.1.2 Quality premium

Australian fuel specifications do not exactly match the Platts specifications.[8] In relation to the Platts specification, Australian gasoline has tighter quality specifications for summer RVP, distillation, benzene, MTBE, sulphur, induction, Ag strip and PULP and SPULP driveability index (see chapter 6). The tighter specifications generally mean it is more expensive to refine and/or buy Australian grade petrol relative to the Singapore benchmark price.[9] Consequently, an adjustment is made to the Singapore benchmark price by Australian refiners ostensibly to better reflect the cost and value of petrol refined to the Australian specifications standard. The value of this adjustment is known as the 'quality premium'. The key Australian specifications that contribute to the quality premium are the lower MTBE and the lower benzene levels. These specifications add around $US1.50 to $US2.50 per barrel to the Singapore benchmark price.[10] On a cents per litre basis, the total premium adds around 3 cpl to the Singapore

8 BP submission, p. 13.
9 According to the Australian Institute of Petroleum, the introduction of fuel standards has required domestic refineries to make investments, and therefore impose additional costs, to comply with the new standards. The Australia Institute of Petroleum estimates that the total investment required by the industry to implement the Australian Government's cleaner fuels program will exceed $2.0 billion. AIP, Downstream Petroleum, 2005, p. 3.
10 ACCC, public hearing transcript, Melbourne 13 September 2007, p. 27.

benchmark price.[11] The actual amount of the quality premium is determined by negotiation between the buyer and seller.[12]

The quality premium can also vary from state to state if a particular state has tighter specifications than the Australian standard. For instance, an additional quality premium applies in SA, WA and Queensland. A higher quality premium also applies in NSW in the summer months (November to March) to meet state-specific RVP requirements. In these cases, local prices would reflect the variations in quality premiums.

Some refiners prefer to use Mogas 92 as the applicable Singapore benchmark. In this circumstance, the quality premium added to the benchmark is around $US4 to $US4.50 per barrel or 4 to 4.5 cents per litre on current exchange rates. [13] The use of Mogas 92 rather than Mogas 95 as the benchmark simply results in a larger premium rather than a change in absolute price to reflect the further gap differential between Mogas 92 quality and the Australian standard. [14]

7.1.3 Freight costs

As the Platts quote is fob, freight costs are added to the Singapore benchmark price by Australian refiners to give a landed price. In the refiners' IPP-based formula, freight costs are set with reference to a benchmark shipping rate (the Worldscale rate) for the journey from Singapore to the relevant discharge port. Worldscale quotes are usually based on a standard ship size and contractual conditions for a specified voyage. To adjust for different ship sizes a system of 'points of Worldscale' is used. This enables a freight calculation to be adjusted for the particular journey. Until recently the refiners used the points of Worldscale for the Singapore to Japan voyage for a 30 000 tonne vessel. This year, several of the refiners started using points of Worldscale for the Singapore to Australia journey on the basis that there were now enough trades in that quote for it to provide a reliable price.[15]

Freight costs are variable and change from day to day. Caltex provided evidence of monthly average shipping rates for the period January 2006 to June 2007. During that period the average shipping rate varied from a low of 2.56 acpl in April 2006 to a high of 5.21 acpl in January 2006.[16]

In addition, the refiners' IPP-based pricing formula includes wharfage rates that are set by the relevant port authority and are also subject to change. Caltex provided evidence indicating that the dollar value of the wharfage charge on a per kilolitre basis currently varies considerably, ranging from $0.30/kL at Clyde to $4.44 at Port Lincoln.[17]

Given the variability of freight and wharfage costs, total freight costs can and do vary from location to location. These variations would generally be reflected in local prices.

7.1.4 Insurance and loss

An allowance for insurance and loss is also included in the refiners' IPP-based pricing formula. This is usually expressed as a small percentage, generally less than half a percentage point, of the benchmark price plus freight.

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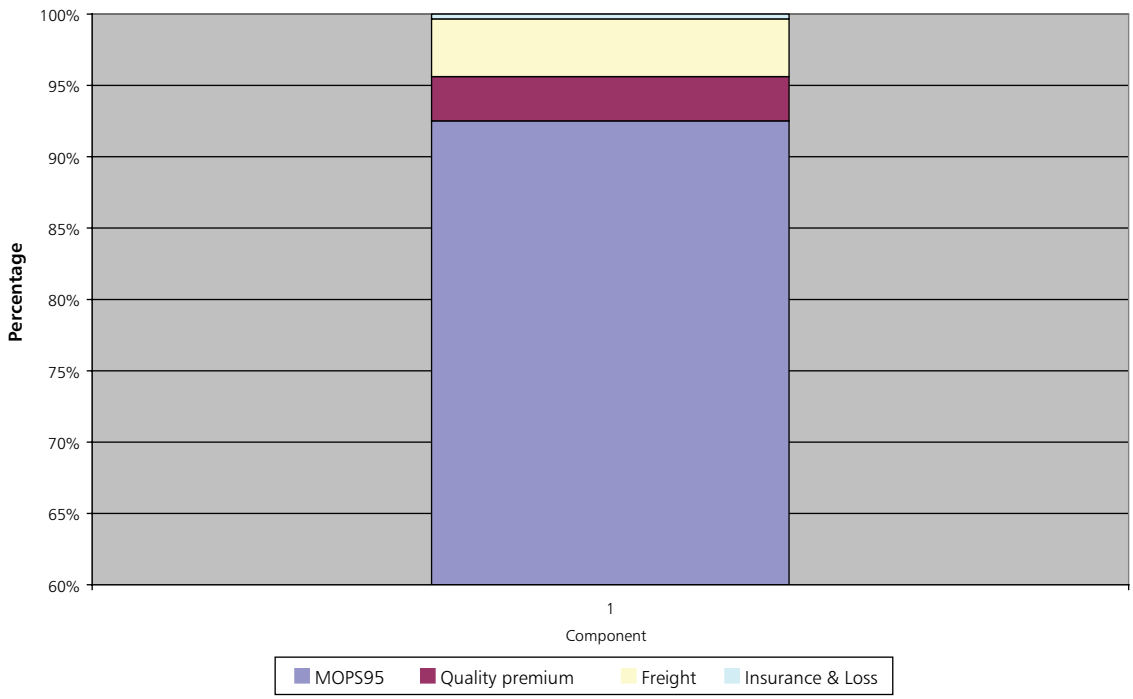
11 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 34.
12 Mobil Oil Australia, non-confidential response to notice under s. 95ZK of the Act, p. 6.
13 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 34.
14 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 55.
15 ACCC, public hearing transcript, Melbourne 13 September 2007, p. 56.
16 Caltex submission p. 32.
17 Caltex submission, p. 31.

7.1.5 Contribution to refinery prices

Chart 7.2 shows an estimate of the average contribution of each of the above components of the IPP-based pricing formula to the domestic refinery price. The chart was derived by the ACCC using data provided by the oil majors. It shows that the Singapore benchmark price makes the greatest contribution to the domestic refinery price at any point in time, representing around 92 per cent of that price. The quality premium contributes around 3 per cent or around 3 cpl on current exchange rates. Although shipping costs vary according to the distance from Singapore to the destination port, an indicative contribution for freight costs is around 4 per cent or 3 cpl. Finally wharfage, insurance and loss each contribute around 0.25 per cent to the refinery price or around 0.2 cpl.

Chart 7.2 Percentage contributions of formula components to refinery prices



Note: The Y-axis starts at 60 per cent to improve readability.

Source: ACCC estimate.

7.1.6 Changes in refinery prices over time

As the Singapore benchmark price is the key element of the IPP-based pricing formula, other things being constant, domestic prices based on that formula largely follow movements in the Singapore benchmark price.

However, as the Singapore benchmark price is expressed in US dollars per barrel, the exchange rate also affects domestic petrol prices (expressed in Australian dollars) that are based on the formula even if the values of other components are unchanged. More generally, the value of the Australian dollar can

insulate domestic prices from overseas price movements. Indeed, as was generally accepted by most participants at the inquiry, the recent strength of the Australian dollar has shielded domestic prices from currently high international crude oil and product prices.

The quality premium applied to the Singapore benchmark price may also change over time and influence prices at the bowser. As fuel specifications progressively tightened at Commonwealth and state level, domestic refiners have claimed that it has necessitated a rise in the quality premium that is applied to the Singapore benchmark price. Evidence provided to the inquiry confirms that the quality premium has risen over the past five years by around $US2–3/bbl.

Freight movements are also variable and have increased over the past five years. It would appear that the Worldscale Flat Rate for the Singapore-Melbourne route has increased by nearly 55 per cent since January 2003. Similarly, spot freight for Singapore–Melbourne has increased by around 67 per cent since 2003. Given the mechanics of the pricing formula, these movements would be reflected in domestic refinery prices, although as noted above, freight is a relatively small part of the price of petrol determined by the IPP-based pricing formula.

7.2 Impact of IPP-based formula pricing

The use of an IPP-based formula to set domestic refinery prices has important implications for petrol pricing throughout the supply chain, including the price that motorists/consumers ultimately pay at the pump.

This is because the IPP-based pricing formula is based on domestic refinery prices in what are known as buy–sell arrangements entered into between the oil majors. Buy–sell arrangements are an important feature of petrol pricing and are considered in several places throughout this report, for example:

- the structural aspects of buy–sell arrangements are considered in chapter 3
- the effect of buy–sell prices on wholesale prices is considered in chapter 8
- the effect of buy–sell arrangements on competition is considered in chapter 13
- the pricing aspects of buy–sell arrangements are considered below.

7.2.1 Australian refinery prices, buy–sell arrangements

Most of the fuel supplied to Australian markets is refined at domestic refineries operated by the four oil majors. The location and capacity of those refineries was discussed in chapter 3.

As is evident from that chapter, none of the oil majors operate refineries in every state. However, all of them supply fuel nationwide at the wholesale and/or retail level. Therefore to supply non-home refinery states, the oil majors must: transport own-refined fuel interstate; obtain fuel from overseas refiners; and/or obtain fuel from rival refiner/marketers who operate a refinery in that state.

Each of the oil majors obtains fuel from the three sources to varying degrees.[18] However, much of the product refined by Australian refiners is supplied to the market through term contracts with competitor major oil companies.[19] These buy–sell arrangements are entered into on a bilateral basis by each of the oil majors with one another. Each bilateral arrangement tends to be for six or 12 months.

18 ACCC, public hearing transcript, Melbourne 5 September 2007, p. 8; Mobil submission p. 4; Shell submission, pp. 2–3 and Caltex submission p. 19.
19 BP submission, p. 15.

The price at which each refiner buys petrol under the buy–sell arrangements is significant for petrol pricing in Australia as it essentially forms a floor for the setting of wholesale prices by that buying refiner. This is because it then necessarily forms the basis of:

- wholesale sales by that refiner to resellers in negotiated pricing outcomes
- terminal gate prices (TGP) which are offered in compliance with the Trade Practices Act and for the pricing of spot transactions in the wholesale market.

Both of these aspects of wholesale pricing are considered in more detail in chapter 8. A discussion of buy–sell prices is in the following section.

Buy–sell prices

Each of the refiners supplied copies of their buy–sell contracts for the past five years to this inquiry on a confidential basis. However, broad comments can be made about buy–sell arrangements without canvassing the terms of particular bilateral arrangements. Moreover, the broad components of such arrangements have been discussed by all the oil majors at public hearings.

Generally speaking, the terms and conditions of each of these contracts are similar and have not changed substantially over time.

Although there are subtle differences between agreements, the prices in buy–sell contracts are based on the refiners' IPP-based pricing formula described above.[20] Therefore buy–sell prices can, and do, vary from location to location according to differences in freight and quality specifications.

Buy–sell price = Singapore benchmark price + quality premium + freight + wharfage + insurance and loss

In most cases, fuel is supplied into the buyer's terminal by ship or pipeline. The buyer is therefore responsible for the costs and operation of the terminal.[21]

The Platts benchmark that underlies the buy–sell price is generally MOPS 95.[22] However, Shell prefers to negotiate buy–sell contracts on the basis of MOPS 92 because it considers it to be a more liquid market. Nevertheless, as noted above the choice of benchmark does not ultimately affect the price as the associated quality premium is adjusted to reflect the variable benchmark.[23]

The amount of the quality premium is specified in the buy–sell agreement. This amount is subject to negotiation and may be revised during contract renegotiation. As discussed in chapter 13, the ACCC considers that the costs of alternative sources of supply places some constraint on the negotiated premium. However, there is often an opportunity for sellers to extract an additional premium in excess of the cost of supply.

The freight component of the buy–sell price is calculated in the same way as described above for the refiners' IPP-based pricing formula. The insurance and loss component of the buy–sell price is determined by negotiation between the buy–sell partners.

20 BP submission, p. 16; Caltex submission, p. 2; and Mobil submission p. 4.
21 Shell submission p. 3.
22 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 53.
23 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 55.

Buy–sell prices are generally confidential between the parties. However, table 7.1 shows the components of an indicative buy–sell price for ULP for Brisbane in the second half of 2006. It indicates that the MOPS quotation accounts for over 90 per cent of the buy–sell price. An indicative level for the quality premium is three per cent. Freight represents around four per cent while wharfage, insurance and loss are minor components with a combined contribution of around half a percent.

Table 7.1 Indicative buy–sell price, ULP, Brisbane: July to December 2006

Component of buy–sell price	USD/bbl	cpl	%
MOPS 95	85	72.24	92.5
Quality Premium	2.75	2.34	2.99
Freight	3.77	3.20	4.10
Wharfage	0.21	0.18	0.23
Insurance & Loss	0.19	0.16	0.21
Total	91.92	78.13	100

Note: Figures in final column may not add to 100 due to rounding
Source: Caltex submission, p. 22 and ACCC calculations.

The key implication of buy–sell price determination is that buy–sell prices are based on the notional costs of imported equivalent product rather than the actual costs of domestic refining.[24] Domestic refiners do not pay the Singapore benchmark price or incur costs associated with the quality premium, ocean freight charges or insurance and loss costs in producing domestically refined petrol.

Nevertheless, the refiners submitted that buy–sell prices must be closely linked to import prices as refiners are competing with imported product. The point of the argument was that, unless a refiner could achieve the import price in Australian markets, it would have little incentive to produce. Similarly, a buyer would be unwilling to pay more for local product than the cost of equivalent imports. These arguments assume, however, that imports are both a true alternative source of supply of Australian grade petrol, and would be readily available should a local refiner attempt to raise prices substantially above import parity. If this is the case, imports prices would place a constraint on domestic refinery prices.

Given the pre-eminence of the buy–sell price, it has been an important issue for this inquiry to understand whether buy–sell prices and the formula on which they are based are appropriate and consistent with notions of workable competition. If not, then there would be cause for concern that domestic petrol prices are higher than they would be in a more competitive environment. There are, in particular, issues whether the IPP formula should reflect the cost of imported fuel to the refineries themselves, and whether that would be case if competition between refiners was fully effective. These issues are explored in the context of the performance of the domestic refiners and also the potential impediments to competition in the supply of petrol at the refining level. The former aspect is considered below while the latter is taken up in chapter 13.

24 ACCC, public hearing transcript, Melbourne 13 September 2007, p. 74.

7.3 Profitability of domestic refining

The ACCC considered it is important to assess the impact of the refining price formula approach on the rate of return from refining operations. In this section, the evidence concerning production costs, margins and accounting profit indicators is presented and discussed.

7.3.1 Costs of production

As noted above, neither the price of imported nor locally refined petrol is directly related to the costs of production, but is rather based on benchmark overseas prices with various actual or notional add-ons reflecting quality premiums, freight, insurance and loss. Nevertheless, actual domestic costs are relevant to a consideration of refining profitability as these will need to be recovered through sales of refined product. This section examines the evidence that has been presented to this inquiry in relation to domestic refining costs of production.

Crude oil

Crude oil is the major input cost into petrol refining. Around 60 per cent of crude oil used in Australian refineries is imported.

Crude oil is an internationally traded commodity. Its price determination is conceptually similar to that of petroleum products. In particular, buys and sales of crude oil are generally based on a formula that includes a price marker and a quality differential that is added to this base. A premium or discount to the base price may be added (or subtracted as the case may be) to reflect current market conditions.

The crude oil marker in Australia is Tapis crude oil (a light, sweet crude produced in Malaysia). The Platts Tapis price quote is the representative regional crude oil price marker and is based on the average of prices for cargoes loading 15 to 45 days in the future.[25]

Chart 7.1 above shows movements in Tapis crude oil prices since 1998–99. To reiterate, prices of crude oil have risen significantly over the past decade. The domestic refiners have told the inquiry about their expectations for the future of crude oil prices.

Other production costs

Each of the refiners provided the ACCC with information concerning the underlying costs of production at their Australian refineries. Some of this information was provided on a confidential basis.

The ACCC does not intend to publish the detailed costs of production of particular refineries or refiners. However, the following general points can be made:

- Firstly, in analysing production costs, it is important to understand that ULP is one product in a suite of products produced by refineries. Just as the refiner margin is calculated by reference to the entire suite of products, so too, refiners generally identify and calculate costs of production across the entire refining operation and prefer not to isolate costs referrable to discrete products (e.g. ULP). Moreover, caution must be exercised in attributing costs to particular products that may apply across all products (e.g. ULP)—for example, by simply allocating on the basis of the percentage attributable to the particular product as a proportion of overall refining output. This is because some products are more complex to produce and the costs associated with production higher.

25 This discussion is based on the Australian Institute of Petroleum's submission to Senate Petrol Price Inquiry, August 2006, pp. 2–6.

- Having said that, it is clear that costs of production have broadly increased across all refineries in the last five years, partly because of costs associated with complying with Australian fuel standards. In 2003 production costs broadly ranged around US$2–3bbl. By contrast, 2007 production costs are closer to $US4–5.50 bbl.
- Domestic refineries are small in scale and less efficient than refineries in the Asia-Pacific region, particularly the large modern refineries in Singapore. The consequence is that domestic refineries have higher costs of production than other regional refiners.
- The inquiry has heard that domestic input costs, particularly labour and environmental compliance costs, are also higher than overseas. As a consequence of relatively high input costs, domestic production costs may currently be up to 20 per cent higher than the average in the Asia-Pacific region and 50 per cent higher than many refiners in the Singapore region.
- These cost disadvantages are likely to increase as even larger overseas refiners start production over the next few years. Indeed, it appears from the evidence that overseas refiners may enjoy a considerable cost advantage relative to domestic refineries.
- In summary, Australian refineries are more costly to operate than competitor refineries in the Asia-Pacific region, particularly Singapore.

7.3.2 Measures of profitability

Profitability in the refining sector is generally measured across a range of indicators. These are referred to below.

Some care is needed when discussing profit indicators to ensure that each one is carefully defined and its derivation understood. During the inquiry it became evident that there is sometimes a slight variation in the way that companies define and measure some of these indicators. As discussed above, the industry does not routinely assess the profitability of a refinery on a product-by-product basis, but rather use a whole-of-refinery approach. Although the industry has assisted this inquiry by providing estimates of profitability indicators on a product basis, the ACCC acknowledges that interpretation of these must be treated with particular care.

The key indicators of refining profitability used by the refining industry are:

- the refiner margin (i.e. the gross refining margin represented by the difference between the price of each of the suite of products produced by the refinery and the cost of crude)
- gasoline crack, which for Australian refineries, is a key component of the refiner margin
- refinery utilisation rates
- net refiner margins
- return on capital employed (ROCE)
- earnings before interest and tax (EBIT)
- net income.

Considerable time was spent during the inquiry questioning the refiners about the profitability of domestic refining. Each of the refiners was asked to provide the ACCC with figures for the past few years showing:

- actual refining margins (gross and net of operating costs)
- earnings before interest and tax
- return on capital employed
- net income.

Information on the gasoline crack is collected by the ACCC as part of its monitoring role.

Each of the refiners has provided the inquiry with evidence concerning the profitability of their refining business. This is discussed below at a general level to protect the confidential nature of the some of the information.

Refiner margins

The refiner margin is a gross margin and, as such, not a measure of profit because it does not take account of operating costs other than crude oil input costs. However, as recognised within the petroleum industry, it can be a useful indicator of profitability and is frequently referred to in this context.

From evidence provided to the inquiry at public hearings, it is the ACCC's view that refiners have enjoyed high actual gross refiner margins in recent times. Although it varies from refinery to refinery, refiner margins have been generally increasing and in recent months have been as high as $US10 per barrel.

Gasoline crack

In Australia, a key component of the refiner margin is the 'gasoline crack'. Properly defined, the gasoline crack is the difference between the price of gasoline and the price of crude oil. To avoid confusion with the other indicator that the industry often calls 'gross margin', the ACCC will use the term 'gasoline crack' in this way.

As discussed, the relevant crude oil marker in Australia is Malaysian Tapis crude oil. The benchmark Australian price for petrol is MOPS 95.

The relevant gasoline crack is therefore the MOPS 95 price quote less the Platts Tapis price quote.

Chart 7.1 graphs the MOPS 95 price quote, the Platts Tapis price quote and the consequent gasoline crack on a fiscal year basis from July 1998 to June 2007. The average gasoline crack from 1998–99 to 2006-07 was around $US3.60 per barrel. In 2006–07 the average gasoline crack was higher than the long-term average at around $US4.70/bbl, which at an USD:AUD exchange rate of 0.8 translates to around 3.7 cpl. However, in the three months to September 2007, the gasoline crack has more than halved

There can be considerable volatility in the gasoline crack from year to year. For instance, the highest average annual gasoline crack, around $US7 per barrel, was in 2003-04, close to treble the preceding year's average. However, in 2004–05, the average was just over half of the preceding year's peak.

Average weekly movements of Mogas 95 and Tapis crude oil prices on an Australian cpl basis from 4 January 2007 to 27 September 2007 are shown in chart 7.3. Again, the difference between the two lines is the corresponding gasoline crack expressed in cpl. The chart indicates that the volatility in the gasoline crack, evident from average annual data, is exacerbated on a weekly basis.

Fluctuations may be caused by short-term supply constraints such as the effect of Hurricane Katrina. There are also seasonal variations in demand for crude oil and refined product. For instance, the demand for crude oil rises in the Northern winter for heating purposes whereas in the Northern summer the demand for refined petrol for driving tends to rise. As the price of crude oil and the price of refined product are determined in separate global markets by different demand and supply factors, it is to be expected that the gap between the two product prices would fluctuate

Chart 7.3 also graphically shows the recent fall of the gasoline crack from its record highs set earlier in the year. This has been caused by the continued rise in the benchmark price of crude oil coupled with a decline in the benchmark price of refined petrol.

The refiners provided their views on how the gasoline crack may move in the future based on their expectations for the benchmark prices of refined petrol and crude oil. For example, Caltex presented a graph which showed its regional demand and supply expectations for refined petrol to 2010. The graph was prepared in February 2007 and shows that regional demand growth for refined petrol remained solid at that time. However, costs and scarce resources had caused some refining projects to be delayed, deferred or cancelled. Caltex told the inquiry that since February 2007, demand for refined petrol has increased in line with Caltex's expectations; however some commentators have increased their global demand forecasts for refined petrol for 2007. On the supply side, costs and skill shortages continue to impede new refinery projects. Caltex cited two refinery projects, with combined capacity of 1 095 000 barrels per day, that have been deferred or delayed. On this basis, Caltex expected that overall supply and demand balance for refined product will remain tight through to 2010.[26] Other things being constant, prices of refined petrol are unlikely to fall substantially over that time.

As noted above, the price of crude oil has also been a key driver of recent reductions in the gasoline crack and will continue to influence its future direction. The inquiry has been told that the current high price of crude oil was not anticipated by many industry participants and largely reflects the geopolitical influences in the region rather than the underlying supply and demand for crude oil. Until those geopolitical considerations are resolved, the price of crude oil is likely to contain a speculative component that makes predicting its future level problematic.

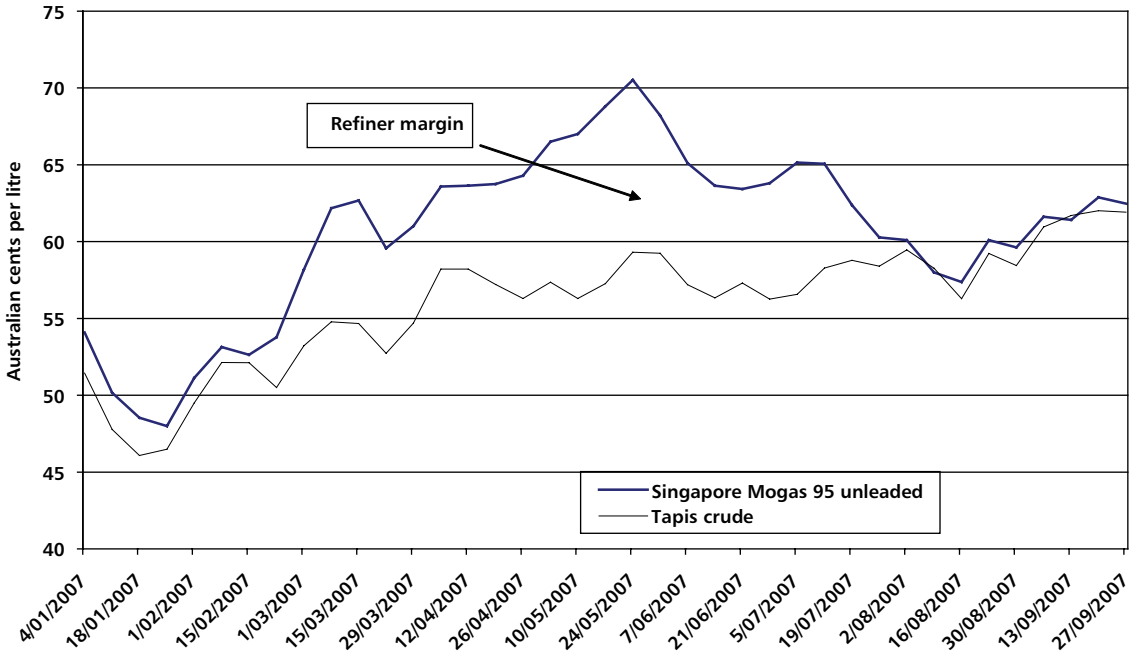
It nevertheless appears that the demand for petroleum products in Asia is also contributing to rises in crude oil prices.[27] These demand influences are unlikely to diminish in the near term.

On the basis of the refiners' views, the ACCC considers there is uncertainty regarding future movements in prices of refined petrol and crude oil over the next few years. This makes it difficult to predict how the gasoline crack will move over that time. There does appear to be general agreement among domestic refiners that there will be some weakening in the gasoline crack that is likely to continue for the next few years. However, the industry does not expect that the gasoline crack will fall to previous lows in the foreseeable future.

In summary, the IPP-based pricing policy, combined with high regional petrol prices and solid demand for refined petrol in the Asia-Pacific region in the last 2–3 years, have led to high margins for refiners. During 2007 refiner margins have reached $US10/bbl at some domestic refineries. These high refiner margins have been underpinned by the levy reflected in the quality premium charged by local refiners. Consistent with high refiner margins, the gasoline crack at Australian refineries has been high. Indeed, it would appear to have reached record levels in the last 12 months.

26 Caltex submission, p. 17.
27 ibid.

Chart 7.3 Average weekly Mogas 95 unleaded and Tapis crude oil prices: weeks ending 4 January 2007 to 27 September 2007



Source: ACCC and Platts

Refinery utilisation rates

A refinery's utilisation rate is an important indicator of refinery performance and therefore profitability. It refers to the actual amount of production relative to the refinery's theoretical or 'nameplate' production. There is a positive relationship between utilisation and actual refiner margins; that is, the higher the refiner margin, all things being equal, the higher the utilisation rate is likely to be.

Each of the refiners has provided information about refinery utilisation rates to the ACCC during the inquiry. While specific information was said to be confidential, there are a number of general comments that can be made:

- Although there has been a reduction in theoretical capacity, Australian refineries are generally operating at high rates of utilisation and close to optimum levels. Utilisation rates have increased over recent years as refiners focus on improving refinery efficiency.
- The future use of domestic refineries may, to some degree, be influenced by the net effect of supply and demand influences in the region. For instance, if regional capacity expands ahead of expected increases in demand, capacity utilisation may be expected to fall somewhat. However, as regional demand increases, capacity utilisation may increase.
- From the evidence available to the ACCC at the inquiry, it is the ACCC's view that domestic refinery utilisation rates may fall somewhat over the next few years as supply of refined petrol exceeds demand growth in the region. This is discussed further below. Thereafter, utilisation rates may well recover as increased demand in the region, particularly from China, absorbs the additional refining capacity.

Net refiner margins

The net refining margin takes account of operating costs and is a better guide than the gross refiner margin of the extent to which refiners are able to cover costs through pricing. As with gross refining margins, net refining margins fluctuate from period to period and differ across refineries. Net margins have at times been low, approaching zero or negative in recent years. Nevertheless, domestic refiners' net refining margins are, on average, currently high compared with previous years.

Refiner margins tend to be cyclical. For example, BP submitted that there have been long periods in recent years when refineries have been unprofitable or marginally profitable.[28] The inquiry has heard evidence from a number of parties to the effect that refiner margins (both gross and net) are likely to fall from their current high levels. [29] In this regard, expanding refining capacity in the region may suppress domestic refiner margins in the future.[30]

Other profit indicators

All the oil majors provided information to the inquiry concerning return on capital employed (ROCE), earnings before interest and tax (EBIT) and net income. For present purposes, the ACCC does not believe it is necessary to publish a figure specific to particular refineries or refiners; however, a number of general points can be made:

- Australian refineries are generally profitable at the present time (based on EBITDA and net income figures). However, there were periods over the past five years when this has not been the case for all refineries.
- Several refiners are currently experiencing high returns on ROCE. As with refiner margins, however, ROCE is subject to fluctuations and has been lower than current levels at times over the past few years. The ACCC accepts that care must be exercised when interpreting ROCE figures as they are heavily influenced by the valuation of the underlying asset base and the extent to which assets have been depreciated, or written down. In that regard, as some refineries are operating relatively old assets, the book value of those assets is also relatively low. This has the effect of raising the ROCE. The ROCE is also affected by the amount of investment. In other words, ROCE may be significantly affected by the extent of capital and operating expenditure undertaken at a particular refinery. A refinery may achieve healthy ROCE in a particular period by deferring necessary capital expenditure into subsequent periods.

7.3.3 Conclusions on current profitability

The ACCC considers that:

- Australian refiners are currently profitable in an accounting sense and indeed are more profitable than they have been for some time.
- In particular, gross refiner margins are:
    - higher than they have been for some years
    - likely to remain steady for the immediate future
- Tightening of the gasoline crack has occurred in the last three months and further tightening may accompany increasing crude oil prices over the coming months.
- Net refining margins are currently also high relative to previous years for most refineries.

28 BP submission, p. 17.
29 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 21; and BP submission, p. 17.
30 ACCC, public hearing transcript, Canberra, 21 August 2007, p. 45.

- Utilisation rates at domestic refineries have improved and short-term returns on capital employed are generally stronger than they have been for some years.
- While ROCE need to be treated cautiously with regard to capital and operating expenditures incurred, all refineries are currently experiencing healthy returns on capital employed.

Overall, it is reasonable to conclude that refineries are profitable and have been for some time. This is despite the fact that domestic refinery costs are higher than the operating costs of large overseas refineries with whom they compete. For example, Caltex, a publicly listed company, agreed that its profits are at record highs. For the first half of the year, Caltex's published profit was 2.6 cents a litre on average across all its products with just over half coming from the refining section of its business.[31] Other refineries were also reported to be profitable at present.

However, some refiners noted the importance of assessing profitability by reference to the additional investments and costs that are currently being incurred as a result of changes to fuel standards. The point was also made that Australian refiners are geared for paying a premium, which is likely to increase over time, for very light sweet crude that is becoming increasingly difficult to source. As it is not economically viable to invest in refineries taking heavier crude, this is likely to affect profitability in future.

Considering all the matters referred to in the above discussion, the ACCC concludes that the IPP-based pricing formula used by domestic refiners is currently working in their favour and enabling them to operate profitably. However, while refiners are presently earning an accounting profit, with declining local crude oil supplies and increasing competition in the region, profitability into the future is less certain. This issue is explored in more detail in the next two sections.

7.4 Competitiveness of Australian refineries and the location advantage

As discussed above, the ACCC has heard evidence that actual domestic refining costs are higher in Australia than in overseas refineries because of relatively smaller scale as well as higher labour and compliance costs. Costs may rise further as new Australian fuel standards are introduced, which may necessitate the need for investments to ensure compliance with those standards. Similarly, crude oil input costs may continue to rise.

Despite this, domestic refiners are currently able to operate profitably. The fact that Australian refiners are generally operating at higher cost than their regional counterparts raises the question of how domestic refiners are able to compete against imported products produced by more efficient international rivals.

In the ACCC's view, based on the evidence before the inquiry, a key reason that domestic refineries can remain competitive with other refiners in the Asia-Pacific region is because they enjoy certain advantages:

- There is a freight differential between the cost of importing a litre of crude oil and the cost of importing a litre of Australian grade refined product. This differential arises because crude oil is imported in larger (up to 200 000 tonnes), 'dirtier' ships than refined product (up to 45 000 tonnes) so that the average per litre freight cost is lower. The freight differential is currently in the order of $US2.75 per barrel. Compared to importers of refined product, Australian refiners do not have to bear the entire freight burden.

31 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 20.

- The quality premium charged by Australian refiners on all fuel sold (explained above). The quality premium component of the location advantage is currently around $US0.50 to $US1.00/bbl. Australian refiners are able to charge their domestic customers a quality premium that is not limited to the cost of producing or importing Australian standard fuel.
- The ability of Australian refiners to set domestic wholesale prices at or above an IPP price reflecting the cost of imported fuel to the refiners.

The first two factors alone indicate that the advantage is currently no less than the range of $US3 to $US4/bbl. In evidence, these two factors were described as a 'location advantage'.

So long as the landed cost of crude oil plus other refinery costs is less than the price at which Australian refiners can sell their output (which in practice is no less than the landed cost of importing refined product plus the quality premium), Australian refining will be profitable in an accounting sense. However, the quality premium component may be eroded over time as supply of Australian grade petrol in international markets increases. The sustainability of the quality premium is considered in the next section.

7.4.1 Sustainability of the fuel quality premium

As discussed above, a quality premium is added to the pricing benchmark ostensibly to reflect the higher quality of Australian grade fuel relative to the Singapore benchmark price and to recover the domestic costs of refining to those higher standards.

In relation to domestic costs, Australian refiners had to reconfigure their refineries to produce the higher grade petrol. This was considered in more detail in chapter 3. This reconfiguration required substantial investment and some reduction in capacity. However, this inquiry has heard evidence that at least some refiners were already producing fuel that was compliant with at least some of Australia's new tighter fuel standards, particularly in relation to the MTBE standard. This is one of the key standards that has been used to justify the imposition of a fuel quality premium on domestically refined petrol. Therefore the impact on costs of those tighter Australian standards may have been overstated.

The ACCC understands that when the Australian fuel specifications were first introduced, there was an immediate supply constraint on international markets as few overseas refiners refined or were capable of refining fuel to Australian specifications at that time. Under those circumstances, the imposition of a premium for Australian grade imported petrol was argued to be appropriate to induce international refiners to increase production to satisfy the rising demand for fuel of that specification.

Quality premiums for domestically refined petrol are based predominantly on what the market will bear, and the bargaining strengths of the negotiating partners, rather than the underlying domestic costs of refining to Australian standards. In other words, the higher Australian standards may have been used to justify a rise in petrol prices over and above that which could be justified on the basis of the actual impact on domestic costs and supply of domestically refined petrol. The ability to raise prices according to what the market would bear arose from the reduction in competition from international refiners who were temporarily unable to supply refined product to the Australian market in sufficient volume to provide a credible alternative source of supply.

Over time, however, more and more refiners in the Asia-Pacific region could provide petrol refined to Australian standards. This supply response is partially a result of the tightening of fuel standards overseas across the region to be more in line with Australian standards. As supply increases, the quality premium applicable to imported petrol is likely to be eroded by competition. This view is similar to that put to the inquiry by some of the oil majors.[32]

The inquiry has been provided with some limited early evidence that suggests that the quality premium may be adjusting downwards over time to reflect increasing overseas supply of Australian grade petrol. The ACCC's view is that the best way to ensure the appropriateness of any quality premiums that are applied to domestic petrol prices is to address any impediments to import competition. These are discussed in chapter 13.

Based on the evidence available to it, the ACCC concludes that the quality premium provides a current benefit to refiners by adding to the profitability of refining and at least partially offsetting the higher operating costs arising from relatively small-scale and relatively higher Australian quality standards.

If, however, the quality premium is eroded by strengthened competition from international refiners, the location advantage that domestic refiners currently enjoy will be reduced.

The inquiry has also been provided with evidence that shows the freight differential component of the location advantage has fallen this year, in the order of 25 per cent, although it is too early to say whether the recent observed reduction will continue.

Caltex considered that the location advantage was being eroded over time due to the higher cost of refining in Australia relative to other refining regions (associated with producing on a smaller scale, and higher capital, wage and energy costs). Caltex consider that over time this will put more pressure on Australian refineries to become more efficient, and may result in significant re-structuring.[33]

The possible erosion of the location advantage raises the issue of whether current levels of accounting profitability are sustainable in the future. In this context, the inquiry has considered the likely future of domestic refining given the likelihood that domestic production costs may rise further and the location advantage be somewhat reduced.

32 See for example, ACCC public hearing transcript, Melbourne, 5 September 2007, p. 33; Caltex submission.
33 ACCC, public hearing transcript, Sydney, 4 September 2007, pp. 16–7.

7.4.2 Future of refining in Australia

The refiners have provided this inquiry with their views on the future of refining in Australia. Much of this information is commercially sensitive and thus will not be disclosed in this report. Nevertheless, on the basis of the information provided to it, the ACCC is able to make some general comments about the future of domestic refining.

In particular, the future of domestic refining will depend critically on several key factors:

- The extent to which international refining capacity expands—as discussed, while there is some uncertainty about whether all of the planned expansion will eventuate it is clear that considerable additional capacity will come on-line in the next few years, for example the new Reliance refinery in India.
- The extent to which future international demand for refined products, particularly in India and China absorbs the increased refining capacity—if capacity expansion leads regional demand growth, as some inquiry participants predict, domestic refiners may face stronger competition from imports of refined petrol. The strength of any such competition would, however, depend critically on:
    - whether petrol that is refined in overseas refineries is compliant with Australian fuel standards
    - whether adequate import terminal capacity is available (both of these potential constraints on competition from international refiners are discussed in more detail in chapter 13.)
- The durability of the location advantage—if the location advantage is eroded, then domestic refiners' ability to withstand possibly stronger international competition would be weakened.
- The efficiency gains that domestic refiners are able to make—a common view that has been expressed to this inquiry is that domestic refiners will need to be as efficient as possible to withstand stronger international competition and potential erosion of the location advantage. The inquiry has heard, however, that some of the refiners' planned future investments are necessary to ensure compliance with domestic regulation rather than to improve efficiencies.

The ACCC accepts the views put to it by some refiners that it is highly unlikely that a new domestic refinery of world-class scale would choose to locate in Australia. This is because the costs of building such a refinery, which are in the billions of dollars, would be even higher in Australia than in some other parts of the region because of higher input and compliance costs. In addition, once constructed, the capacity of such a refinery would be substantially in excess of domestic demand. Significant volumes would therefore need to be exported from Australia. The ACCC has been told that the costs of exporting from Australia would also be substantially higher than in some other parts of the region.

Based on the evidence available to it, the ACCC considers that the legacy structure of domestic refiners places them at a competitive disadvantage relative to larger, more efficient refineries in the region. Currently, those disadvantages are offset to some degree by the location advantage that enables domestic refiners to operate profitably. However, domestic refiners are likely to face stronger international competition in the future that should put some additional constraint on margins and profitability.

7.5 Conclusions on refinery pricing and performance

As mentioned at the outset, the notion of a formulaic approach to refinery pricing forms the cornerstone of petrol pricing in Australia. This formula is loosely based on the concept of import parity pricing.

A key issue for this inquiry is whether the pricing approach adopted by refiners is appropriate considering competition and industry performance. This issue is discussed in chapter 13.

As noted above, the ACCC considers that domestic refiners are currently profitable in an accounting sense, but are likely to come under some pressures in the future as demand and supply conditions change in the region.

In an overall assessment, accounting profits, while important, do not necessarily provide a complete picture of the profitability of Australian refiners. Wider notions of economic profits that take account of the opportunity cost of the inputs used in production may also be useful.

The ACCC has not calculated the level of economic profits in the domestic refining industry, but considers that there are some indicators that may be used to infer whether or not domestic refiners' current accounting profits are indicative of a capacity to earn higher than normal returns over the longer term. In particular, the ACCC considers that the existence or otherwise of impediments to competition is an important indicator of whether any economic profits could be sustained in the longer term. These are discussed in chapter 13.

For present purposes, however, the ACCC is satisfied that the IPP pricing policy provides refiners with reasonable rates of return from refining operations and enables them to compete with regional suppliers. Although future supply and demand conditions are not certain, none of the evidence suggested that there would be major changes in local refinery profitability in the foreseeable future.

8 Price determination and competition at the wholesale level

8.1 Introduction

Each of the domestic refiner-marketers operates at the wholesale level of the market. There are also a number of independent operators, including Liberty, United, Gull, Neumann and Trafigura, who wholesale fuel into the retail market. The independent wholesalers obtain their fuel supplies from either the domestic refiners or from imports.

This chapter considers the ways in which wholesale prices are determined by both the domestic refiners and the independent wholesalers.

8.2 Structure of the wholesale sector

Chapter 4 contains a detailed discussion of the structure of the wholesale sector. In summary, the key structural aspects of the wholesale market are:

- Vertically integrated refiners dominate the wholesale sector.
- The refiner-marketers supply almost all of the fuel sold at wholesale in Australia, either directly or indirectly.
- They obtain the fuel they sell from a combination of their own refining operations, from importing and from other domestic refiners under buy–sell arrangements.
- There is very little importing by independent wholesalers. Most of the fuel sold by independent wholesalers involves the re-selling of fuel obtained from the domestic refiners.
- The structure of the wholesale market has changed in recent years due to the exclusive supply arrangements between the supermarket chains, Coles Express and Woolworths, and their respective wholesale supply/alliance partners, Shell and Caltex. These alliances have reduced the share of the retail market available to independent resellers and have diminished their role in the wholesale market.

Against this structural background, to properly understand price determination at the wholesale level, it is necessary to analyse the buy–sell arrangements that underpin wholesale arrangements, how wholesale pricing operates, the relevance of terminal gate pricing and the availability of wholesale margins. It is then possible to evaluate the future of petrol wholesaling in Australia and make an assessment of the degree of competition at the wholesale level.

These matters are dealt with in the following sections.

8.3 Buy–sell arrangements

Buy–sell arrangements are critical to an understanding of wholesale price determination and competition because they represent the transaction between the refiners that precedes (and therefore has an impact on) most other wholesale arrangements.

Buy–sell arrangements for the purchase and sale of domestically refined petrol between the domestic refiners were discussed briefly in chapter 7 in the context of a discussion about the IPP-based pricing formula used to determine the buy–sell prices. As explained in chapter 7, each refiner operates a refinery in only one or two states. However, each supplies fuel nationally at the wholesale and/or retail levels. The refiners told the inquiry that the purpose of buy–sell arrangements is to ensure that a refiner has adequate supplies of product in locations where it does not have a home refinery.[1] Through these arrangements, local refiners are able to supply fuel in markets where they do not enjoy a refinery presence in a way that reduces transportation and other infrastructure costs but still enables them to compete with home state refiners for wholesale sales.

8.3.1 Refinery exchange arrangements

Before July 2002 fuel was sold between the refiners under what were known as volume exchange agreements (refinery exchange). Under those arrangements, oil companies would swap a volume of refined product in one location for an equivalent volume in another location where they did not operate a refinery.[2] In this way, they were able to secure reliable supplies of petrol in states where they did not have a refinery presence.

Evidence before the inquiry established that the industry moved away from refinery exchange to buy–sell arrangements in 2002. BP's evidence was that the refinery exchange system worked effectively, but did not apply appropriate values to the products being handled; that, in some instances, the products being swapped were not of equivalent quality and there was not a reference to market price; that each exchange arrangement required a reciprocal arrangement with the same company; that this was not always the most efficient way to source products for each location.[3]

Other refiners gave similar evidence. For example, Shell explained that it moved away from the refinery exchange because buy–sell arrangements are more transparent and easily explainable as they are based on international benchmarks.[4]

8.3.2 Features of buy–sell arrangements

The buy–sell arrangements that replaced the refinery exchange are governed by discrete buy and sell contracts between each buy–sell partner. Unlike refinery exchange agreements, there is no requirement for buy–sell partners to buy or sell equal volumes of like product from each other.[5]

As discussed in chapter 7, prices in buy–sell contracts are negotiated between the buy–sell partners and buy–sell prices are struck based on the refiners' IPP-based pricing formula.[6] Added to the Singapore benchmark price are amounts representing quality premium, freight, wharfage and insurance and loss. Refiners have told the inquiry that final prices in the buy–sell arrangements are the product of negotiations influenced to a significant extent by the alternative supply options available to the buyer (including imports).[7]

In chapter 7, the components of the buy–sell price were examined in detail.

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1 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 52; BP submission, p. 15.
2 BP submission, p. 15.
3 ibid.
4 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 53.
5 Caltex submission, p. 20.
6 BP submission, p. 16; Caltex submission, p. 2; and Mobil submission, p. 4.
7 Caltex submission, p. 21.

The ACCC has examined buy–sell arrangements over the past five years and concluded as follows:

- That buy and sell volumes are not necessarily identical between buy–sell partners. Moreover, volumes purchased by the respective buy–sell partners are not necessarily of similar magnitude, although this may be the case.
- That buy and sell prices under these arrangements can vary from location to location reflecting variations in quality premiums and freight components.
- There is still a high degree of reciprocity in the terms and conditions under which buy–sells are transacted. While the amount referrable to particular components of the price may differ (the most obvious example is wharfage and freight, which will vary by location), each of the various buy–sell contracts follows the same pricing formula outlined in chapter 7. In essential respects, the terms and conditions of purchase and sale are the same.
- In some cases, the terms are actually identical. For example, the evidence shows that a seller will negotiate different insurance and loss components with each of its buying partners. However, for the buy–sell partners (to any bilateral arrangement), the 'buy' components are the same as the 'sell' components. As the 'sell' locations are typically not the same as the 'buy' locations, the quality premiums specified in each buy–sell pair of contracts typically do not match, reflecting in part the different fuel standards in some states. Nevertheless, the evidence shows that if the buy–sell partners do supply each other in a particular location, the quality premium applicable in that location will be same in each refiner's buy and sell contract.
- The quality premiums may vary from state to state to reflect differences in state-specific fuel standards compared with the Australian standards. However, the evidence also reveals that there may be differences in the quality premium that apply to regions within a particular state that are not referable to any difference in standards. These price differences may reflect the inequality of influence or power enjoyed by different players in particular locations highlighting potential weaknesses in the strength of competition in some areas of the wholesale market. This issue is discussed further in chapter 13.
- The buy–sell pricing formula does not contain an explicit margin component. Nevertheless, it is apparent that, in large volumes, buy–sell arrangements are profitable to the seller. The seller is able to realise the refiner margin as well as earning a margin on each of the notional landed costs charged on locally produced fuel along with returns on the quality premiums.

8.3.3 Prices available to independent resellers

The ACCC has received evidence as part of the inquiry that the buy price available to a refiner-marketer under a buy–sell contract is generally not available to independent resellers. This is because no independent reseller has been able to provide the quid pro quo sell component that is the hallmark of the buy–sell arrangement. More importantly, the buy price available to a refiner-marketer under a buy–sell contract appears generally to be lower than prices that independent resellers are able to negotiate for the same volume of wholesale supply of petrol from the domestic refiners at a similar location. This is largely due to the fact that a specific wholesale margin is not included in the buy–sell price but is included in any other wholesale sale arrangements.

On that basis, a refiner-marketer who purchases fuel under a buy–sell arrangement in a non-home refinery state is likely to enjoy a competitive advantage in wholesaling fuel in that same state over an independent reseller as the price obtained to purchase the fuel to be resold would be lower.

8.3.4 Significance of buy–sell prices to wholesale prices

As noted in the opening section of this chapter, a large share of all the fuel sold at the wholesale level to independent resellers and retailers is obtained under buy–sell arrangements. More importantly, all fuel sold by refiners at wholesale is priced based on the buy–sell price whether or not it is purchased under buy–sells, imported or produced by the local refiner. In this way, the buy–sell price is built into the price at which that same fuel is re-sold at the wholesale level. The buy–sell price acts effectively as a floor below which wholesale prices will not fall and above which wholesale prices will be built up.

As set out in the preceding section, the buy–sell arrangements also provide the refiners (as a group) with a competitive advantage at the wholesale level by enabling them to obtain the fuel that they sell at wholesale in their non-home refinery states at a lower price than any other reseller of fuel. This creates reciprocal benefits that are only available to refiners.

Chapter 13 considers whether these outcomes are consistent with a workably competitive industry.

8.4 Derivation of wholesale prices

The manner in which wholesale prices are determined is similar across all refiners.

First, most refiners sell at wholesale from their wholesale division, which is a separate profit centre from the refining business. Therefore, before any wholesale transactions take place, domestically refined petrol is transferred from the refining business to the marketing arm through internal transfer arrangements. The transfer price that applies to such transactions is generally equivalent to the lowest applicable buy–sell price. Whether that price is an average buy or sell price can depend on whether the transfer is referable to a home or non-home refinery state. This transfer price effectively becomes a floor for future wholesale transactions as previously discussed.

Once the internal transfer has taken place, the wholesale division sets various prices for the supply of petrol to its various customers. Independent resellers also set prices for their customers after having purchased fuel from their supply source.

Participants in the inquiry (refiner-marketers and independent resellers) provided a large amount of information about wholesale price determination both in writing and verbally at open and closed hearings. While much of the detail of the evidence provided is confidential and commercially sensitive, the following general comments can be made about pricing across the wholesale sector.

Wholesale prices for petrol generally comprise the following components:

- The buy–sell price or wholesalers' own purchase price (which is based on the IPP formula).
- Other add-ons such as delivery, brand, credit and equipment-related costs where applicable.
- A wholesale margin.
- A discount, if negotiated.
- In some circumstances, price support is offered as an alternative to discounts.

The mechanism by which the wholesale price is set varies from wholesaler to wholesaler. In addition, the ultimate price at which any wholesaler sells to a customer will differ as it will be the outcome of negotiation and influenced by a number of key factors.

Generally speaking, the wholesaler sets a certain 'list price' or 'reference price' that is based on a formula built from the Singapore benchmark price, quality premium, freight and wharfage, insurance and loss, taxes and a marketing margin. This is the same broad formula as is used for terminal gate pricing (explained later). The wholesaler will frequently refer to the terminal gate price as a basis for the list or reference price although the end price will generally differ.

The factors that are likely to be the key determinants of the final negotiation of price are:

- the existence of a long-term supply contract
- the length of the contract
- the volumes purchased
- the relationship with the purchaser (e.g. part of the internal corporate structure, an unrelated entity or a supermarket alliance partner).

The evidence also suggests that wholesale prices partially depend on the relative negotiating strengths of the various parties. A purchaser's negotiating strength is affected, not only by its volume purchases, but also by its alternative supply options, including imports and other wholesalers. Similarly, the wholesaler's bargaining power will largely depend on the extent to which it is constrained by the availability of close substitutes from rivals, including imports. The strength of competition from rivals varies from location to location. Often in regional and rural areas there may be only one wholesale supplier who would consequently enjoy a degree of market power. Proximity to refineries and seaboard terminals can also have an impact. The ultimate price negotiated between wholesaler and customer more closely reflects the customer's alternative supply options rather than the seller's cost of sourcing the product.

From the evidence received as part of the inquiry, the ACCC is of the view that the supermarkets (Coles and Woolworths) can certainly obtain significant volume discounts and through their structured alliance arrangements (with Shell and Caltex) obtain favourable wholesale prices. By comparison, smaller independent operators are unable to negotiate the terms of their arrangements with the same purchasing power and are thus 'price takers' in the market. This affects their ability to compete in the retail market, particularly in the context of deep discounting that occurs at the bottom of the price cycle (discussed in chapter 11).

The ACCC has also received evidence that since the commencement of the supermarket alliances, supply from Caltex and Shell to other independents has diminished significantly. This has affected the independents' ability to exert downward pressure on prices.

However, more generally, the ACCC has found that the larger the player and the larger the volume, the more favourable the wholesale price that can be obtained.

Set out in section 8.5 is a discussion of terminal gate prices (TGPs). As is addressed in more detail in that section, while TGP is a spot price rarely used in practice, it is a wholesale price published regularly by wholesalers and, to that extent, is a useful indicator of wholesale price movements and comparisons. Because actual wholesale prices have been provided to the inquiry in confidence, the ACCC does not intend to provide detailed analysis of those figures in this report. However, it is important to note that many of the comments made regarding TGPs are equally applicable to wholesale prices.

For that reason, an analysis of wholesale pricing is not complete without a review of the calculation of TGPs. The conclusions drawn with reference to TGPs can be accepted as indicative of the position in relation to wholesale 'list' prices or 'reference' prices.

8.4.1 Refiner-marketers' evidence of wholesale prices

While each wholesaler sets its prices on a similar basis, set out below is the detail of the non-confidential evidence provided by the four refiner-marketers regarding their specific pricing policies at the wholesale level.

Caltex

Caltex explained in its public submission that it employs different wholesale pricing methodologies in setting wholesale prices for franchisees and branded resellers, non-contracted resellers and large independent customers.[8]

It submitted that some of its wholesale sales are on the basis of the Caltex Reference Price (CRP). The CRP is a formula that includes a product marker, quality premium, freight, insurance and wharfage, marketing margin and taxes. The 'marketing margin' includes credit terms, brand, access to StarCard and marketing activities. These inclusions distinguish the CRP margin from that contained in Caltex's TGP. Furthermore, the CRP includes a national average cost for shipping, insurance and wharfage and is therefore a single national price unlike the TGP that varies by location.

Caltex calculates the CRP for petrol and diesel on a daily basis. To reduce price variability and for ease of administration, Caltex changes CRP only if the calculated price movement is greater or less than 0.50 cpl. Caltex uses seven working day rolling averages for variables such as MOPS and exchange rates to reduce price volatility. CRP is a single national price and with minor exceptions, only varies by location because of state subsidies[9]:

- Franchisees buy at CRP. If price support is provided to franchisees to help them meet local retail competition, it is paid as a rebate off the current CRP.
- Caltex's branded resellers buy at a discounted CRP.
- Price support is not payable to resellers and non-franchised retailers, who instead receive a discount off CRP at the time of purchase.[10]
- Non-contracted wholesale customers may make spot sales on the basis of TGP.
- Large independent customers, such as Woolworths buy petrol from Caltex on the basis of a formula price that is related to Singapore prices. As with TGP, the shipping insurance and wharfage components of this formula are based on the cost of delivery to the nearest terminal. The margin included in this formula is negotiated between the parties
- Sales to non-contracted independent resellers are either based on an IPP build-up formula similar to TGP plus an agreed margin, or CRP less a negotiated rebate.
- Commission agents earn a set commission or fee per litre sold.

8 Caltex, submission, p. 45.
9 ibid., p. 46.
10 ibid.

Shell

Shell explained that it sells at wholesale to commercial customers, Shell branded and non-branded retailers and other non-branded wholesalers. Its major wholesale customers are the Coles Alliance, 7-Eleven, Australian Fuel Distributors, Matilda, Scotts and United.

Shell's wholesale sales are based on TGP and may include additional charges for delivery, brand and credit. Some customers are offered discounts to attract or maintain their business. The size of the discount is largely driven by the volume that is purchased.[11]

Shell explained that its sales to Coles Express are based on a pricing mechanism that incorporates TGP plus other charges, for example branding and delivery.[12]

Sales to dealer-owned retail sites are also based on TGP plus charges for branding rights, credit charges and freight where applicable. Shell also sells to other retailers and wholesalers based on TGP plus costs for other services and delivery where applicable.[13]

The ACCC has reviewed each of the fuel supply agreements that govern wholesale sales from Shell to its major independent resellers and retailers. There are a number of similarities between the agreements. All agreements have formula-based pricing based on the same components as TGP. However, the wholesale arrangements to these parties vary in a number of ways:

- where pricing is based on TGP, the discount or premium varies
- some agreements contain price support whereas others do not
- the wholesale margin varies—if price support is payable, the wholesale margin is substantially higher
- freight charges vary.

Mobil

Mobil explained that it sells petrol at wholesale through four main channels[14]:

- its single multi-site franchisee, SEP, which operates a network of 310 owned or leased Mobil-branded service stations in Adelaide, Melbourne, Sydney and Brisbane
- independent Mobil-branded distributors who supply an independently own and operated network of Mobil-branded and unbranded service stations in regional Australia (except Tasmania)—these distributors also supply farmers
- large independent resellers such as United, Liberty and APCO who supply non-Mobil branded service stations in metropolitan and non-metropolitan areas
- large commercial and industrial customers throughout Australia

Mobil's wholesale pricing also varies according to its relationship with the purchaser[15]:

- for spot sales, wholesale sales are based on TGP
- independent distributors, independent resellers and commercial and industrial customers are supplied on the basis of contracts that have varying terms and conditions that are negotiated with each customer.[16]

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11 Shell submission, p. 6.
12 ibid.
13 Shell submission, pp. 6–7.
14 Mobil submission, p. 6.
15 Mobil public response to s. 95ZK notice, p. 8.
16 Mobil submission, p. 6.

- The Mobil Reference Price (MRP) is the primary basis of Mobil's contract wholesale sales and is based on IPP[17]:
- MRP = IPP + 'local component' +excise +GST

Mobil's wholesale sales to SEP are based on prices that move in line with TGP. Mobil may offer price support as a wholesale price discount where required to enable SEP franchisees to respond to competitors' retail prices.[18]

BP

BP explained that it supplies petrol products to a network of company-owned/company-operated (COCO) retail sites. The pricing to these sites is covered in chapter 9. BP also supplies privately owned retail sites across Australia as well as BP distributors in predominantly rural areas. These distributors in turn, may supply privately owned sites.

TGP forms the basis of pricing of all of BP's wholesale sales. Discounts are available to all customers who are supplied under contract, except in Victoria. The size of the discount varies by grade. BP does not supply any customers at a premium to TGP.[19]

BP explained that over the recent years, all of its wholesale sales have been on a contractual basis; it has not made any spot wholesale sales. According to BP this reflects the mutual advantages to buyer and seller of contractual supply.[20]

8.5 Terminal gate prices

Each wholesale supplier is required under the Oilcode to publish daily a TGP. The TGP is essentially the spot price that a purchaser who arrives at a wholesaler's terminal with a truck could expect to pay for a bulk purchase of wholesale petrol for cash.

The TGP is generally built up from the refiners' IPP-based pricing formula that was discussed in chapter 7 and is therefore similar in structure to the wholesale prices discussed above. However, in some cases, nuances distinguish TGP from wholesale reference prices. These were discussed previously.

8.5.1 Relevance of TGPs

Although wholesalers are required to publish TGPs, few, if any, wholesale sales are actually made at the level of spot TGP.[21] As already stated, the evidence presented to the ACCC was generally that there is currently no spot market for petrol in Australia. In addition, as the structure of the downstream petrol sector evolves from a large number of small independents to a smaller number of larger independents, the demand for spot sales on a truck-by-truck basis is likely to diminish further.

As noted above, most wholesalers generally use a wholesale list price as the basis for determining wholesale prices even if a TGP is also published.[22] The prices specified in the wholesale list price are

17 Mobil, public response to s.95ZK notice, p. 8.
18 Mobil submission, p. 6.
19 BP submission, p. 22.
20 ibid.
21 BP submission, p. 22.
22 Caltex publishes a CRP that forms the basis of its contract wholesale sales.

generally similar to the TGP formula but may include discounts or premiums to TGP.[23] (see previous discussion).

There was considerable discussion during the inquiry about whether TGP reflects prices that are actually paid at the wholesale level or whether it is simply a price that is posted by wholesalers to comply with their regulatory obligations. These issues are discussed in more detail in chapter 15.

However, as noted above most wholesale supply prices are broadly similar to TGP having been built on the same components. Furthermore, wholesale prices generally move in line with TGP movements. This means that an analysis of TGP on a comparative basis and in relation to international prices is still informative.

8.5.2 How are TGPs determined?

Essentially, the TGP set by most wholesalers is based on the following formula:

TGP = refiner pricing formula/buy–sell price/import supply cost + terminal costs + operating costs + wholesale margin + excise +GST.

This can be summarised further to:

TGP = supply price + wholesale margin + taxes

The main component of TGP is therefore the wholesaler's own purchase price. This may be the refinery price/buy–sell price, the import cost price, or the negotiated wholesale price. As already noted, the main elements of refinery and negotiated wholesale prices are the benchmark refiner price, typically MOPS95, the quality premium, freight, and insurance and loss.

A wholesale margin is added to the supply price as part of the TGP calculation. The margin is intended to cover terminal and wholesale operating costs as well as provide a profit to the wholesaler. Unlike refinery and buy–sell prices, which change daily, most wholesalers review their wholesale margin only periodically.[24]

The margin component of the TGP may vary from location to location. This reflects the strength of local competition, with the margin lower in locations where customers have a choice of wholesaler.[25] In addition, the wholesale margin tends to vary inversely with volume sales. Therefore the margin is likely to be higher in locations where sales volumes are relatively low.

Excise, which is payable at a rate of 38.143 cpl, and GST are also included in TGP. In addition, state fuel subsidies may be reflected in wholesale prices. Chapter 6 explains in more detail the rationale and level of taxation applicable to petrol.

There are some minor differences in the way that individual wholesalers determine TGP. For example, when calculating the daily TGP each wholesaler uses a rolling average of a Singapore benchmark price, usually MOPS95, freight quotes and the AUD:USD exchange rate to smooth out daily fluctuations in these variables. However, some wholesalers choose to use a seven-day rolling average of Singapore

23 Caltex explained that its CRP uses a national average freight and wharfage estimate whereas TGP includes port-specific charges (based on IPP). In addition, CRP has a national wholesale margin whereas the TGP margins are location specific (Caltex submission, pp. 46–7).
24 BP submission, pp. 21–2.
25 Mobil public response to s. 95 ZK notice, p. 10.

prices and the exchange rate, whereas others use a five-day rolling average.[26] Some wholesalers also adjust their TGP daily whereas others change TGP less frequently.

8.5.3 TGP arrangements in WA and Victoria

It was noted in chapter 6 that TGP arrangements were introduced in Western Australia in December 2002 to increase price transparency in the wholesale fuel sector and provide access for eligible distributors and retailers to petrol products purchased directly from the terminal at competitive prices.

Prescribed suppliers must notify the Prices Commissioner of the next day's TGP by 2 pm on any day. The TGP is the maximum price that the controlled petroleum products can be sold at, from 8.30 am on the following day. In addition to the requirement to notify terminal gate prices, terminal operators are required to notify the Prices Commissioner about the components that make up this price.[27]

The Victorian Government has also introduced TGP arrangements that are intended to provide access to product at terminals at competitive wholesale prices for all distributors and retailers. The main elements of the Victorian arrangements are:

- TGPs must be based on a specified formula.
- TGPs must be publicly available and change no more than once in 24 hours.
- Prices specified for contractual purchases should be based on TGP.
- There are no constraints on discounting from TGP.

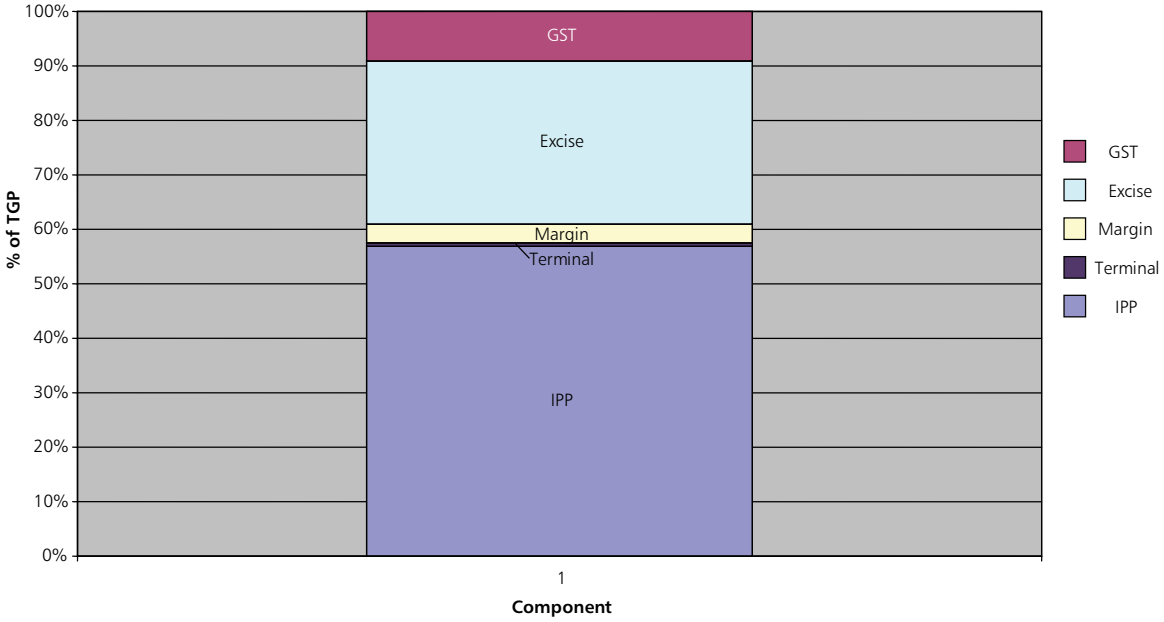
8.5.4 Contribution of components to TGP

Chart 8.1 shows an indicative breakdown of TGP into its individual components. The chart was derived by the ACCC from information provided to the inquiry. The chart indicates that the IPP-based supply price contributes over half of TGP (around 57 per cent). Terminal costs generally contribute less than one per cent to TGP. On average, wholesale margins contribute around 4 per cent. The remaining 39 per cent is accounted for by excise (29 per cent of indicative TGP) and GST (9.1 per cent of indicative TGP).

26 For instance, Caltex uses seven-day working average (Caltex submission, p. 46), Mobil uses a seven-day rolling average to calculate MRP but the daily price for TGP. Mobil is, however, reviewing the calculation of TGP with a view to adopting a seven-day rolling average (Mobil public response to s. 95ZK, p. 9).

27 Department of Consumer and Employment Protection submission, July 2007, p. 20.

Chart 8.1 Percentage contribution of components to TGP

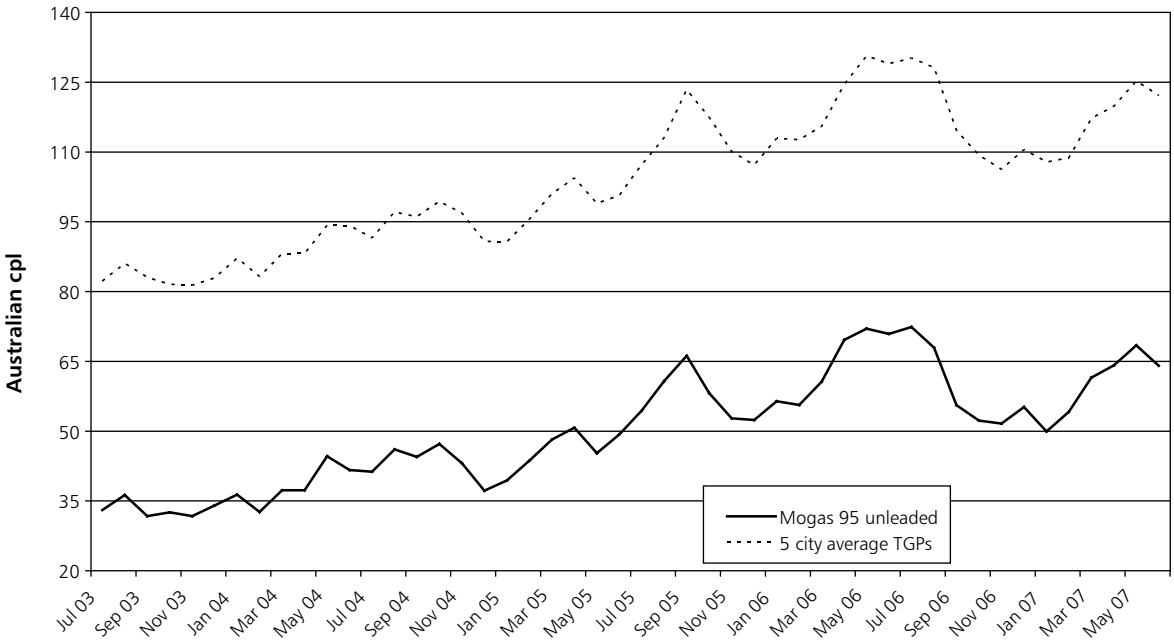


Source: Derived by ACCC from information provided by inquiry participants.

8.5.5 Relationship of TGP to international prices

As indicated earlier, the supply price is the key component of TGP. In turn, regardless of the source of supply, chapter 7 explained that prices will be based on the concept of IPP. Movements in TGP therefore closely follow movements in the Singapore benchmark price, typically MOPS95 as shown in chart 8.2, although there is a time lag between those movements as discussed later. The gap between TGP and MOPS95 is the wholesale margin plus taxes. The margin is compressed when international prices are rising, and expands when international prices are falling.

Chart 8.2 Movements in MOPS95 and average monthly TGP.



Under the previous regulatory arrangements, the ACCC used a seven-day rolling average of Singapore benchmark prices to calculate maximum wholesale prices to smooth the peaks and troughs of movements in international benchmark prices. This methodology also has the effect of introducing a lag between movements in international benchmark prices and movements in domestic TGPs, with changes in international prices often not impacting on domestic prices for three to four days.[28] The full impact of movements in international prices may take up to two weeks to be reflected in local prices, depending on the frequency with which TGPs are changed. The effect of price lags can, however, work in both directions with consumers benefiting when international prices are rising as domestic price increases are delayed. Wholesalers benefit when international prices are falling as price reductions are delayed.[29]

In addition, when there is a public holiday in Singapore, a MOPS benchmark price is not published on that day and therefore the previous day's benchmark price is included in the TGP calculation. This has the effect of making the TGP lower than it might otherwise have been if the market is rising, and higher than it might otherwise have been if the market is falling. A public holiday in Australia may also affect the relationship between TGP and international prices if the published TGP would normally have been altered on that day.[30]

28 Shell submission, pp. 4–5.
29 BP submission, p. 23.
30 Shell submission, pp. 4–5.

8.5.6 Comparison of TGPs across states

Table 8.1 shows the average annual TGPs of the major oil companies in each of Sydney, Melbourne, Brisbane and Adelaide and the five-city average for the five years 2002–03 to 2006-07. In Perth, information is only provided from 2003–04 as terminal gate pricing arrangements were introduced in WA in late December 2002.[31] Before then, the WA Government determined TGPs under the maximum wholesale pricing arrangements.

As expected, the table shows that TGPs vary from state to state. This reflects not only variations in the components of IPP, but also differences in wholesale margins and state taxes. The variation differs from year to year but appears to have been declining since 2003–04. In 2003–04 for instance, the difference between the highest TGP (89.2cpl in Perth) and the lowest (86.1cpl in Sydney) was 3.1 cpl. By 2006–07, this difference had declined to 1.7cpl.

Melbourne had the lowest average TGPs in each of the years under consideration. Adelaide and Perth have at times each been the city with the highest average annual TGP.

The five-city average annual TGP has increased from 87.9 cpl in 2003–04 to 118.6 cpl in 2006-07, an increase of just under 35 per cent in nominal terms. During that time, Singapore benchmark prices expressed in $US/bbl increased by around 84 per cent (see chapter 7). At the same time, the Australian dollar appreciated by over 10 per cent relative to the US currency. This has dampened the domestic impact of rises in Singapore benchmark prices to around 66 per cent.[32] As IPP represents around 57 per cent of TGP, and the Singapore benchmark price represents around 90 per cent of IPP, the impact on TGPs of rising international benchmark prices since 2003–04 is around 34 per cent. This is similar to the increases shown in table 8.1 that suggests that most of the recent average annual movements in TGP can be accounted for by rises in international refined petrol prices.

Table 8.1 Terminal gate prices, annual: 2002–03 to 2006–07

Capital cities	2002–03 cpl	2003–04 cpl	2004–05 cpl	2005–06 cpl	2006–07 cpl	% Increase 2003–04 to 2006–07
Sydney	85.0	87.1	98.2	118.3	118.5	36
Melbourne	84.1	86.1	97.3	117.4	117.4	36.4
Brisbane	85.7	87.8	99.1	119.2	119.0	35.5
Adelaide	86.8	89.1	99.6	119.7	119.1	33.7
Perth		89.2	99.6	119.3	118.9	33.3
Five-city average		87.9	98.7	118.8	118.6	34.9

Source: ACCC, major oil companies and Gull.

8.5.7 Comparison of TGPs by wholesaler

The information in table 8.1 contains general information about increases in average TGPs over time. It confirms that TGPs vary across states and largely reflect movements in international refined petrol prices. However, it does not provide an indication of the similarities or differences between TGPs within

31 Gull's TGP is also included in the Perth average.

32 The average annual exchange rate has been calculated from RBA monthly USD:AUD exchange rates to be 0.71 in 2003–04 and 0.79 in 2006–07.

a state. This information is more relevant for an assessment of the extent of price competition as the geographic proximity of wholesale terminals is likely to affect the extent to which those terminals are close substitutes for wholesale customers. Average TGPs by supplier within a state in 2006–07 are shown in table 8.2.

Table 8.2 Terminal gate prices, average: 2006–07

Company TGPs	Sydney cpl	Melbourne cpl	Brisbane cpl	Adelaide cpl	Perth cpl
BP	117.9	116.6	118.2	117.7	119.1
Caltex	119.5	118.8	119.0	120.4	120.6
Mobil	118.7	117.9	121.1	120.9	118.6
Shell	117.8	116.5	117.6	117.4	117.3
Gull					118.9
Average TGP	118.5	117.4	119.0	119.1	118.9
Highest average TGP	119.5	118.8	121.1	120.9	120.6
Lowest average TGP	117.8	116.5	117.6	117.4	117.3
Difference between highest and lowest	1.3	2.3	3.5	3.5	3.3

Source: ACCC, major oil companies and Gull.

Table 8.2 shows that there was a degree of variability between various oil companies in average TGP within a state in 2006–07. This variability was highest in both Brisbane and Adelaide where there was a 3.5cpl difference between the highest average annual TGP and the lowest. By comparison, in Sydney the difference between the highest and lowest was 1.3 cpl.

8.6 Wholesale margins

As already pointed out, unlike buy–sell prices, wholesale prices include an explicit wholesale margin.

Based on the confidential information available to it, the ACCC is satisfied that the following points can be made about wholesale margins:

- The refiner-marketers build a fairly similar standard wholesale margin into their wholesale reference prices. Discounts from this margin may then be negotiated or price support offered. The band for negotiation is narrow, around 2 to 5 cpl.
- Returns are also available to the refiner/wholesaler other than from the explicit wholesale margin. This is because a margin is necessarily built into various other components of the wholesale price. As with the buy–sell arrangements, a refiner/wholesaler will crystallise the Singapore refiner margin through the use of the Singapore benchmark price. In addition, the freight and wharfage components are charged although not actually incurred. This crystallises a key component of the location advantage referred to in chapter 7. Moreover, as set out in chapter 7, the quality premium is not simply based on additional cost but on what the market will bear. Quality premiums are negotiated elements of both buy–sell arrangements and wholesale supply contracts and can vary from location to location and between supply contracts without reference to any variation in standard. The levy imposed

through the quality premium is the other key component of the location advantage and refiners will endeavour to secure a return on this element. As with all elements of the price, their ability to do so will reflect the bargaining power of the particular party in that location.

- The refiner can obtain margins on various elements of its wholesale price. Of course, that 'margin' will not necessarily be expressed as part of the wholesale transaction if the transaction is taken to commence after an internal transfer has taken place at a notional price. However, if the transaction is considered in its entirety, from refiner though to the end of the wholesale sale, these margins can be recognised.
- The evidence supports the conclusion that, in applying IPP pricing policy, Australian refiners will seek to recover margin across every component of the IPP price formula. This is particularly evident in the observable variations in quality premium charged by refiners both to one another and to wholesale customers, and in the evidence that suggests that these premiums are struck by negotiation and not by reference to actual costs.
- The evidence indicates that petrol wholesaling is a profitable activity for the relevant participants. Nevertheless, wholesale margins are narrow.
- When discounts are taken into account, the actual gross margin obtained by the refiner-marketers varies within a range of around 1 to 3 cpl**.** The ACCC received evidence that, on a net basis, these margins may at times be negative.[33] (Care should be taken, however, when analysing wholesale margins as these margins are frequently determined as a margin built from a refiner's internal transfer price which of course, is a notional price).

8.7 Future of wholesaling

Both the refiner-marketers and the independent wholesalers were positive about the future of wholesaling.

The refiner-marketers are seeking to expand their existing wholesale operations over the next 10 years and continue to supply to independent resellers. The independent wholesalers were also generally optimistic about the future of their wholesale operations.

A number of independent wholesalers noted that while there were increased opportunities to supply to small independent retailers due to the reluctance of the refiner-marketers to supply small retailers, they also considered that the number of small independent retailers would decline in the future as a result of competition with the supermarkets.

33 ACCC, public hearing transcript, Melbourne, 20 September 2007, p. 85.

8.8 Conclusions

Based on the evidence received at the inquiry, it is the view of the ACCC that:

- the four refiner-marketers dominate the wholesale market
- the buy–sell arrangements:
    - create reciprocal benefits that are only available to other refiners thereby placing the refiner-marketers (as a group) into a position of competitive advantage even in non-refinery markets
    - in conjunction with IPP pricing policy, they enable the refiner-marketers to effectively set a floor for the determination of wholesale prices in the wholesale market
- while based on IPP, the price at which refiners supply to wholesale resellers is generally higher than the price at which they will supply to one another under buy–sell arrangements; as a general rule, the difference is broadly reflected in the alternative available supply source for the wholesale reseller—in other words, the final wholesale price does not reflect the cost to the refiner of importing but rather the cost to the wholesale customer of importing that fuel.
- the evidence supports the conclusion that, in applying IPP pricing policy, Australian refiners will seek to recover margin across every component of the IPP price formula
- the use of IPP formula-based pricing results in the refiner-marketers pricing in the same way across the wholesale market
- in practice, wholesale prices available to customers in Australia vary considerably and are affected by numerous factors, the most important of which is the volume sought to be purchased; discounts and favourable terms are likely to be more generally available to larger players than smaller ones—regional differences in bargaining strength and proximity to refineries and seaboard terminals can also affect negotiations
- the exclusive supply arrangements between the supermarkets, Coles Express and Woolworths and their respective suppliers, Shell and Caltex, have diminished the supply options for many independent resellers
- while competition to supply distributors, independent resellers and other commercial and industrial customers can be strong and there can be regular changes of fuel supplier for pricing or other reasons, competition between refiner-marketers in wholesale petrol markets is not fully effective (discussed in more detail in chapter 13).

9 Price determination and competition at the retail level

9.1 Introduction

As set out in chapter 5, the participants at the retail level are:

- the refiner-marketers, through owned and operated sites, as well as through commission agency agreements and franchises
- the supermarkets, Coles Express (supplied by and branded Shell) and Woolworths (through its joint venture with Caltex)
- independent operators, ranging from large independent chains to small one- to two-site operations.

The strong presence of the refiner-marketers evidences a significant level of vertical integration at the retail level, through company-owned and supplied sites. The refiner-marketers also influence retail prices through price support, a mechanism that is explained in section 9.4.3 of this chapter.

This chapter examines how retail prices of unleaded petrol are set. It draws on information supplied in submissions, hearings and additional information to this inquiry, as well as the ACCC's independent analysis.

The structure of the chapter is as follows.

- Section 9.2 explores the different components making up retail petrol prices.
- Section 9.3 explores the relationship between Australian retail prices and international prices. It includes a discussion of the divergences between domestic prices and international prices in January and June 2007, which were publicly highlighted by the ACCC.
- Section 9.4 explores the process by which retail prices are determined, including the different strategies employed by the different types of petrol retailers.
- Section 9.5 explores retail margins.
- Section 9.6 draws together the findings on market structure in chapter 5 and the evidence presented in this chapter on price determination and retail margins to conclude that there appears to be a significant level of competition at the retail level.

9.2 Components of retail petrol prices

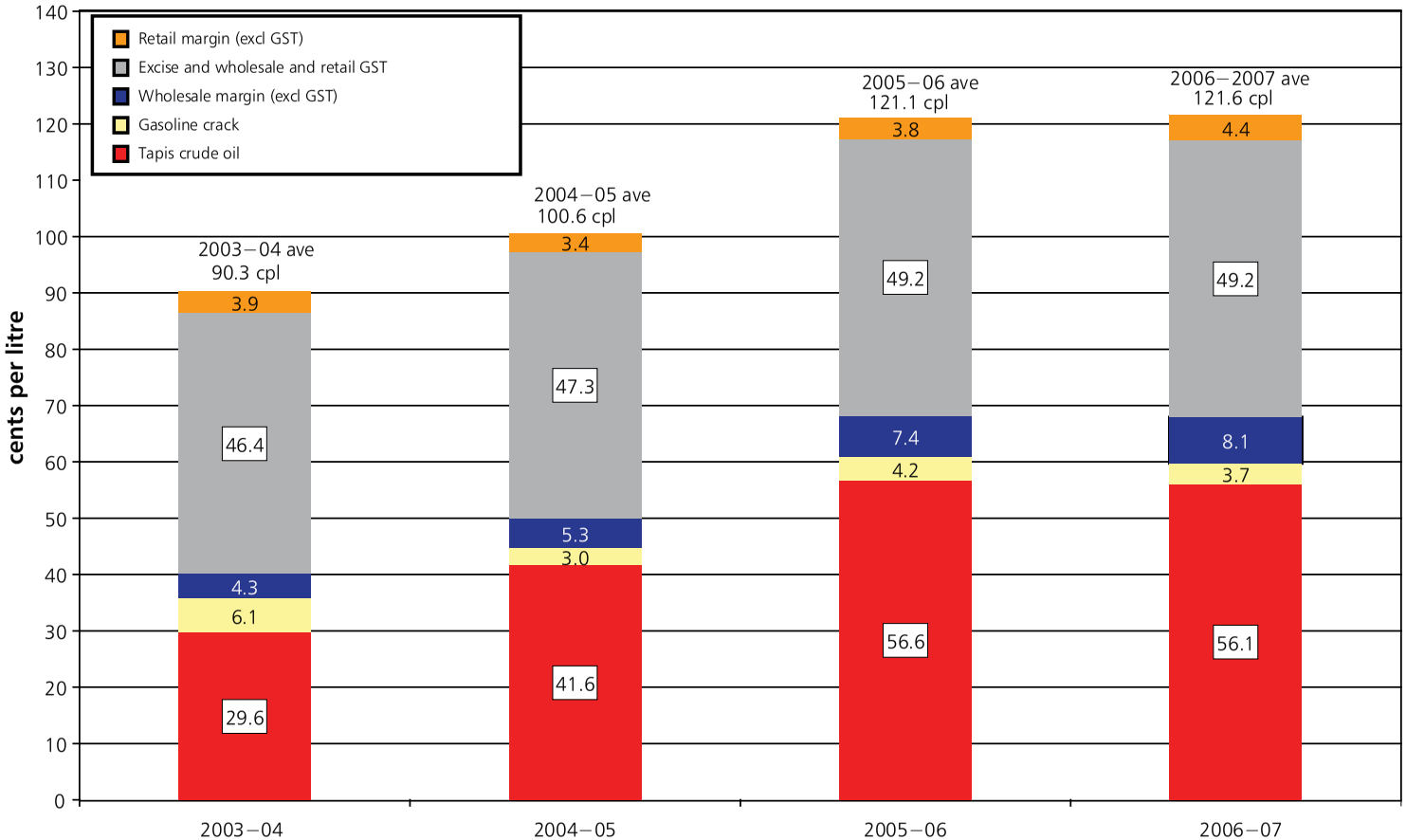
Chart 9.1 illustrates the different components of Australian retail petrol prices across the five largest metropolitan cities from 2003–04 to 2006–07.

In the chart:

- the average annual retail petrol price is indicated above the bar for each year
- all components are in Australian cents per litre
- the gasoline crack is the difference between the price of Singapore Mogas95 Unleaded and Tapis crude oil
- the wholesale margin is the average TGP in the five cities less Singapore Mogas95 Unleaded, excise and wholesale GST
- the excise and GST-component includes excise (at a constant 38.14 cpl) plus wholesale and retail GST
- the retail margin is the average retail price in the five cities less the average TGP (which includes excise and wholesale GST) and the GST-component of the retail margin
- these calculations are averages and will not represent the actual costs and margins to any particular company
- the wholesale and retail margins are gross margins and take no account of any costs incurred at the wholesale or retail level
- in any one year changes to individual components of the petrol price may not be equal to the overall change in the petrol price as a result of rounding
- as the Queensland Government provides a subsidy at the retail level of 8.4 cpl (or around 9.2 cpl taking account of the effect of the GST), the TGPs in Brisbane have been reduced by 9.2 cpl to put the retail prices and wholesale prices on a consistent basis. However, this means that the TGP data in chart 9.1 (and in charts 9.3 to 9.6) reflects adjusted TGPs rather than actual TGPs.[1]

1 No adjustment has been made for any of the other government subsidies in this analysis.

Chart 9.1 Components of Australian retail petrol prices, five-city average, annual average: 2003–04 to 2006–07



Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura, Gull and Platts, energy information division of McGraw-Hill, Inc.

In addition to explaining the various components that make up the price of petrol, chart 9.1 also shows that, over the last four years:

- the key matter influencing domestic petrol prices has been changes (predominantly increases) in the price of Tapis crude oil
- retail margins have remained broadly constant
- wholesale margins have increased by around 4.0 cpl (although fuel standard premiums may have contributed to this variation)
- the second largest component of the price of petrol is excise and the GST.

In the last year, the retail margin excluding GST increased by 0.6 cpl, the wholesale margin excluding GST increased by 0.7 cpl, while the gasoline crack fell by 0.5 cpl. The price of Tapis crude oil also fell by 0.5 cpl.

9.3 Relationship between retail prices and international petrol prices

9.3.1 General relationship between retail prices and Singapore Mogas95 Unleaded

From the evidence reviewed by the ACCC, there is clearly a strong relationship between domestic retail unleaded petrol prices and international prices, with Singapore Mogas95 Unleaded being the relevant benchmark. This is because, as discussed in chapters 7 and 8, Australian wholesale prices are based on Singapore prices.

In the course of the inquiry, the ACCC heard evidence that variations in Singapore Mogas95 Unleaded explain a large proportion of the variation in the price of petrol sold at retail when a one-week lag is taken into account to allow for the time required for the Singapore benchmark price to make its way into the IPP-based formula price and for stock turnover to occur.[2]

The ACCC also undertook an econometric analysis to assess the claim that retail petrol prices in Australia are fast to rise after an increase in Singapore Mogas prices and slow to fall following a decrease. This study, using data from 1998 to 2007, found that retail prices tend to adjust in a symmetric manner on average over time.[3] The results suggested that the retail petrol price generally responds to any change in the Singapore Mogas price by the end of the second week following that change.

Accepting that average Australian retail petrol prices broadly follow movements in the Singapore benchmark price, it is nevertheless important to recognise that domestic retail prices also fluctuate considerably based on local competitive factors. These fluctuations may, at times, mask the relationship between international prices and domestic price movements.

One of the key features of metropolitan retail markets that has such an effect is the regular price cycle that occurs in the largest metropolitan cities in Australia. The occurrence of these cycles and their impact on the retail market is the subject of chapter 11 and will not be discussed in detail here. It is, however, worth noting in this context that:

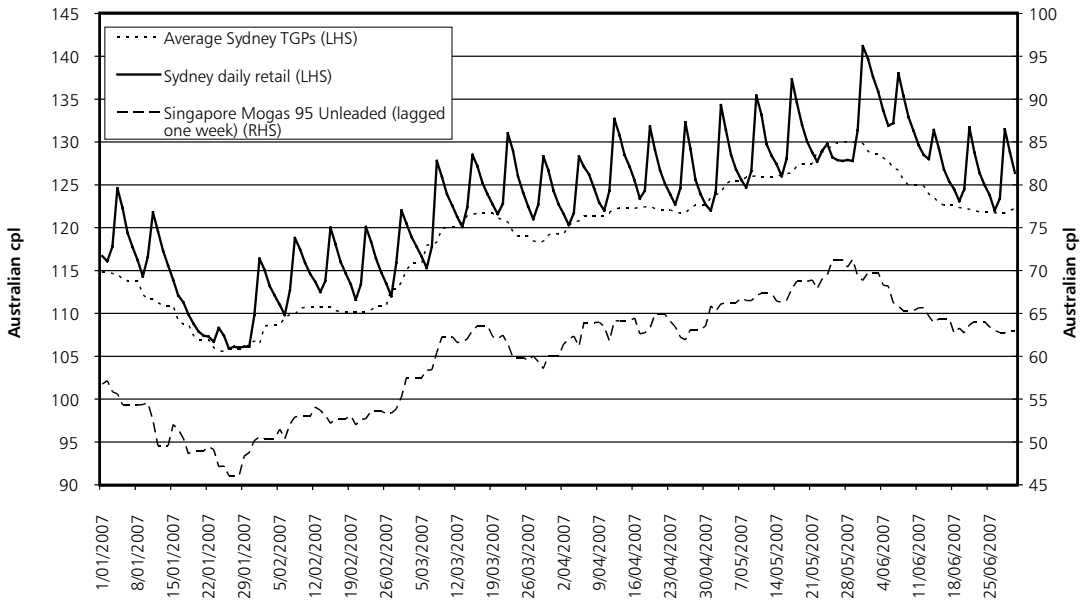
2 BP submission, p. 30 and Caltex submission, pp. 60–1, 72.
3 This study largely follows the approach of S Borenstein, AC Cameron, and R Gilbert, *Do gasoline prices respond asymmetrically to crude oil price changes'* Quarterly Journal of Economics, Vol. 112, No. 1, 1997, pp. 305–39.

- despite the 'saw-tooth' pattern of prices evident in price cycles, there is a close correlation between average movements in domestic retail prices and movements in international prices (this is shown in chart 9.2)
- there is also some force in the suggestion, made in evidence to the ACCC, that different competitors, by their individual pricing strategies and competitive conduct in the market, influence price movements throughout the occurrence of the cycle (typically weekly)

On this basis, average prices in the retail market become an outcome of a combination of competitive forces as well as international influences.

The correlation between movements in Singapore Mogas95 Unleaded prices and Australian wholesale prices (terminal gate prices) and retail prices is shown in chart 9.2 for Sydney for the period 1 January 2007 to 30 June 2007. Singapore Mogas prices have been lagged by one week.

Chart 9.2 Sydney, daily average retail prices, daily average terminal gate prices and daily Singapore Mogas95 Unleaded prices (lagged one week): 1 January 2007 to 30 June 2007



Source: Informed Sources, BP, Caltex, Mobil, Shell and Platts, energy information division of McGraw-Hill, Inc.

9.3.2 Divergences between retail prices and international prices

Movements in retail prices against movements in Singapore Mogas95 Unleaded prices since 1 January 2006 have been monitored by the ACCC using the approach outlined in section 2.5.1 of chapter 2. In particular, the ACCC has applied a number of factors (detailed in section 2.5.1) to assess divergences of retail prices from underlying Singapore Mogas95 Unleaded price changes, for both Singapore Mogas95 Unleaded increases and decreases.

The outcome of this analysis was that there is no evidence of any systematic deviation of retail prices from the relevant international benchmark prices, but it was clear that deviations do occasionally occur.

Two instances of deviations were highlighted by the ACCC (i.e. in January 2007 and late May/early June 2007) in the course of the monitoring process. Chart 2.6 in chapter 2 shows that Singapore Mogas95 Unleaded prices decreased from late May 2007 while domestic petrol prices continued to increase. The January divergence is also shown.

This gave rise to concern that reductions in Singapore refined petrol prices were not being reflected in lower retail prices.

The ACCC publicly expressed concern about this issue in June 2007, as noted in the ACCC's issues paper to this inquiry and in chapter 2. In these circumstances, the ACCC specifically asked market participants to explain the divergences, under s. 95ZK of the Act.

The response from participants at the inquiry varied. However, the following points can be made.

- A number of industry participants considered that there were divergences during the two periods in question, but that these divergences were not unusual and that frequent divergences also occur in the opposite direction, i.e. where the price of Singapore Mogas is increasing while retail prices are falling. Market participants considered that it was misleading to focus on particular short periods of time in isolation.[4]
- Some participants drew attention to the fact that, in the January 2007 period, discounting did not keep pace with a rapid decline in costs, but retail margins fell below the long-term average in late January and early February. It was then suggested that, in June 2007, international prices fell rapidly from a peak in May. The observations were that retail prices did not follow international prices initially, given the previous highs of international prices. Parties stated that in Sydney, there was an irregular and prolonged period of deep discounting in the last two weeks in May, which was followed by increasing prices to recover margins, at a time when international prices were falling.[5]
- There were also differing views expressed regarding the appropriateness of the methodology used to highlight the alleged divergences.
- Caltex, for example, compared retail prices with international prices by assuming that the 'underlying retail price' is based on the same day's TGP and the TGP is based on the previous seven working days' Mogas95 prices. It used a seven-calendar day rolling average of retail prices for Brisbane, Sydney, Melbourne and Adelaide. This analysis led Caltex to conclude that there were peaks in the difference between retail prices and Singapore prices on the two periods in question, but that the peaks were 'within the historical range of volatility'. Using a 14-day rolling average apparently showed no significant peaks around the two dates. This led Caltex to suggest that apparent peaks may be the result of the monitoring model used and may not represent any unusual operation of the market.[6]

The ACCC does not consider that these responses provide a satisfactory explanation of the divergences. It notes that the analysis in chapter 2 suggests that, at least in the period since January 2007, there appears to have been a degree of asymmetry in the response of retail petrol prices to decreases in Singapore Mogas prices compared with the response of retail prices to increases in Singapore Mogas prices.

4 BP submission, p. 32 and Mobil submission, p. 10.
5 Coles submission, p. 7.
6 Caltex submission, pp. 75–85.

9.4 How prices are determined at the retail level

9.4.1 General pricing strategies

As can be seen from chart 9.1 above, the most important factor determining the retail price generally is the wholesale price at which the retailer purchased the fuel. Retail petrol prices in Australia will tend to reflect wholesale prices plus associated costs (such as branding and transport) plus a profit margin.

However, in setting the price at the bowser for unleaded petrol, there are numerous additional factors. Importantly, all of the retailers take into account the prices charged by their competitors. The pricing strategy adopted by all players is to match (or undercut), to the extent they can, their local competitors' prices or the price of the major competitor in their area. Each retailer seeks to balance volume of sales (obtained through low retail prices) with increased margin (obtained through higher prices). All retailers generally follow the price cycle movements of their competitors, although they may choose the timing of their respective price movements.

Other factors that appear to affect retailers' pricing strategies are:

- competition in the local market
- customer behaviour
- market position
- general market conditions
- day of the week
- traffic direction and intensity.

Beyond these factors, the particular pricing strategies of different types of organisations do vary.

9.4.2 Different operating structures affect how prices are set

The structure of the relationship between the oil company and the retailer broadly has an impact on the wholesale agreement for the supply of fuel and the degree to which the oil company directly or indirectly controls the retail price.

The different business structures that prevail for retail sites in Australia are outlined in chapter 5. In summary, they are:

- owner-operated
- commission agent
- franchise operated
- the supermarket/alliance arrangements.

At owner-operated sites, the owner of the site determines the retail price. In the case of sites that are branded with one of the refiner-marketers, such owners may also have agreements with their supplier that include providing price support to the owner-operator.

At commission agent sites, a site is managed on behalf of another organisation, typically a refiner-marketer or larger independent chain. At such sites, the retail price will be set by the owner and communicated to the commission agent on a regular basis.

At franchise-operated sites, the operator rents a site or number of sites from a refiner-marketer and operates under a franchise agreement, under which fuel will generally be sourced from the owner

of the site. While the franchisee may be responsible for setting the retail price, the wholesale price is generally determined by the refiner-marketer and communicated to the franchisee and, in addition, the refiner-marketer may influence retail prices through providing price support. Price support is an important mechanism through which some refiner-marketers control prices set at retail at these sites. This point is developed a bit further on in the chapter.

In relation to the supermarket alliances, the relevant refiner-marketer supplies fuel to the supermarket under a wholesale supply agreement, however, it is the supermarket that set the retail price. Again, price support may be a feature of such an arrangement.

9.4.3 Price support arrangements

Price support is a throw-back to the days before the repeal of the Sites Act, when the refiner-marketers were restricted as to the number of sites they could own. This legislation has now been repealed, however, price support is still used by a number of the refiner-marketers in varying degrees, to control or influence the setting of petrol prices at certain retail sites.

The refiner-marketers gave evidence to the ACCC concerning the extent to which they use price support, if at all. The detail of these arrangements has some commercial sensitivity, nevertheless the following points can be made from evidence given publicly:

- BP provides price support to only four locations in Australia.[7]
- Caltex provides price support to its franchisees.[8]
- Mobil provides price support to its retail franchisee, SEP (the entity that operates around 280 of Mobil's retail sites).[9]
- Shell provides price support to Coles.[10]

The specifics of price support arrangements vary from company to company. However, the systems have common elements.

- Each company sets an internal reference price at which the relevant retailer buys fuel (plus freight and other costs).
- Each company also determines a margin that the relevant retailer is entitled to obtain. The company monitors competitors' prices and provides price support to a level that allows the retailer to match the competitors' prices during periods of discounting, but still retain the margin above the internal reference price.
- In some circumstances, a recommended retail price is communicated to the retailer and the price support may be conditional on the retailer not pricing above this price. The retailer generally follows the recommended price although it is not strictly required to do so.
- Price support tends to be given on the basis of a rebate at the end of a given period.
- The company decides at a given point in time to withdraw price support and informs the retailer. In this respect, it is worth noting that all price support arrangements are negotiated to enable the supplier to withdraw support at any time on a discretionary basis.

As stated above, price support arrangements remain an important feature of retail supply arrangements notwithstanding the repeal of the Sites Act. They are used by some refiner-marketers to indirectly

7 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 75.
8 Caltex submission, p. 86.
9 Mobil submission, p. 9.
10 ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 25.

control and influence prices charged at the bowser without the refiner-marketer directly setting such prices and as such they are a significant tool used by refiner-marketers to influence the market. These arrangements also play a significant role in enabling a retailer to match a competitor's prices throughout the periods of price discounting that frequently occur in the market.

9.4.4 Particular influence of various players

The conduct of the following players also has a major influence on the pricing strategies of retailers particularly in the context of price cycles.

Informed Sources

Each of the refiner-marketers and certain of the independents use the price monitoring service provided by Informed Sources to help them set retail prices. Informed Sources collects price data from retailers that subscribe to its service through an automated electronic system and also manually collects data from various retailers who do not subscribe to Informed Sources. The data collected and collated by Informed Sources is made available to subscribers through an internet service and covers about 3500 sites. Subscribers can generate reports based on data received from Informed Sources on its and competitors' prices in particular geographic areas every 15 minutes, depending on data provision.

Smaller retailers generally do not subscribe to Informed Sources and instead rely on physical monitoring and reporting of their competitors' prices.

Some of the refiner-marketers have set up electronic software systems to help them determine their prices. These systems are fed data on competitor prices and other relevant data to generate an appropriate retail price based on certain programmed criteria, broken down by market group or even on a site-by-site basis.

This high transparency of competitors' prices keeps major players in the market very well informed of competitors' prices. The sophistication with which the major retailers adjust their prices to competition also results in rapid movement of retail prices.

The quality and quantity of the information available to the major players also effectively reduces the risk encountered by retailers who seek to lead prices up in a market. By carefully monitoring the market price data, a price leader can tell whether its competitors follow the price rise or not. If not, then the price leader can drop its price back in line with the market within a short period of time after its initial price rise.

The issue of transparency of retail price information is considered in chapter 15.

Informed Sources also provided the ACCC with useful information on pricing movements and pricing of various players in the major capital cities. This information has underpinned the ACCC's analysis and comments set out below.

Refiner-marketers

While there may be individual differences in pricing strategy among the refiner-marketers, it appears that in individual markets, it is generally a refiner-marketer that initiates price increases from the trough of a price cycle. However, it was acknowledged that Coles Express also tends to lead the market up in some locations.[11] In particular, the evidence shows that refiner-marketers with a significant retail

11 Witnesses appearing before the inquiry supported this view—ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 12; and ACCC, public hearing transcript, Sydney, 4 September 2007, pp. 80–1.

presence in a particular location, often coupled with having a refinery in the area, generally lead prices up.[12] Such a 'footprint' in a particular location appears to enable the refiner-marketer to exert more influence on the price cycle.

Market data (and admissions by the relevant refiner-marketers) reveal that the price increase in regular price cycles is generally led by Mobil in Sydney and Melbourne,[13] Caltex in Brisbane[14] and BP in Perth. As set out in chapter 3, Mobil has a refinery in Victoria; Caltex operates a refinery in Queensland; and BP operates the only refinery in Western Australia. While Mobil does not have a refinery in New South Wales, it has a significant retail presence in that state.

The evidence also shows that a retailer frequently initiates a large increase in prices and observes the reactions of its competitors. If its competitors increase prices but not to the same level of the initiator, the initiator may bring its prices down into line with its competitors, or retain a differential to the extent that it can sustain that difference; for example, because it has a superior location or greater market share than competitors in the area.

A refiner-marketer that uses price support measures frequently uses the giving and withdrawal of price support to influence the rises and falls in the cycle set out above.

Evidence reveals that, at the bottom of the price cycle, the refiner-marketers tend not to charge at the lowest price point. Apart from leading the cycle, the general strategy applied by the refiner-marketers appears to be to charge the 'going market price'. It appears that they will generally match the pricing of their competitors, but will rarely aggressively discount.

Supermarkets

The two major supermarket chains in Australia—Coles and Woolworths—operate retail sites at which customers can access shopper docket discounts on their fuel purchases. The shopper docket schemes are discussed in chapter 12.

The supermarkets are generally considered to be the aggressive price discounters in the market, having to some extent taken over this role from the non-supermarket independent retailers.[15] For example, Scotts stated that, while it used to be the price leader in Mount Gambier, since the entry of the supermarket retailers, it is more generally a price follower.[16]

However, data provided by Fueltrac suggests that in Darwin, Hobart and most of the regional cities and rural locations around Australia where there are no or limited independents, Coles Express and Woolworths do not compete on price. It considered that price discounting is usually carried on by the independents.[17]

In relation to the regular price cycles, in the past supermarkets have generally been considered the first to reduce prices from the peak and the last to increase prices, following other retailers. However, this behaviour appears to have changed in the last couple of years, with Coles often being the first to

12 Witnesses appearing before the inquiry supported this view—ACCC, public hearing transcript, Melbourne, 9 October 2007, pp. 48–53.
13 ACCC, public hearing transcript, Melbourne, 20 September 2007, pp. 7–8; and ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 12.
14 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 54.
15 ACCC, public hearing transcript, Melbourne, 9 October 2007, p. 53; Caltex submission, pp. 57–8; ACCC, public hearing transcript, Sydney, 4 September 2007, p. 28; ACCC, public hearing transcript, Brisbane, 22 August 2007, pp. 37–8; ACCC, public hearing transcript, Hobart, 14 September, pp. 75–8.
16 ACCC, public hearing transcript, Mt Gambier, 11 September 2007, p. 16.
17 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 69.

increase prices from the trough of a price cycle and Woolworths increasing prices following an increase by competitors with a shorter lag than in previous years.[18]

Coles and Woolworths state in their submissions that they set prices based primarily on local competition.[19] Both Coles and Woolworths state that their strategies are to at least match the lowest price in the local area, as well as offering their shopper docket discounts.

Woolworths states that it does not lead the price down, noting that in setting fuel prices it attempts to compete with competitors' board prices.[20]

Independent retailers

From the evidence presented, it is the view of the ACCC that independents have historically been aggressive discounters and led prices down from the peaks.[21] However, the entry of the supermarkets and the introduction of the shopper docket scheme have apparently reduced the impact of the independent retailers. It would appear that independents now tend to follow the market. Many smaller players have been forced to adopt a pricing strategy of seeking higher margins with lower volumes.[22] Nevertheless, from a review of the evidence, many larger independents still maintain consistently low prices, even at the bottom of the cycle.

One oil industry consultant gave evidence before the inquiry of his view that independent suppliers have changed their pricing behaviour out of a fear of possible reactions by the supermarkets. He stated that those players that might in the past have maintained their (low) prices on Friday and derived benefits in terms of higher volumes from their lower prices may well now be moving to increase their prices more quickly. He stated that this was because 'they are scared of what the supermarkets might do'.

While this evidence was anecdotal, it was based on observations in the market. The inquiry also heard evidence in closed session from two independent suppliers who stated that they temper their behaviour (by not reducing prices too low and by not delaying too long in following a price increase) to avoid a response in the form of very low prices and 'missed' price cycles.

The ACCC is of the view that the supermarkets now exert considerable influence on retail pricing and that the independents have lost some of their role as discounters in the market.

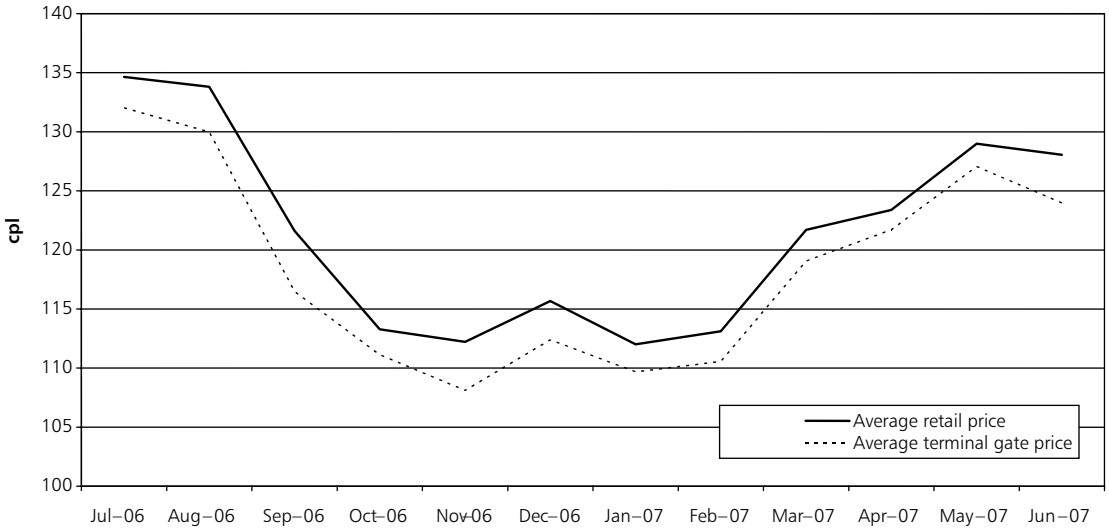
9.5 Retail margins

As outlined in section 9.2, over the last four years, retail margins have remained broadly constant, although they have increased slightly in the last two years, following a fall in 2004–05. In this section, the level of retail margins for unleaded petrol is examined more closely.

As explained in the ACCC's submission to the Senate inquiry, average retail petrol prices tend to follow TGPs. This is illustrated in chart 9.3, which shows monthly average retail petrol prices in the five largest metropolitan cities and the average of the TGPs in those five cities.

18 Mobil response to s. 95ZK request, pp. 15–6; ACCC, public hearing transcript, Perth, 28 August 2007, p. 20, p. 65.
19 Coles submission, p. 6; Woolworths' submission, p. 2.
20 ACCC, public hearing transcript, Sydney, 4 September 2007, pp. 71–4.
21 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 67; ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 61.
22 United Petroleum submission, pp. 1–2; ACCC, public hearing transcript, Canberra, 21 August 2007, p. 35, p. 37, p. 43.

Chart 9.3 Five largest metropolitan cities, average monthly retail prices and terminal gate prices: July 2006 to June 2007



Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura and Gull.

The ACCC's analysis of retail margins is based on the difference between retail petrol prices and wholesale petrol prices, as approximated by TGPs. This measure is therefore a **gross indicative** measure and includes costs at both the wholesale and retail level (such as branding, transport beyond the terminal gate and costs associated with running a service station). In addition, as explained in chapter 8 of this report, rather than reflecting actual wholesale prices, TGPs are often a benchmark or reference price for many in the market.

Gross indicative retail margins have been relatively stable over the past few years, with the difference between the lowest annual margin and highest annual margin being 1.2 cpl.[23] Table 9.1 presents average annual retail prices and TGPs across the five largest metropolitan cities, and the difference between these prices (i.e. the retail margin), for 2003–04 to 2006–07.[24] The margins are also presented in chart 9.4.

Note that the margins discussed in this section include GST and therefore differ from the figures presented in section 9.2, where retail margins excluding GST were considered.

In 2006–07 the difference between the average retail petrol prices in the five largest metropolitan cities and the average TGPs in those five cities was 4.9 cpl. This was 0.8 cpl higher than in 2005–06 and 0.7 cpl higher than the average over the last four financial years (4.2 cpl). The average margin fell in 2004–05, before increasing in each of the following two years.

23 Note that as the Queensland Government provides a subsidy at the retail level of 8.4 cpl (or around 9.2 cpl taking account of the effect of the GST), the TGPs in Brisbane have been reduced by 9.2 cpl to put the retail prices and wholesale prices on a consistent basis. However, this means that the TGP data in the analysis of Brisbane and the five-city average are adjusted TGPs rather than actual TGPs.

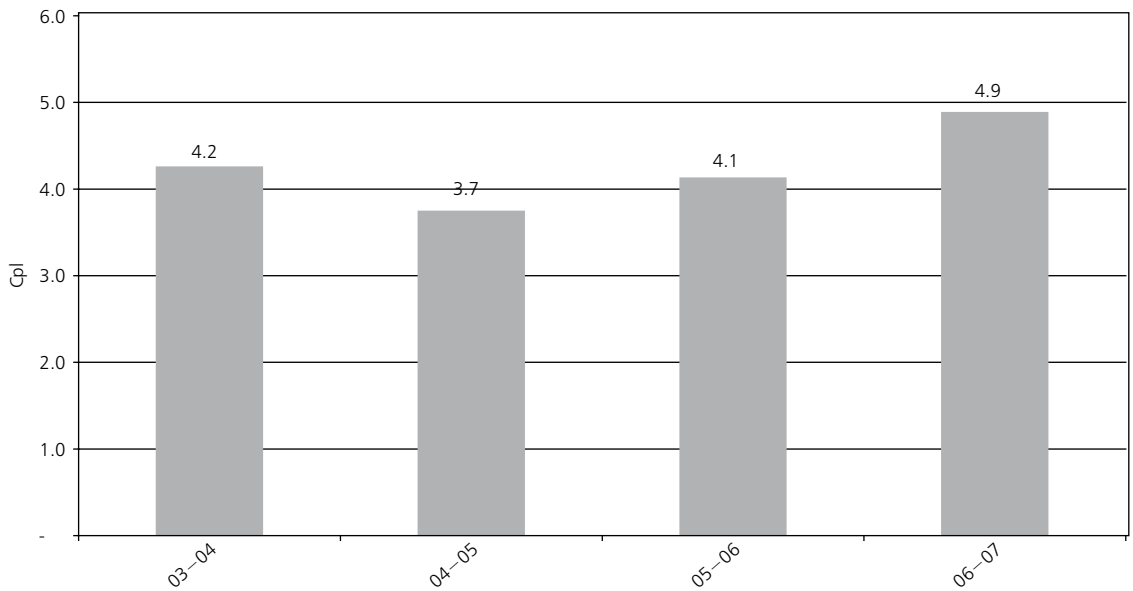
24 TGP data is not available before 2003–04 for all cities.

Table 9.1 Average annual retail prices, terminal gate prices and gross indicative margins, five-city average: 2003–04 to 2006–07

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2003–04	90.3	86.0	4.2
2004–05	100.6	96.9	3.7
2005–06	121.1	116.9	4.1
2006–07	121.6	116.7	4.9

Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura and Gull.

Chart 9.4 Five largest cities, annual differentials between average retail prices and average TGPs: 2003–04 to 2006–07



Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura and Gull.

Confidential information provided by petrol retailers on gross retail margins is broadly consistent with the trend illustrated in chart 9.4. At an aggregate level this information showed that retail margins generally increased since 2002–03 and fell when the major supermarkets entered the market (between 2003–04 and 2004–05), before increasing to 2006–07.

Company data also shows that margins in regional areas are generally higher than in metropolitan cities. Higher margins in country areas has affected the strategy of some businesses such as United Petroleum, which states that it is looking to expand its business by focusing on regional rather than metropolitan sites because there is less competition, lower volumes and higher margins in regional areas.[25] The subject of prices in regional areas is examined in chapter 10.

25 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 24.

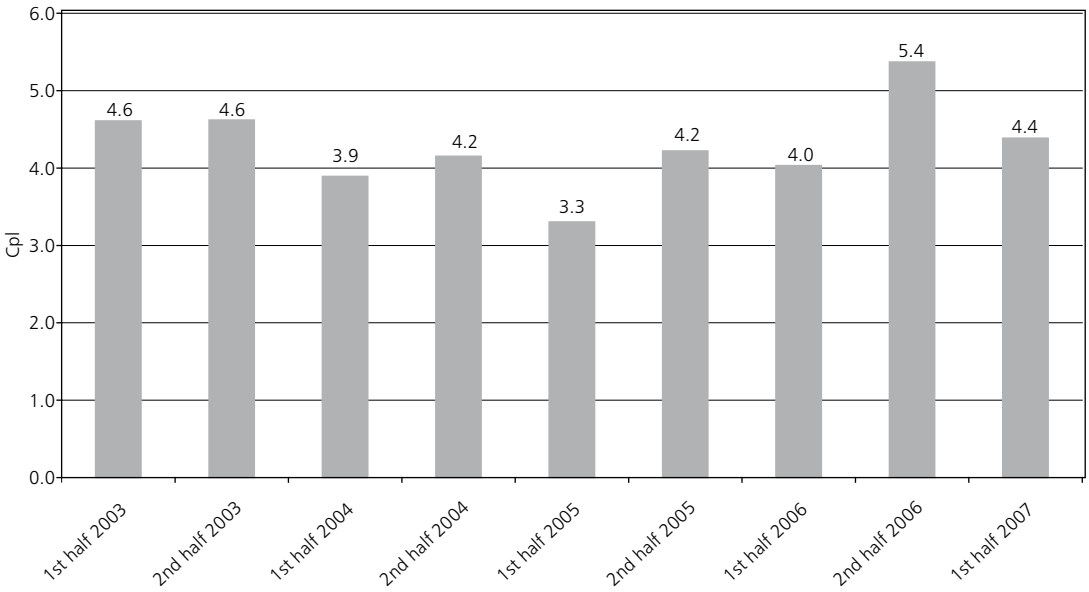
When examined over six-monthly periods, gross indicative margins ranged from a low of 3.3 cpl in the first half of 2005 to a high of 5.4 cpl in the second half of 2006, as shown below in table 9.2 and chart 9.5.

Table 9.2 Average six-monthly retail prices, terminal gate prices and gross indicative margins, five-city average: H1 2003 to H1 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	Cpl	Cpl	Cpl
1st half 2003	89.9	85.3	4.6
2nd half 2003	87.5	82.9	4.6
1st half 2004	93.1	89.2	3.9
2nd half 2004	99.4	95.3	4.2
1st half 2005	101.9	98.5	3.3
2nd half 2005	117.3	113.1	4.2
1st half 2006	124.9	120.9	4.0
2nd half 2006	121.9	116.5	5.4
1st half 2007	121.2	116.8	4.4

Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura and Gull.

Chart 9.5 Five largest cities, six-monthly differentials between retail unleaded petrol and TGPs: 1st half 2003 to 1st half 2007

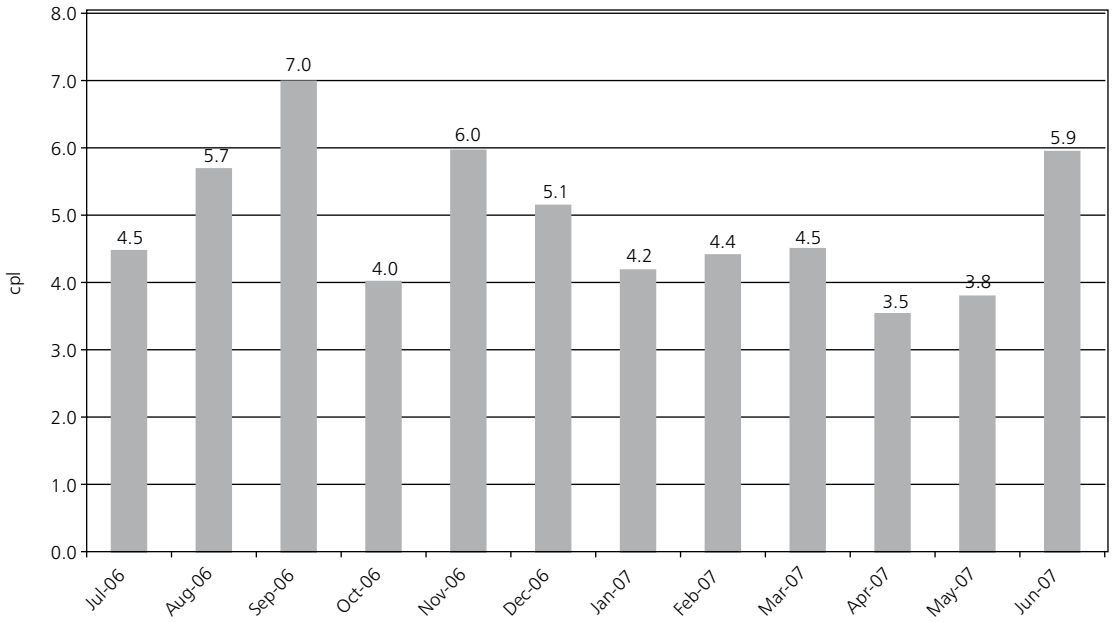


Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura and Gull.

Margins have been even more volatile when examined on a monthly basis. This can be seen from chart 9.6, which shows the monthly differential between average retail petrol prices in the five largest metropolitan cities and the average TGPs in those five cities in 2006–07.

It can be seen that the monthly differential ranged from a low of 3.5 cpl in April 2007 to a high of 7.0 cpl in September 2006. This is a range of 3.5 cpl.

Chart 9.6 Five largest metropolitan cities, monthly differential between average retail prices and average TGPs: July 2006 to June 2007



Source: ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura and Gull.

On a shorter time scale, retail margins vary over the course of retail price cycles, being high early in the price cycle and falling as prices fall. For example, DOCEP presented some analysis of retail margins in Western Australia in its submission. DOCEP stated that Perth retail margins fluctuate daily, typically reaching a peak of between 6.0 cpl and 10.0 cpl early in the price cycle and decrease to a minimum of between -2.0 and 2.0 cpl at the end of the cycle.[26]

The level of margins in individual cities varied. Brisbane (5.1 cpl) had the highest average annual retail margin over the four-year period and Perth had the lowest (3.0 cpl). In Melbourne the average retail margin was 4.9 cpl, in Sydney it was 4.7 cpl and in Adelaide it was 3.7 cpl.

In three of the five capital cities—Melbourne, Brisbane and Perth—the retail margins were highest in 2006–07. In Sydney it was highest in 2004–05 and Adelaide it was highest in 2005–06.

In three of the five capital cities—Melbourne, Brisbane and Perth—the margins were lowest in 2004–05. In Sydney it was lowest in 2005–06 and in Adelaide it was lowest in 2006–07.

26 DOCEP submission, pp. 23–4.

In terms of six monthly periods:

- Three cities (Melbourne, Brisbane and Perth) had their lowest margin in the first half of 2005. In Sydney the lowest margin was in the first half of 2004 and in Perth and Adelaide it was in the first half of 2007.
- Three cities (Sydney Melbourne, and Perth) had their highest margin in the second half of 2006. In Brisbane the highest margin was in the first half of 2007 and in Adelaide it was in the second half of 2005.
- The range between highest and lowest six-monthly margins was highest in Melbourne (4.0 cpl) and lowest in Adelaide (1.4 cpl).

On a monthly basis between July 2006 and June 2007:

- The highest range in monthly margins was in Brisbane (7.6 cpl) where it ranged from a low of 1.6 cpl (in October 2006) to a high of 9.2 cpl (in December 2006).
- Monthly margins were most stable in Sydney where the range between the highest and lowest margins was 3.7 cpl.
- Melbourne had the highest monthly average margin of 10.1 cpl in September 2006. Adelaide had the lowest monthly average margin of 0.0 cpl in January 2007.

Details of the margins in individual cities are presented in appendix J.

It is important to note that while an understanding of margins is relevant to petrol pricing, an analysis of margins on a cents per litre basis may not, without more information, lead to an accurate assessment of profitability at individual sites or for individual retailers. This is because overall profitability of individual sites will largely depend on the volumes traded and achieving a successful balance between volume and margin. It is quite possible for a high margin, low volume site to be less profitable than a low margin, high volume site. The overall profitability of a particular site will also depend on the ability to retail goods and services other than petrol.

The ACCC's analysis demonstrates that retail margins appear to be small. Interested parties to the inquiry supported this view.[27] This may have led to some rationalisation of the industry with the closure of uneconomic sites. The ACCC also received evidence that a significant proportion of gross profit arned by convenience stores comes from selling non-fuel products.[28]

9.6 Competition at retail level

9.6.1 The nature of petrol and nature of demand

As discussed in chapter 1, the nature of unleaded petrol and the nature of demand for it are conducive to a competitive market and price volatility. Unleaded petrol is a homogenous product, with little brand loyalty or non-price competition. A proportion of consumers have highly price elastic demand and are willing to buy fuel at the time and location that offers them the lowest price. These consumers are also more likely to use the supermarkets' shopper dockets. The pricing of unleaded petrol is highly transparent and consumers are highly mobile, facilitating shopping around for the cheapest price. However, a proportion of consumers have price inelastic demand and buy fuel when they need to at a location that is convenient for them.

27 Coles Express submission, p. 5; BP submission, p. 30, p. 35.
28 Woolworths submission, pp. 5–6.

9.6.2 Market structure

Chapter 5 details the market structure of petrol retailing in Australia. The retail level of the petrol market is substantially less concentrated than both the refining sector and the wholesale level of the market. The retail sector has also become less concentrated over the period 2002–03 to 2006–07, as measured by the HHI falling from 0.1872 in 2002–03 to 0.1738 in 2006–07.[29]

Chapter 5 also details the process of rationalisation over the past 30 years to the number of retail sites in Australia. There are currently around 6500 sites, whereas there were 20 000 sites in 1970. This is due to both supply-side and demand-side factors.

Nevertheless, the ACCC is of the view that the retail sector of the market still has a significant number of players, particularly in metropolitan areas.

9.6.3 Future of petrol retailing

The inquiry heard evidence that suggested that further rationalisation in service station numbers is likely in the future.

Some of the refiner-marketers noted that they planned to divest unprofitable sites and invest in sites in attractive locations with higher quality facilities. They noted that this process could result in a reduction in their future site numbers.

In particular, BP noted that over time its network of directly operated stores had reduced in size as it had focused on the convenience business and ensuring that it held a portfolio of retail sites that were high volume, high shop turnover, flagship sites. BP expects ongoing churn in its company-owned network as it divests poorer performing sites with new-to-industry sites in key strategic locations. BP also noted that over the last few years there had been a significant transition of BP's company-owned sites from franchise operation to company operation.[30]

Mobil also submitted that it had recently completely restructured its retail operations to improve the viability of the Mobil branded network. Mobil noted that 250 service stations had been closed during the last six years, that it had divested ownership interest in all but two of its branded distributors, and also sold most of the rural and regional service stations it owned.[31]

Nevertheless, the supermarkets indicated that they intended to expand their operations in the future as did independent operators such as United.

On this basis, the ACCC's view is that, while players such as the supermarkets may retain a significant presence, the retail market is likely to remain competitive, at least in the short term

9.6.4 Conclusions

On the basis of the evidence discussed in this chapter the ACCC has formed the following conclusions:

- The main driver of increases in domestic petrol prices over recent years has been the increase in the price of Tapis crude oil.
- There is generally a strong relationship between domestic retail unleaded petrol prices and Singapore Mogas95 Unleaded, with a lag of between one and two weeks for both price increases and price falls.

29 See section 5.2 for a description of the HHI index.
30 BP submission, pp. 25–6.
31 Mobil submission, pp. 6–7.

- There is no evidence of any systematic deviation of retail prices from the relevant international benchmark prices but deviations do occur on occasion (such as in January and June 2007).
- The ACCC does not consider that the responses provided by market participants about these deviations provide a satisfactory explanation. The analysis in chapter 2 suggests that, at least in the period since January 2007, there appears to have been a degree of asymmetry in the response of retail petrol prices to decreases in Singapore Mogas prices compared with the response of retail prices to increases in Singapore Mogas prices.
- Different operating structures (owner-operated, commission agent, and franchise operated) affect how prices are set.
- The refiner-marketers use price support arrangements to influence the setting of prices at the retail level, even where they do not directly set the price.
- Different types of organisation have different pricing approaches:
    - The refiner-marketers generally initiate prices moving up to the peak of regular price cycles and, at the bottom of the price cycle, these suppliers tend not to charge at the lowest price point.
    - The supermarkets are considered to be the aggressive discounters in the market, in addition to offering shopper docket discounts, having to some extent taken over this role from the non-supermarket independents. However, this behaviour appears to have changed somewhat in the last couple of years.
    - Independents have historically been aggressive discounters and led prices down from the peaks. However, the entry of the supermarkets, and the introduction of the shopper docket schemes, has reduced the impact of the independent retailers.
- Retail margins appear to be small. The gross indicative retail margin on average across the five largest metropolitan cities over the last four years is 4.2 cpl. Retail margins have remained broadly constant over that period, although they have increased slightly in the last two years. Low margins may have led to some rationalisation of the industry with the closure of uneconomic sites.

Overall it appears that there is a significant degree of price competition at the retail level. However, there is generally less price competition in rural areas and this is explored further in chapter 10. Price cycles are considered in chapter 11 and shopper dockets are considered in chapter 12. Finally, the issue of retail price transparency is considered in chapter 15.

10 Prices in regional areas

10.1 Introduction

The discussion in chapter 9 focused on retail prices for unleaded petrol in the capital cities, or at aggregate levels. However, prices for unleaded petrol in regional areas of Australia are a concern for many residents in these areas. Pricing in regional areas and country areas is not as intensely competitive as it is in metropolitan locations. The number of competitors is usually less, costs (transport, distribution and site operation) are higher and regular price cycles are absent. As a general rule, retail margins are consequently higher.

Country prices are also generally more stable than city prices and in general there are no regular price cycles in country towns. Examples of price movements in a couple of country towns (Tamworth in New South Wales and Broome in Western Australia) are provided in appendix L. Some country towns have regular cycles but these tend to be towns that are close to large metropolitan cities.

This chapter examines first the price differential between city and country areas and second the differentials between individual country towns.

10.2 City–country differential

10.2.1 Data analysis

In Australia, prices for unleaded petrol are generally higher in country areas than in cities. The city–country differential is the difference between the average country price and the average capital city price.

Annual city–country differential

Table 10.1 shows the city–country differential for the six states and the Northern Territory on an annual basis for the five years from 2002–03 to 2006–07. It also shows a couple of aggregate indicators of the city–country differential (five-city and eight-city city–country differentials).[1]

1 The city–country differentials for each state are the difference between the arithmetic average of average annual prices in each country town in the state and the average annual capital city price.

The **five-city** city–country differential is the difference between the arithmetic average country price for the seven states and territories monitored (there are no prices available for the Australian Capital Territory other than Canberra) and the arithmetic average price for the five largest metropolitan cities—Sydney, Melbourne, Brisbane, Adelaide and Perth.

The **eight-city** city–country differential is the difference between the arithmetic average country price for the seven states and territories monitored and the arithmetic average price for the eight capital cities.

Since the eight-city differential includes in the city price the smaller capital cities, which tend to have higher prices than the five largest metropolitan cities, the eight-city city–country differential produces smaller numbers than the five-city city–country differential.

Table 10.1 City–country differential, annual: 2002–03 to 2006–07

	2002–03	2003–04	2004–05	2005–06	2006–07	5-year average
State	cpl	cpl	cpl	cpl	cpl	cpl
New South Wales	4.1	3.5	3.4	4.9	5.1	4.2
Victoria	4.7	3.3	5.7	4.9	4.3	4.6
Queensland	4.5	4.1	5.0	5.3	5.1	4.8
South Australia	5.1	3.9	4.6	5.1	6.9	5.1
Western Australia	7.9	8.7	10.4	9.6	8.8	9.1
Tasmania	–0.1	0.5	0.0	-1.5	0.6	–0.1
Northern Territory	7.4	4.2	4.7	3.4	3.2	4.6
Aggregate indicators						
Five-city	4.9	4.2	5.3	5.3	5.4	5.0
Eight-city	2.4	1.5	2.5	2.4	2.6	2.3

Source: ACCC and FUELtrac

As shown in the table, the differential varies between states, but over the past five years has averaged 5.0 cpl using a five-city average and 2.3 cpl using an eight-city average.

2006–07 compared with 2005–06

Table 10.1 shows that, compared with the previous year, in 2006–07:

- there was an increase in the city–country differential in New South Wales, South Australia and Tasmania
    - the largest increase was in Tasmania, with an increase of 2.1 cpl
- the city–country differential decreased in Victoria, Queensland, Western Australia and the Northern Territory
    - the largest decrease was in Western Australia, with a decrease of 0.8 cpl
- the five-city city–country differential increased by 0.1 cpl and the eight-city city–country differential increased by 0.2 cpl.

2006–07 compared with the five year average

The table shows that, compared with the five year average, in 2006–07:

- The city–country differential was higher in New South Wales, Queensland, South Australia and Tasmania.
    - The largest variation was in South Australia, where it was higher by 1.8 cpl.
- The city–country differential was lower in Victoria, Western Australia and the Northern Territory.
    - The largest variation was in the Northern Territory, where it was lower by 1.4 cpl.
- The five-city city–country differential was slightly higher by 0.4 cpl and the eight-city city–country differential was higher by 0.3 cpl.

2002–03 to 2006–07

The table shows that over the five-year period 2002–03 to 2006–07:

- the lowest city–country differential over the period occurred in 2003–04 for three states (Victoria, Queensland and South Australia)
    - in Western Australia the lowest city–country differential was in 2002–03, in New South Wales it was in 2004–05, in Tasmania in 2005–06 and in the Northern Territory in 2006–07
- the lowest five-city and eight city city–country differentials also occurred in 2003–04
- Western Australia generally had the highest city–country differential and Tasmania had the lowest
- the difference between the highest and lowest city–country differential over the five years ranged between 1.2 cpl and 3.0 cpl for six states (i.e. New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania)
    - in the Northern Territory it was 4.2 cpl
- the difference between the highest and lowest five-city city–country differential over the five years was 1.2 cpl and the difference between the highest and lowest eight-city city–country differential was 1.1 cpl.

Movements in city and country prices in 2006–07

Charts for each state and the Northern Territory average monthly capital city and average country prices over the period July 2006 to June 2007 are contained in appendix K.[2]

The charts illustrate that the difference between country and city prices varies over the year. The charts show that prices in country areas tend to take longer to reflect the movements in international petrol prices. For example, when movements in international petrol prices lead to an increase or decrease in overall prices, it is reflected in the largest metropolitan cities first and in country areas with a lag of around one to two weeks.

This lag leads to city prices being closer to country prices during a rise in international prices (such as in March 2007) and further apart during a fall in international prices (such as in November 2006). This causes the city–country differential to vary over the year.[3]

Monthly variations in the city–country differential

The variation in the city–country differential is illustrated in chart K.8 in appendix K, which shows the city–country differential in New South Wales on a monthly basis from July 2006 to June 2007.

The chart shows that:

- the average monthly city–country differential over the 12-month period was 5.1 cpl
- the average monthly city–country differential fluctuated greatly over this period; it ranged from a low of 2.6 cpl in March 2007 to a high of 9.0 cpl in September 2006.

2 The average country price is the average of monthly prices in all towns in the state or the Northern Territory for which prices are available.

3 In the charts, city and country prices peak or trough during the same month in most cases. This is because monthly average prices are being examined, which may mask the effect of the generally one or two week lag.

10.2.2 Reasons for the differential

Interested parties to the inquiry largely agreed on the reasons for the differential between city and country prices. These factors can be separated into underlying factors and locally specific factors.

Underlying factors

The key underlying influences on domestic petrol prices are movements in the Singapore price for refined petrol and the Australian/US dollar exchange rate. The time lag between changes in these prices and price changes at petrol bowsers is generally longer in country areas than in cities. A time lag of around one to two weeks generally applies in cities due to the averaging formula used by refiners in Australia and the frequency of changes to terminal gate prices. In addition to this, petrol stocks are replenished less often by wholesalers and retailers in country areas, due to the generally lower volume of sales. The lag between movements in international prices and country retail prices is therefore longer.

Locally specific factors

Petrol prices in country locations are generally higher than in the larger metropolitan cities because of locally specific factors. The main factors are smaller populations, greater distance from terminals, less competition and lower volumes.

Locally specific factors also explain price differences between country towns, which are discussed further in the next section. Each location in rural and regional areas will tend to have particular factors that influence petrol prices at particular times.

Population

In general, locations with a small population are likely to have fewer service stations, and therefore less competition than locations with a large population. Market participants cited less competition as one factor explaining the city–country price differential.[4] Caltex considered that there is less competition in country areas than in metropolitan areas and that supermarket chains in country towns have a stated policy of pricing against the lowest priced competitor. It considered that this policy discourages such operators from discounting, because they may suffer no volume gain but a reduction in margin. Caltex stated that rural prices are therefore likely to move slowly in response to a fall in international prices. [5]

Furthermore, higher margins (and therefore retail prices) may be required at those service stations in locations with a small population to make them viable. As turnover and volume are likely to be higher at service stations in locations with a large population, the margin per litre (and therefore retail price) can be lower. In addition, larger profits on shop sales at sites with larger turnovers allow an even smaller margin to be earned on petrol sales at large turnover sites. Market participants cited lower turnover in regional areas as one factor contributing to higher prices.[6] In addition, APADA stated that, because of lower passing trade, discounting in most cases does not necessarily result in increased sales.[7]

Less competition in rural areas may also explain the general absence of regular price cycles in these areas. BP stated that in major regional centres such as Townsville, Albury and Toowoomba, 'sticky' pricing occurs, when there are long periods of time where margins are very low, with no player willing to be the first to lift prices and if prices are restored to higher levels, margins may remain above average

4 NRMA submission, pp. 17–18; ACCC, public hearing transcript, Melbourne, 24 August 2007, p. 27.
5 Caltex submission, p. 82.
6 BP submission, p. 30; Caltex submission, p. 70; NRMA submission, p. 18; APADA submission, p. 5; ACCC, public hearing transcript, Townsville, 23 August 2007, p. 29.
7 APADA submission, p. 5.

for a considerable period. However, BP did not consider that this necessarily indicates less competition in such areas, rather that the competitive behaviour is different.[8]

The effect of prices falling as the population in a town increases may be explained in abstract terms in the following way.

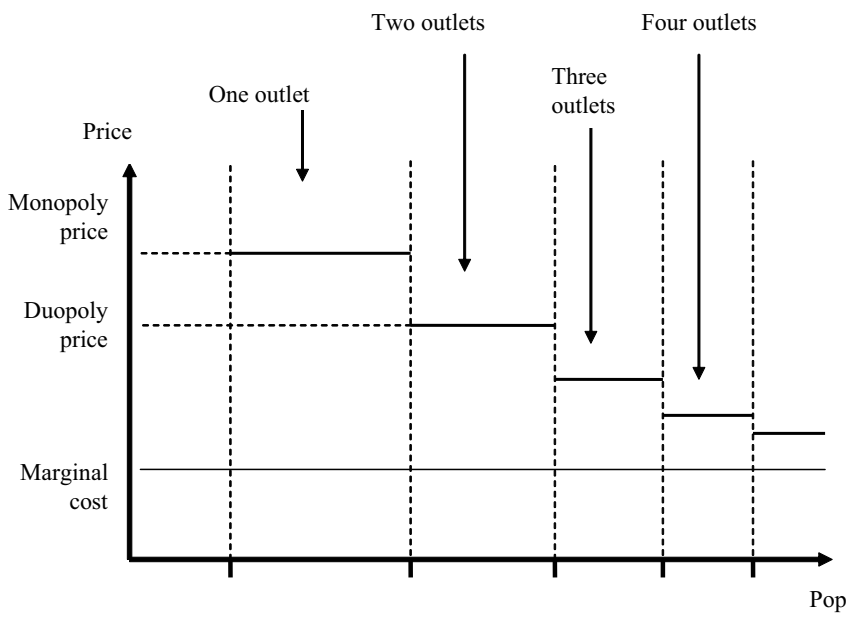
As the market goes from very few customers and grows, one outlet will start up. It will charge a monopoly price and just cover its capital costs.

As the market grows further, the monopoly outlet is able to enjoy higher profits (still charging the monopoly price) until the market is 'big enough' to support two outlets. When the market gets to this point a second outlet commences operations. Competition pushes down prices and profits so that both outlets just cover capital costs. The two firms charge the duopoly price.

As the market grows further, the duoplists keep charging the duopoly price but make more profits. This continues until there is enough volume sold in the market to support three outlets and so on.

This simplified model is illustrated graphically below.[9] The graphs provide the type of pattern we might expect to observe between different regions as the population grows. Figure 10.1 shows how price changes as population increases.

Figure 10.1 Price falls with population increases



Note that as the population grows, the price falls in a discontinuous way. In other words, bigger centres that are able to sustain more outlets will have consistently lower prices. The price falls tend to diminish, however, as population increases. Therefore the 'gap' between the monopoly and duopoly price is bigger than the gap between the duopoly and three-outlet price, and so on.

8 BP submission, p. 29.
9 The model used is a differentiated product model where the number of buyers can vary.

The prices head towards marginal cost as the population rises. However, as long as there are fixed capital costs, the prices always exceed marginal cost regardless of population size.[10]

Profits are shown in the next figure.

Figure 10.2 Profit falls as numbers of suppliers increases

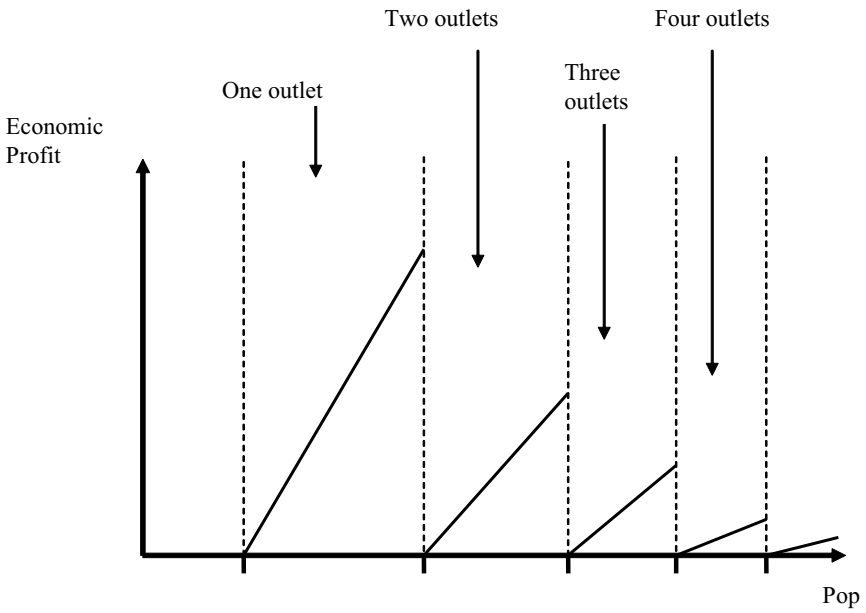


Figure 10.2 shows the level of economic profit falling to zero each time a new supplier enters the market.[11] A zero economic profit means that an outlet is just getting a market return on capital. As the population grows, existing outlets become more profitable until the population is large enough to permit a new entrant. Profits then 'collapse' and rebuild as the population grows, until the next outlet enters.

Note that the maximum profit before new entry gets 'lower' each time and the profit lines are 'flatter' as the population grows.

This suggests that profits should be more variable in rural and regional areas. In some areas we expect profits to be high if the population just won't support a new outlet. In other circumstances the profits will be low, say if the population has just enabled new entry. Overall, we would expect rural and regional areas to be more profitable than city areas as reflected by the 'falling' profit lines as population increases.

10 The fact that prices stay 'constant' in the diagram as the population grows, as long as a new outlet can't economically enter, simply reflects the way that population grows in this analysis. It is assumed that all consumers are 'identical' in terms of their demand, so that as the population grows there is no systematic change in the elasticity of demand.

11 This model is for a 'Salop circular city' model with linear distance cost for consumers. The results also hold in general form for a Cournot model where the population of identical consumers grows.

Distance from terminal

The further away a location is from a terminal, the greater will be freight costs. Market participants cited this factor as one contributing to higher regional prices.[12] Where there is direct delivery of fuel from the terminal the cost of supply is generally lower. Where distributors supply fuel from storage depots in regional areas there is the double handling of fuel and therefore higher costs in supply.

Moreover, those locations close to major highways will tend to have service station sites with higher volume petrol and shop sales, than those in out of the way locations. Such sites have the ability to operate on lower margins.

Number of wholesale suppliers

In general there will be more competition in the supply of fuel to retailers where there are more wholesale suppliers in a market.

Volume discounts

Customers that buy fuel in greater volume and more frequently have better ability to negotiate discounts off the terminal gate price.

10.3 Country–country differentials

Apart from the differential between city and country prices, there is often a level of concern in the community about divergences between prices in different towns where people expect that prices should be similar.

While Caltex stated that it operates very few sites in the country, it considered that the variation between prices in individual country towns, in almost all cases, is the result of local competitive factors, including site volumes and site density, the presence of discounters and the impact of new entrants seeking to establish volume.[13]

The Wagga Fuel Watch Committee (WFWC) raised a concern about what it stated is a consistent price differential between Wagga Wagga and Albury. It stated that in May 2007 there was a 17 to18 cpl price differential, with Wagga Wagga having higher prices.[14]

10.3.1 Case studies

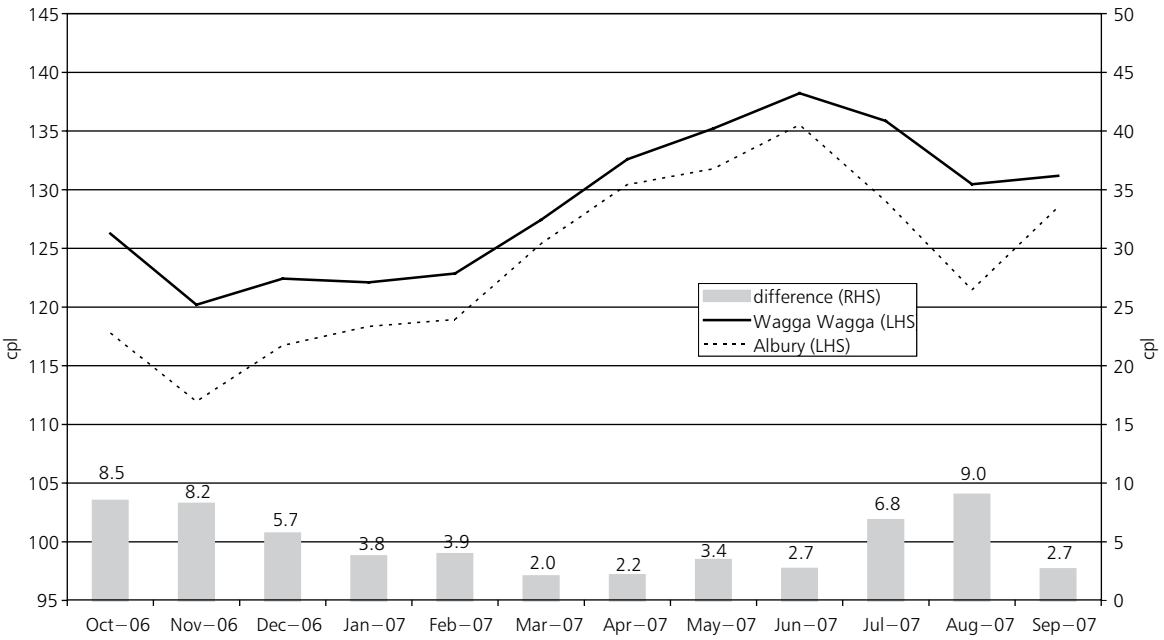
Given the concern expressed by the WFWC, the ACCC has examined the differential between Wagga Wagga and Albury. We have also examined the differential between Charters Towers and Townsville. The ACCC receives a large number of complaints about price differentials in north-Queensland, and this case study has been chosen for illustrative purposes.

12 BP submission, p. 30; Caltex submission, p. 70; NRMA submission, p. 18; APADA submission, p. 5; ACCC, public hearing transcript, Melbourne, 24 August 2007, pp. 27–8.
13 Caltex submission, p. 70.
14 ACCC, public hearing transcript, Wagga Wagga, 10 September 2007, p. 13.

Case study one—Wagga Wagga and Albury

Chart 10.1 shows the average monthly prices for Wagga Wagga and Albury and the average monthly difference over the 12 months from October 2006 to September 2007.

Chart 10.1 Wagga Wagga, Albury and difference, unleaded petrol, monthly averages: October 2006 to September 2007



Source: ACCC and Informed Sources

Over the 12 months to September 2007, the average monthly difference between Wagga Wagga and Albury was 4.9 cpl. The monthly difference ranged from a low of 2.0 cpl in March 2007 to a high of 9.0 cpl in August 2007.

Albury is located on the Hume Highway and Murray Valley Highway, around 570 kilometres from Sydney and around 300 kilometres from Melbourne. Wagga Wagga is on the Sturt Highway and Olympic Way around 430 kilometres from Melbourne and around 470 kilometres from Sydney. Wagga Wagga is around 130 kilometres north by road from Albury.

Given the geographic proximity of Albury and Wagga Wagga, it is understandable that residents of Wagga Wagga question the higher prices in Wagga Wagga, given that differences in freight costs should not cause the average 4.9 cpl differential.

Considering the locally specific factors outlined in section 10.2 discussing the city–country differential, some differences between the two locations that could help to explain the price differential are:

- Albury/Wodonga is on the Hume Highway and has a higher volume of passing traffic than Wagga Wagga
- the population of Albury/Wodonga is around 70 000; 10 000 more than the population of Wagga Wagga

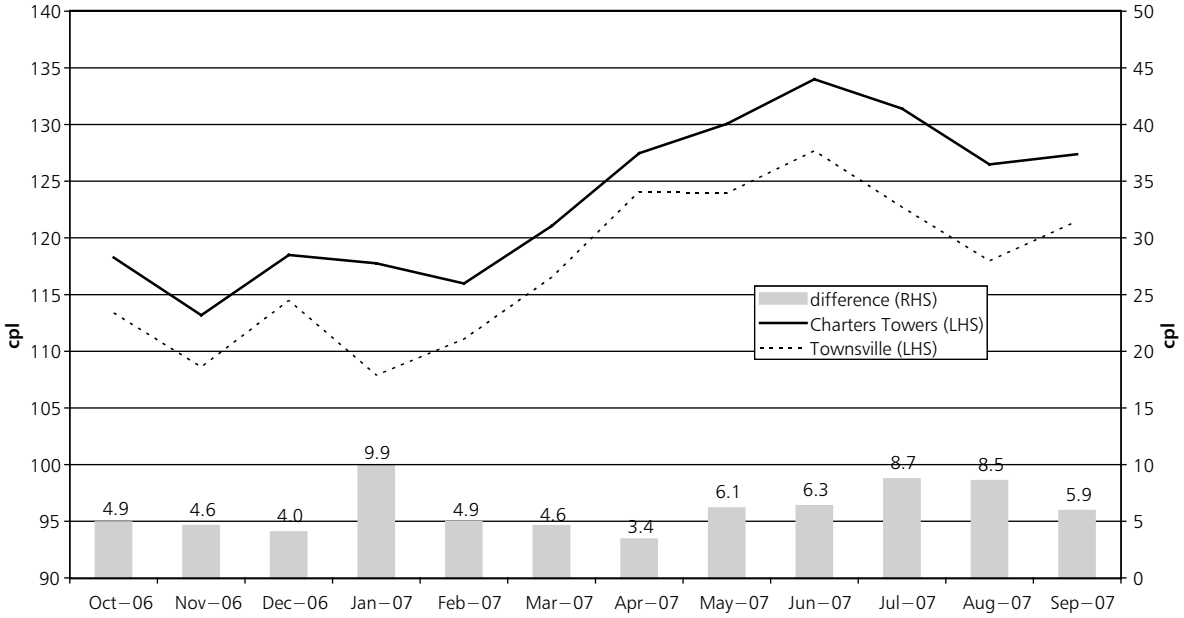
- Albury/Wodonga has combined a total of 30 retail sites compared with 16 in Wagga Wagga, based on the number of sites monitored by Informed Sources
- Albury/Wodonga has four supermarket sites whereas Wagga Wagga has two supermarket sites.

The major factors which appear likely to explain the average 4.9 cpl price differential between Albury/Wodonga and Wagga Wagga is the fact that Albury/Wodonga is situated on a major highway, with more passing traffic than Wagga Wagga and has a correspondingly higher number of retail sites to service this demand. The larger number of sites makes it likely that there is a greater degree of competition in the Albury/Wodonga area, leading to lower average prices.

Case study two—Charters Towers and Townsville

Chart 10.2 shows the average monthly prices for Charters Towers and Townsville and the average monthly difference over the 12 months from October 2006 to September 2007.

Chart 10.2 Charters Towers, Townsville and difference, unleaded petrol, monthly averages: October 2006 to September 2007



Source: ACCC and Informed Sources

Over the 12 months to September 2007, the average monthly difference between Charters Towers and Townsville was 6.0 cpl. The monthly difference ranged from a low of 3.4 cpl in April 2007 to a high of 9.9 cpl in January 2007.

Townsville is located on the north-Queensland coast around 1400 kilometres by road north of Brisbane. Charters Towers is inland and around 130 kilometres by road south-west of Townsville.

As with the case of Wagga Wagga and Albury, the geographic proximity of Charters Towers and Townsville means that it is unlikely that differences in freight costs could explain the average price differential of 6.0 cpl.

Considering the locally specific factors outlined in the section discussing the city–country differential, some differences between the two locations that could help to explain the price differential are:

- the population of Townsville at around 100 000 is 11 to 12 times larger than the population of Charters Towers
- Townsville has over four times as many retail petrol outlets as Charters Towers
- Townsville is on the Bruce Highway and has a higher volume of passing traffic than Charters Towers
- each of the four oil majors has access to terminal facilities in Townsville whereas Charters Towers is inland and has no terminals
- Townsville has four supermarket sites whereas Charters Towers has one.

The significantly larger population in Townsville is the main factor that is likely to explain the price differential between it and Charters Towers. With the larger population comes a greater number of service stations and therefore more competition and lower prices in Townsville.

These two case studies illustrate that average prices in regional towns that are geographically relatively close may vary due to a range of factors.

11 Price cycles

11.1 Introduction

The nature of petrol and demand for petrol were discussed in section 1.4. The discussion highlights a number of characteristics of petrol which appear to make it susceptible to price volatility. Petrol prices in Australia's largest cities tend to move in cycles.

This chapter examines those price cycles, including the economic theories which help to explain price cycles. It also considers the issue of petrol price increases around public holidays. It draws some implications of price cycles for consumers. This chapter, however, does not cover intra-day price volatility.

11.2 Incidence of price cycles in Australia

In Australia, regular price cycles in retail petrol are generally confined to the largest metropolitan cities and areas close by. The price cycles that occur in Sydney, Melbourne, Adelaide, Brisbane and Perth are fairly regular and have been a recurring feature in these markets. Canberra, Darwin, Hobart and rural areas still have petrol price volatility associated with price movements in the upstream products of crude oil and refined petrol. However they are less likely to have regular or persistent short term price cycles. Movements in average daily retail prices for petrol in metropolitan cities and a couple of country towns in the three-month period 1 July to 30 September are shown in appendix L.

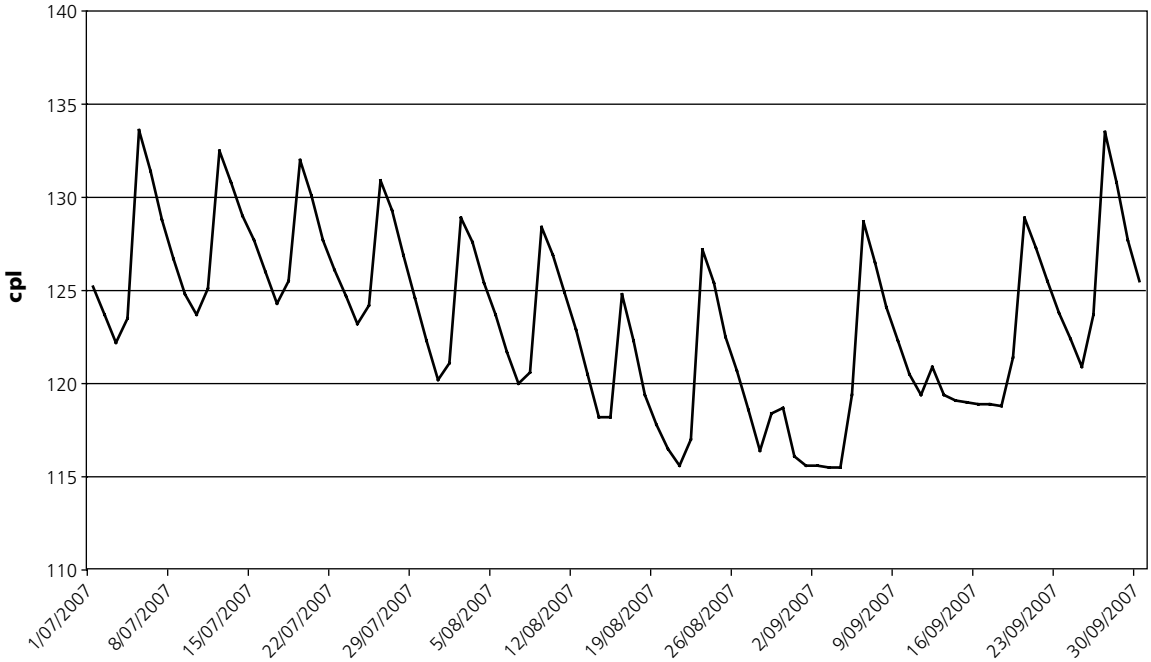
11.2.1 Nature of price cycles

Regular price cycles predominantly occur in the five major metropolitan cities. The shape of price cycles is asymmetric—that is, prices increase rapidly over a short period and then steadily decrease. Generally these cycles are weekly in nature (Perth is an exception) with peaks commonly on Thursday and troughs commonly on Tuesday in recent years.

The Melbourne market provides an illuminating example of such regular price cycles. As shown in figure 11.1, there were 12 weekly price cycles in Melbourne over the three-month period 1 July to 30 September 2007.[1]

1 The definition of a price cycle is provided in section 11.2.2.

Chart 11.1 Melbourne, average daily retail prices: 1 July to 30 September 2007



Source: ACCC and Informed Sources

11.2.2 ACCC's analysis of price cycle data

The ACCC has analysed data on the price cycles in the five major metropolitan cities (Sydney, Melbourne, Brisbane, Adelaide and Perth) for the six-month period 1 January 2007 to 30 June 2007. This period is chosen because it is recent and is comparable with earlier periods examined by the ACCC and included in previous publications.[2]

One issue in analysing price cycles is defining just when a cycle starts and ends. The following methodology has been used:

- a price cycle is considered to have occurred if there are total price movements between trough to peak of one cpl or more and from that peak to subsequent trough of one cpl or more[3]
- the amplitude of a price cycle is the difference in price (in cpl) between the bottom (trough) and the top (peak) of the price cycle[4]
- the duration of a price cycle is the number of days between the trough of one price cycle and the trough of the next cycle.

2 The ACCC's 2001 *Reducing fuel price variability* report examines price cycles in the first half of 1998 and the first half of 2001 (in pp. 13–21 and appendix A). The ACCC's *Submission to the Senate Economics Legislation Committee Inquiry into the price of petrol in Australia* examines price cycles in the first half of 2006 (in pp. 40–2 and appendix 2).

3 In cases where the average daily price remains constant for more than one day at the bottom (trough) or top (peak) of a cycle, the trough or peak is taken to be the first day of constant prices.

4 In previous ACCC publications, this has been referred to as the variation of a price cycle.

Note that:

- the data includes all days of the week and public holidays
- the data was obtained from Informed Sources
- the price data used is based on average daily prices across the relevant geographic area; therefore, the actual fluctuations at individual service stations on any particular day would have been higher in some instances and lower in others.

Analysis of the 2007 data shows that:

- the average amplitudes of price cycles from 1 January to 30 June 2007 ranged from a low of 7.7 cpl in Perth to a high of 9.5 cpl in Melbourne
- the most common duration of price cycles in this period was seven days in Sydney, Melbourne, Brisbane and Adelaide and 13 days in Perth.

Table 11.1 shows summary data on price cycles in the five largest metropolitan cities for the first six months of 2007.

Table 11.1 Summary of price cycle analysis: 1 January to 30 June 2007

	Sydney	Melbourne	Brisbane	Adelaide	Perth
Number of cycles	24	24	24	24	11
Amplitude—cpl					
Smallest amplitude	1.6	3.8	4.6	1.4	3.1
Largest amplitude	13.4	14.0	13.0	15.3	10.2
Average amplitude	8.6	9.5	8.4	8.8	7.7
Most common amplitude	8 to <9	9 to <10	9 to <10	9 to <10 12 to <13	6 to <7 7 to <8 9 to <10
Duration–number of days*					
Average trough to peak	2.2	2.0	1.9	2.1	4.3
Average peak to trough	5.1	5.3	5.4	5.2	10.9
Average price cycle	7.3	7.3	7.3	7.3	15.3
Most common duration	7	7	7	7	13
Peaks and troughs					
Most common day for peaks	Thursday	Thursday	Thursday	Thursday	Thursday
Most common day for troughs	Tuesday	Tuesday	Tuesday	Tuesday	Sunday

Source: ACCC and Informed Sources

*Note that the average duration of price cycles does not always equal the sum of average number of days from trough to peak and average number of days from peak to trough. This is because the average duration of price cycles represents completed price cycles over the six-month period. It may be that at the end of the period there was a movement from trough to peak but not a complete movement from peak to next trough, and therefore not a complete price cycle.

11.2.3 Price cycle data over a longer period

The ACCC obtained analysis from Informed Sources on price cycles in the five major metropolitan cities from 1 January 1993 to 21 October 2007 to assess price cycles over a significant period.

The methodology and the data issues are outlined below, followed by the summary data. Charts associated with city-specific analysis are provided in appendix M.

Methodology

Both the previous shorter term ACCC analysis and the longer term Informed Sources analysis are based on daily average prices in the five major metropolitan cities supplied by Informed Sources. Their methods of defining price cycles and measuring amplitudes and durations are broadly in line with each other.

The Informed Sources analysis is subject to the following data issues:

- Between 1 January 1993 and May 1997 data was collected manually—i.e. by field staff observing prices from price boards outside service stations:
    - the data contains no weekend and public holiday observations
    - there is no data for Sydney in September 1994.
- After May 1997 a combination of manual collections and data sourced from oil company fuel cards or direct from consoles was used:
    - there are some missing observations, mainly on Sundays, between May 1997 and November 1998.

Summary

In table 11.2, Informed Sources analysis reports the following aspects of price cycles across cities and by year:

- The number of troughs is the number of low price points, which is generally one more than the number of completed price cycles considered by the ACCC—i.e. price movements from trough to peak to subsequent trough.
- The average number of days between troughs is the average duration of price cycles.
- The average price rise is the average over the year of all amplitudes of price cycles in that year.
- The average percentage price rise is the average over the year of the amplitude of each price cycle relative to the average price over that price cycle.[5]

5 The average price of a cycle is calculated by summing each daily average price from the first trough to the price on the day immediately prior to the second trough divided by the number of days.

Table 11.2 Summary of price cycles analysis by Informed Sources: 1993 to 2007

Date	Days	Sydney				Melbourne				Brisbane				Adelaide				Perth			
		Troughs	Average Days Between Troughs	Average Price Rise	Average % Price Rise	Troughs	Average Days Between Troughs	Average Price Rise	Average % Price Rise	Troughs	Average Days Between Troughs	Average Price Rise	Average % Price Rise	Troughs	Average Days Between Troughs	Average Price Rise	Average % Price Rise	Troughs	Average Days Between Troughs	Average Price Rise	Average % Price Rise
1993	362	37	9	4.2	6.2%	28	13	5.2	7.9%	26	12	4.7	7.7%	27	13	5.6	8.1%	14	26	7.0	10.3%
1994	365	40	9	3.4	5.2%	46	7	2.6	3.9%	36	10	3.2	5.4%	37	9	3.5	5.2%	24	14	4.6	6.9%
1995	365	31	11	2.4	3.6%	40	9	2.2	3.1%	45	7	2.2	3.5%	42	8	3.0	4.2%	30	12	3.4	4.7%
1996	366	39	9	2.3	3.2%	50	7	2.3	3.3%	42	8	2.3	3.6%	51	7	2.9	4.1%	42	8	4.1	5.6%
1997	365	70	5	2.3	3.2%	54	6	3.5	4.9%	59	6	2.7	4.2%	67	5	3.6	5.0%	42	8	3.9	5.3%
1998	365	53	6	2.5	3.6%	56	6	3.9	5.8%	48	7	2.7	4.5%	56	6	3.8	5.6%	47	7	3.2	4.6%
1999	365	52	7	3.3	4.6%	63	5	5.2	7.5%	49	7	3.4	5.4%	62	5	4.7	6.6%	51	7	5.5	7.6%
2000	366	40	9	3.5	4.0%	50	7	5.6	6.4%	47	7	4.4	5.5%	50	7	3.8	4.4%	46	8	5.9	6.6%
2001	365	45	7	5.0	5.7%	36	9	7.5	8.5%	44	8	5.1	6.4%	39	9	5.9	6.6%	35	10	5.4	6.2%
2002	365	51	7	6.0	6.9%	48	7	6.6	7.6%	50	7	5.7	7.1%	44	8	5.5	6.3%	42	8	6.0	6.8%
2003	365	53	6	6.5	7.2%	48	7	7.1	8.0%	49	7	6.8	8.3%	47	7	6.2	6.8%	44	8	6.2	6.8%
2004	366	52	7	5.4	5.5%	41	8	5.9	6.2%	45	8	6.2	6.9%	44	8	6.3	6.4%	40	9	4.2	4.4%
2005	365	51	7	6.5	5.8%	43	8	5.4	4.9%	39	9	6.5	6.4%	52	6	7.2	6.5%	29	12	3.8	3.5%
2006	365	51	7	8.5	6.8%	47	7	8.6	6.8%	52	7	7.3	6.2%	53	7	9.4	7.5%	27	13	6.0	4.9%
2007	294	41	7	8.1	6.5%	41	7	9.2	7.5%	40	7	8.5	7.3%	40	7	8.8	7.1%	20	14	7.5	6.1%

Source: Informed Sources

Table 11.2 shows that:

- the average durations of price cycles in 1993 ranged from nine days in Sydney to 26 days in Perth
- all the five cities have moved to roughly weekly cycles since 1998; Perth is the exception where the average duration has increased from nine days in 2004 to 14 days in 2007
- the average amplitudes of price cycles in 1993 were between 4.2 cpl (or 6.2 per cent of the average price of a cycle) in Sydney to 7.0 cpl (or 10.3 per cent) in Perth
- all five cities had declining average cycle amplitudes up to 1996 and then started to experience increasing amplitudes; average cycle amplitudes have fluctuated in Melbourne, Adelaide and Perth since 1999, as well as in Sydney and Brisbane since 2003
- the average amplitudes in 2007 ranged from 7.5 cpl (or 6.1 per cent) in Perth to 9.2 cpl (or 7.5 per cent) in Melbourne.

11.2.4 Price cycles and public holidays

There have been suggestions in the media that petrol retailers deliberately increase prices just before public holidays and long weekends when consumers are more likely to need to fill up their tanks. However, retailers who commented on this issue to the ACCC rejected the claim and stated that public holidays and long weekends did not influence their pricing decisions. The inquiry heard evidence that price cycles have become predictable and account for any price increases leading up to holiday periods.

The ACCC analysed this issue by considering the amplitudes of the price cycles (i.e. the movement from trough to peak) immediately before public holidays in the five largest metropolitan capital cities.

The analysis covers the six-month period from 1 January to 30 June 2007, which included the following public holidays:

- Australia Day: Friday, 26 January 2007
- Easter: commencing on Good Friday, 6 April 2007
- Anzac Day: Wednesday, 25 April 2007
- Queen's Birthday: Monday, 11 June 2007[6]
- various regional holidays:
    - Victoria—Labour Day: Monday, 12 March 2007
    - Queensland—Labour Day: Monday, 7 May 2007
    - South Australia—Adelaide Cup Day: Monday, 12 March 2007
    - Western Australia—Labour Day: Monday 5 March 2007 and Foundation Day: Monday 4 June 2007.

Appendix N contains the detailed analysis. The analysis of price cycle amplitudes in the five largest metropolitan cities for the period 1 January to 30 June 2007 shows that in Sydney, Melbourne, Brisbane and Adelaide, price cycles tend to peak on a Thursday and decline to a trough on a Tuesday and this trend typically continued before public holidays in these cities.

The results of this analysis can be compared with the ACCC's analysis of the variation of price cycles immediately before public holidays in the five largest metropolitan capital cities from 1 January to 30 June 2006 in the ACCC's July 2006 submission to the *Senate Economics Legislation Committee inquiry into the price of petrol in Australia.*

6 This is a public holiday for Sydney, Melbourne, Brisbane and Adelaide, but not for Perth.

Table 11.3 compares the amplitudes in the week before public holidays for the five largest capital cities from 1 January to 30 June in 2006 and 2007.

Table 11.3 Amplitudes in the week before public holidays, five largest metropolitan cities, comparison of the periods: 1 January to 30 June 2006 and 1 January to 30 June 2007

	Number of amplitudes before public holidays	Proportion of amplitudes before public holidays greater than or equal to average amplitude	Proportion of amplitudes before public holidays less than average amplitude	Proportion of amplitudes before public holidays lower than highest amplitude
2006				
Sydney	4	50%	50%	100%
Melbourne	5	40%	60%	80%
Brisbane	5	40%	60%	80%
Adelaide	5	100%	0%	100%
Perth	4	50%	50%	100%
Average	4.6	56%	44%	92%
2007				
Sydney	4	25%	75%	100%
Melbourne	5	60%	40%	80%
Brisbane	5	20%	80%	100%
Adelaide	5	40%	60%	100%
Perth	2	33%	67%	100%
Average	4.2	36%	64%	96%

Source: ACCC and Informed Sources

Table 11.3 shows that:

- an average of 44 per cent of price cycle amplitudes before public holidays in 2006 and 64 per cent in 2007 were lower than the average amplitude in the relevant six-month period
- from 1 January to 30 June 2006 in Sydney, Adelaide and Perth the highest amplitude of price cycles did not occur before a public holiday; in Melbourne and Brisbane the highest amplitude did occur before a public holiday
- from 1 January to 30 June 2007 in Sydney, Brisbane, Adelaide and Perth the highest amplitude of price cycles did not occur before a public holiday; in Melbourne, the highest amplitude did occur before a public holiday
- the majority of the cities did not have the highest price cycle amplitudes before a public holiday from 1 January to 30 June in both 2006 and 2007.

The ACCC's analysis shows that the claim sometimes made that cyclical petrol price increases before public holidays are always higher than cyclical price increases at non-holiday times was generally not the case for the five largest metropolitan cities for 1 January to 30 June in both 2006 and 2007.

11.3 Overseas experience of price cycles

Price cycles do appear in other countries, in certain markets. However, they do not seem to be particularly widespread. Table 11.4 provides a summary of a number of studies of price cycles in international markets, as well as details from submissions to this inquiry. The majority of the international studies identified focus on price cycles in Canadian metropolitan markets.

These overseas price cycles are consistent with the asymmetric feature of Australian price cycles—that is, relatively fast price rises followed by a series of smaller decreases. However, Australia's price cycles in unleaded petrol appear distinctive in their duration and amplitude. In particular, price cycles in Australia have a greater amplitude than any reported for other countries. Although the typical duration of the price cycle in Australia is weekly, the overseas experience is much more varied. For those cities with regular price cycles, the duration varies from city to city, ranging from daily to weekly to several months.

Notes for Table 11.4 Overseas experience of price cycles in retailing unleaded petrol

1 A Eckert, 'Retail price cycles and the presence of small firms', *International Journal of Industrial Organization*, Vol. 21, 2003, pp. 151–70.

2 MD Noel, 'Edgeworth price cycles: evidence from the Toronto retail gasoline market', *The Journal of Industrial Economics*, Vol. 55, No. 1, 2007, pp. 69–92.

3 A Eckert, 'Retail price cycles and response asymmetry', *The Canadian Journal of Economics*, Vol. 35, No. 1, 2002, pp. 52–77.

4 A Eckert and DS West, 'Retail gasoline price cycles across spatially dispersed gasoline stations', *Journal of Law and Economics*, Vol. 47, No. 1, 2004, pp. 245–73.

5 B Atkinson, 'Retail gasoline price cycles: evidence from Guelph, Ontario using bi-hourly, station-specific retail price data', *Competition Bureau Working Paper*, 2007.

6 R Castanias, and H Johnson, 'Gas wars: retail gasoline price fluctuations', *Review of Economics and Statistics*, Vol. 75, 1993, pp. 171–74.

7 M Lewis, 'Temporary wholesale gasoline price spikes have long-lasting retail effects: the aftermath of Hurricane Rita', *Ohio State University Working Paper*, 2006.

8 United States Senate, *Gas prices: how are they really set?* report prepared by the Majority Staff of the Permanent Subcommittee on Investigations, 30 April and 2 May, 2002.

9 Informed Sources, Unleaded petrol price data on Germany submitted to the ACCC, 2007.

10 Shell submission, p. 7.

11 Informed Sources, Unleaded petrol price data on Norway submitted to the ACCC, 2007.

Notes:

a Unit of measurement is Canadian cents per litre, if not stated otherwise.

b Eckert (2003) notes that Montreal, Ottawa and Quebec City also exhibited a cycle pattern for much of 1990 to 1995.

c The figures are not facts but predictions from Markov Switch Regression.

d Allvine and Patterson (1974) documented that Boise, Jacksonville, Kansas City, Miami, Milwaukee, Phoenix, Portland, Sacramento, San Francisco and Seattle also had frequent price fluctuations.

e Michigan, Ohio and Illinois are included in the region.

Table 11.4 Overseas experience of price cycles in retailing unleaded petrol

Country	City	Time period	Cycle duration			Cycle amplitude			Peak time	Data source
			Total	Price rises	Price falls	Average	Price rises[a]	Price falls[a]		
Canada[b]	Toronto	1990–95		85% 1 week	70% 1 week					Eckert (2003)[1]
		February–June 2001		1.01 half-days[c]	12.78 half-days[c]		5.61			Noel (2007)[2]
	London	1990–95		84% 1 week	48% 1 week		3.6	3.5		Eckert (2003)
	Windsor, Ontario	1990–95		53% 1 week	32% 1 week					Eckert (2003)
		November 1989–September 1994		95% two weeks or less	48% two weeks or less					Eckert (2002)[3]
	Sudbury	1990–95		74% 1 week	44% 1 week long		2.9	2.5		Eckert (2003)
	Vancouver	July–December 1999		Average 9 days	1 or 2 weeks		10.1		82% on Tuesday and Wednesday	Eckert and West (2004)[4]
	Guelph, Ontario	August–November 2005		1 or 2 days 1 day	5 days		8.4		81% on Monday to Wednesday	Atkinson (2007)[5]
United States[d]	Los Angeles	December 1967–August 1972		93% 1 week	43% 3 weeks or less					Castanias and Johnson (1993)[6]
	Columbus, Ohio	2004–2005								Lewis (2006)[7]
	Midwest region[e]	January–August 2001	Weekly	1 or 2 days	4-5 days to 2 weeks		7-10 US cents per gallon		Usually on Wednesday or Thursday	US Senate Report (2002)[8]
Germany	Rhine/Ruhr Conurbation	January–April 2006	Two cycles per week			2.1 euro cents per litre			Usually on Tuesday, Thursday and Friday	Informed Sources[9]
Austria			Weekly cycles			4 euro cents per litre				Shell[10]
Norway	Oslo and Trondheim	July 2006–June 2007	Weekly cycles			50 Norwegian krone per litre			Commonly on Tuesday	Informed Sources[11]

11.4 What explains the causes and features of price cycles?

Price cycles are a distinguishing characteristic of Australian metropolitan retail unleaded petrol markets. Generally these cycles are weekly in nature (Perth is an exception) with higher prices from Wednesday afternoon to Friday evening and lower prices on Tuesdays and Wednesday morning. The rise in each city's cycle is typically relatively fast and is most often led by a refiner-marketer, especially a refiner-marketer with a refinery in the particular city. After the typically quick rise to the peak in the cycle the price tends to reduce more gradually.

The existence of such well defined price cycles in Australian retail unleaded petrol markets is something of an anomaly. The following sections introduce explanations for the causes and features of the Australian petrol price cycles.

11.4.1 Why do price cycles occur?

Edgeworth cycles theory

There are a range of explanations for price cycles. Modern explanations for petrol price cycles have centred on so-called Edgeworth price cycles. Appendix O provides more details on the development of this theory in the economic academic literature.

The application of Edgeworth cycles to petrol prices is based on the assumption of petrol retailers that sell regular unleaded petrol competing with each other primarily on price. As noted in section 1.4, a number of characteristics of regular unleaded petrol make the market more susceptible to price competition than most retail product markets in Australia.

The key structural prediction of the theory is that price cycles are asymmetric: prices fall for longer periods and by smaller increments per period than prices rise. The theory suggests this is the result of competing retailers continuously undercutting each other by a small margin to try and win market share. This continues until a substantial increase in price is eventually required for financial sustainability. The price cycles in Australia are asymmetric, with average time from trough to peak much shorter than average time from peak to trough.

The key behavioural prediction of the theory is that large retailer groups are most likely to initiate price increases and match rather than undercut the price decreases of their smaller competitors. The refiner-marketers in Australia tend to initiate price rises and will match others' prices during the discounting stage.

Alternative explanations

The economic literature has offered other supplementary or competing explanations for inter-temporal price fluctuations in a market, including cost asymmetry, changes in inventory level, explicit coordination and so on.[7] Some of these factors may influence the evolution of price cycles to various extents from time to time, but are generally less directly suited to explaining the regular and asymmetric features of retail petrol price cycles.

7 MD Noel, 'Edgeworth price cycles: evidence from the Toronto retail gasoline market', *The Journal of Industrial Economics,* Vol. 55, No. 1, 2007, pp. 87–90.

Cost asymmetry across retailers

One explanation for price variations is the cost differentials among petrol retailers. Currently a range of wholesale prices are offered to different types of retailers, depending on the relative negotiating strengths of the trading parties. As noted in section 8.4, the supermarkets obtain significant volume discounts through their alliance with the refiner-marketers. With this cost advantage from favourable wholesale prices, the supermarkets have the ability to charge a lower price than their competitors for market share. They have in the past heavily discounted petrol and were slow in following refiner-marketers' price leadership. Their present pricing strategies appear to be less aggressive than before.

However, it is still uncertain whether charging a price lower than its competitors' marginal cost is in the best interest of the low-cost suppliers. The cost differential theory seems to have ambiguous implications for firm behaviour during the price cycles. For example, Maskin and Tirole briefly consider the market-sharing arrangement in an oligopolistic market which is used by high-cost firms to induce low-cost firms not to undercut.[8]

Cyclical wholesale petrol price discounts[9]

Price variations can be caused by wholesalers deciding to regularly discount wholesale petrol to remove short-term excess production at refineries, leading to price cycles at the retail level. There are two reasons for discounting wholesale prices: firstly, it is important to maintain constant daily refinery production and, secondly, storage costs at refineries and import terminals can be high.

However, this theory fails to accurately model the nature of pricing strategies at the wholesale level. Petrol, as an internationally-traded commodity, is generally priced against international benchmark prices. The spot wholesale prices move closely with the international benchmark price changes. These international benchmark prices do not tend to exhibit the regular price fluctuations evident in retail petrol prices. Further, the majority of wholesale sales are made on the basis of term contracts rather than spot sales to ensure supply security to retailers over a specific period. The period covered in a contract is generally longer than the duration of retail price cycles. The amount of discounts offered on a term contract mainly depends on the sale volume of the contract and there is no reason for them to vary the discounts with the stage of the retail price cycle. What is more, the resultant cost differential between large and smaller retail operators is ambiguous in explaining firms' behaviour over the course of price cycles (as discussed previously).

Excess inventory elimination

An inventory cost explanation has been offered for temporal price discounting. This is where a retailer uses price cuts to sell excess inventory to consumers with lower inventory costs.[10] However, this inventory cost theory seems to be implausible for explaining the high regularity exhibited in petrol price cycles. It is unlikely for one or all of the petrol retailers to systematically overestimate sales week after week when delivery in the urban markets is generally made on a daily basis.

If it is costly to adjust the daily delivery of petrol, it may be argued that lower prices are charged by the service stations to encourage higher consumption at off-peak time. This is useful to smooth out consumption over time for a more balanced utilization of capacity. Thus price differentials can be justified on the basis of the cost of building additional capacity to meet peak demand.

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8 E Maskin and J Tirole, 'A theory of dynamic oligopoly, II: price competition, kinked demand curves, and Edgeworth cycles', *Econometrica,* Vol. 56, No. 3, 1988, p. 593.

9 This does not cover the price support offered by the refiner-marketers to eligible franchisees.

10 GD Eppen and Y Liebermann, 'Why do retailers deal? An inventory explanation', *Journal of Business,* Vol. 57, 1984, pp. 519–30.

However, in the retail petrol business, delivery schedules would seem to be fairly flexible for meeting changes in demand and supply.[11]

Changes in demand

Australian price cycles are predominantly weekly, and prices are relatively low early in the week, on Monday and Tuesday, and reach peak level on Thursday. Overseas price cycles do not generally exhibit a persistently weekly pattern. For cycles to be both regular and weekly it seems there would need to be some form of differentiation of demand across different days and that differentiation must follow a weekly pattern.

There are a number of explanations for how variations in demand over a week may influence price cycles:

(a) Demand for petrol could generally be low at the beginning of the week and high towards the weekend. At times of low demand, retailers have stronger incentives to undercut their competitors and therefore the resulting petrol prices are relatively low. During times of high demand, retailers may adopt peak-load pricing to reduce capacity constraint.

(b) Demand elasticities may vary over a week because a sufficiently large number of relatively price insensitive consumers tend to purchase petrol on Thursday and Friday. If this is the case, retailers may time price cycles to take advantage of demand elasticity variations and price discriminate between consumers buying at different times of a week. When a retailer raises price on the days when relatively more consumers are price-insensitive, these consumers will continue to buy the same amount of petrol anyway. In contrast, by offering lower prices on the days when relatively more consumers are price sensitive, a retailer may be able to steal these consumers from other competitors.

(c) Retailers may also tune the timing for leading up prices to the changing demand. It is observed that a price leader often lifts its price up after the morning peak hours, expecting other competitors to follow suit fairly quickly. By the afternoon peak hours, the price rise has already been matched by competitors. In leading prices up during off-peak hours, the lost sales will be limited and can be compensated by larger profitable sales at peak time.

However, the intra- and inter-day demand pattern is not directly observable as consumers may adapt their purchasing pattern to the changing prices. As shown in section 11.5.2, sales volumes are generally higher early in the week when the prices are relatively low in the markets with price cycles. While demand may change (as described above) and have an influence over prices, it will not lead to price cycles without the competitive market forces driving retailers to undercut each other in a battle for market share.

It may also be that the weekly pattern itself has become stronger as a result of the work of the ACCC and the media in publicising price cycles.[12] If it becomes widely known that it is cheaper to purchase petrol early in the week, it seems plausible that this would reinforce any tendency towards a weekly price cycle.

11 MD Noel, 'Edgeworth price cycles: evidence from the Toronto retail gasoline market', loc. cit., p. 88.
12 Information on the ACCC petrol price cycle web page is discussed in chapter 15.

Explicit coordination

The general public is concerned with the highly uniform nature of price fluctuations across petrol retailers in a market. In addition, petrol retailers are very often accused by consumers of collusion in driving weekly price changes. However, investigations into the issue, more often than not, fail to prove the existence of collusion that is in breach of s. 45 of the Act. To prove a breach of s. 45, it is necessary to obtain evidence that actual collusion between retailers has taken place. Section 45 of the Act is considered in section 14.2.1.

In the retail petrol market, retailers can quickly match or undercut prices charged by other competitors, leading to highly uniform pricing across retailers. The highly uniform nature of price changes across retailers need not be the result of explicit firm coordination. However, the rapid movement of the cycle and the speed of responsive movements by price followers make it almost impossible for the motoring public to know who is driving the cycle.

Are price cycles consistent with a competitive market outcome?

The causes of price cycles are not clear. Australian price cycles appear consistent with aspects of Edgeworth cycles theory, such as the asymmetric shape of the cycles and the general prediction that prices will be led up by larger players. The theory does not explain the sheer persistence of other features of the cycles such as their regular duration and the tendency for troughs and peaks to occur on certain days. The other concepts discussed may also offer some insights in these areas.

Consensus has been generally reached in the economic literature that price cycles predicted by the Edgeworth cycle theory are consistent with a competitive market outcome. The primary cause of price cycles under the theory is that petrol retailers undercut each other in competing for higher market share and the larger players lead the price up when low prices become unsustainable. Other possible causes of price cycles, such as excess inventory elimination and cost asymmetry across retailers, show no evidence of anti-competitive behaviour.

Price cycles persist in the five largest capital cities and their surrounding areas, which feature higher station density, lower market concentration and the existence of a large number of independent retailers. In contrast, the country areas, which typically have a small number of petrol stations selling petrol supplied by some refiner-marketers, show no pattern of price cycles and higher prices than cities. The city–country price differential is discussed in chapter 10. With less competition in country areas in general, there is a tendency towards pricing rigidity rather than price cycling.

In view of the economic explanations for price cycles, the existence of price cycles alone does not seem to provide evidence of a lack of retail competition.

11.4.2 Institutional features that may facilitate price cycles

Role of Informed Sources service

The price cycles can be facilitated by the provision of comprehensive and timely market price data by Informed Sources. As noted in section 9.4.2, the major petrol retailers have generally subscribed to Informed Sources' price-monitoring service. This enables them to respond very rapidly to price changes in the market.

The Informed Sources service may affect the behaviour of major petrol retailers over the course of a price cycle as follows:

- It enables the refiner-marketers to adopt very sophisticated pricing strategies under which prices are adjusted on a localised basis.
- It effectively reduces the risk encountered by retailers from leading prices up in a market, making them more likely to take the price leader role.
- It may reduce the incentive of large subscribers to discount since short-term gains from price discounting will fall if others can respond quickly.

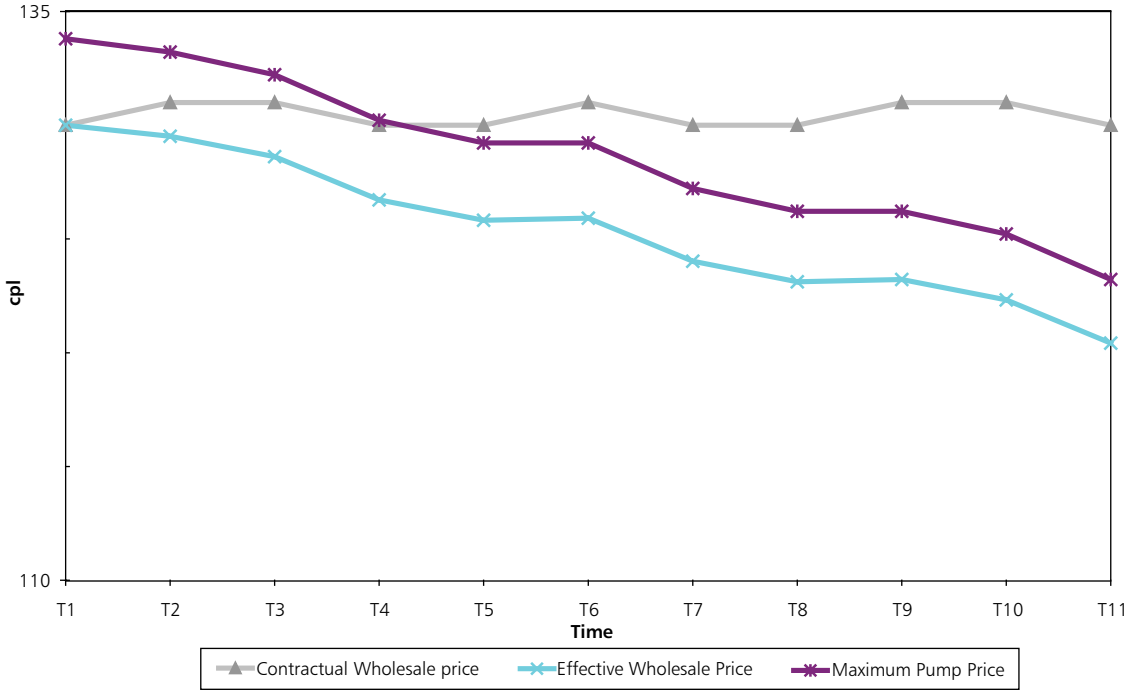
Some of the independents that choose not to subscribe to this data service may retain a relatively strong incentive to discount since it takes more time for Informed Sources to collect and update prices for non-subscribers.

Role of price support

Where it applies, price support tends to facilitate price cycles. Price support is a rebate provided by the refiner-marketers to franchisees on their petrol purchase. Section 9.4.1 documents each refiner-marketer's price support arrangement and their common elements.

Based on these common elements, chart 11.2 shows how a price support arrangement may facilitate the downward spiral of a price cycle. The contractual wholesale price is the reference wholesale price (inclusive of applicable freight cost) charged by the refiner-marketers. The effective wholesale price is the contractual wholesale price net of price support. The maximum pump price is the maximum price that a retailer receiving price support can charge. Thus, the difference between the maximum pump price and the effective wholesale price is the maximum margin that a retailer receiving price support can earn. As shown in the diagram, a varying price support, commencing at zero and steadily rising as the stipulated maximum pump prices fall, is provided to the franchisees. The corresponding maximum margins fall slightly.

Chart 11.2 A price support scheme



Note: The time frequency measured on the horizontal axis does not necessarily correspond to a day.

Some key features of price support arrangements allow the refiner-marketers to exert significant control over their franchisees:

- The provision of price support is conditional on their franchisees charging a price no higher than the stipulated maximum pump price. This may induce the franchisees to charge the stipulated maximum pump prices, which generally match the cycled prices in the market.
- There is no other discount on the wholesale prices paid by franchisees. The margins for franchisees are generally thin and fall with decreasing retail prices from discounting.
- Since franchisees share the cost of price discounting, they may not be willing or able to discount deeply for an extended period.
- Franchisees may have been anxiously waiting for price increases to restore margin at the end of a discounting cycle.

The timing of the provision and termination of price support, as well as the amount of price support, may all reinforce regular price cycles. However, there is no evidence to suggest that the price support scheme is a cause of price cycles. The permanent withdrawal of price support by a refiner-marketer or all refiner-marketers will not necessarily stop price cycles. The inquiry was informed of at least one instance where a retailer attempted, without success, to limit price cycles by the removal of price support.

11.4.3 Interested parties' views

There were three main views expressed during the inquiry as to what causes the regular price cycles. One view, expressed generally by the major petrol retailers, is that price cycles are a manifestation of a highly competitive market, which when combined with the characteristics of unleaded petrol (as outlined in section 1.4) causes price cycles. Some interested parties also considered that price cycles were originally caused by the discounting behaviour of independent retailers, and are introduced into markets when independents enter. A second view is that the refiner-marketers contribute to price cycles by using the pricing structure through price support arrangements to manage demand on their production schedules. A third view is that the underlying patterns of demand affect whether price cycles exist.

Price cycles are the result of highly competitive markets

The major retailers all submit that price cycles are the result of vigorous competition. They state that retailers, followed by competitors, reduce prices to increase sales volume, to the point where margins are low. One retailer will then increase prices to recover margins, followed by others. Electronic price monitoring services allow competitors to react quickly to price movements.

BP

BP considers that the price cycle is a manifestation of competition.[13] It refers to Edgeworth cycles for modelling 'sawtooth discount-restoration' cycles, observed in petrol retail prices.

BP states that petrol retailers often reduce prices to gain customers, given the nature of petrol as a commodity, highly mobile customers, visible prices and high price elasticity of demand. At high margin levels, the profit lost through a price reduction may be more than offset through an increase in volume sold. However, continuing price matching and undercutting result in prices associated with very low margins.

BP states that prices move back up at the point where there is no further financial benefit to be gained from securing extra sales volumes, taking into account profits from related shop sales. One retailer usually makes the first move, followed by its competitors.

BP states that a decision to raise prices to improve margins would be influenced by the pattern of behaviour in the market over time.[14]

BP submits that the bottom of each price cycle is near the TGP of the day, whereas the high point has become less predictable. In the past, the high point was usually about four cpl above published list prices. BP states that now, usually two or three major market players will raise prices to different points, before the market settles on the lowest of these prices. BP considers that this shows that the market is subject to competition. It also states that price rises are not always sustained when prices rise at only some sites in a market, which leads to those sites with higher prices reducing their prices to match their competitors.

BP states that the amplitude of price cycles has increased and suggests that one possible reason for this is the inflation pressure on costs and therefore margins. BP states that 'there is no compelling logic to the length of these cycles'.

13 BP submission (pp. 27–9), if not stated otherwise.
14 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 63.

Caltex

Caltex agrees with BP that the price cycle is the result of intense competition, particularly where there are a large number of retailers.[15] It suggests that price cycles are driven by two different groups of competitors with distinct pricing strategy: discounters and non-discounters. Prices are driven down by discounters, such as the supermarkets, in an attempt to increase petrol sales volumes and non-petrol sales. Non-discounters, mainly the refiner-marketers, match the discounts very quickly by using electronic price monitoring services and price support to franchisees. After several days of price discounting—which cannot be sustained—a non-discounter will cease price support and increase prices at its retail sites. Competitors will follow, so that all pump prices may increase in rapid succession.

Caltex points out that the amplitude of price cycles may vary, because peaks and troughs are driven by the two different groups of competitors and, therefore, vary independently of each other.[16] Caltex states that the troughs of price cycles are typically about equal to industry average TGP, which it considers suggests that the most aggressive discounters (most often the two supermarkets) discount to a minimum margin at the bottom of a price cycle.[17]

Mobil

Mobil provides a similar description of the process of price cycles to BP. It considers that the volatility of prices in Australia, compared with the experience in other countries, reflects 'the highly competitive nature of the local retail fuel market and the on-going struggle for volume between active competitors in a low margin business'.[18]

Mobil considers that the differences in cycles that occur in different markets across Australia presumably reflect different local competitive conditions.[19]

Shell

Shell considers that price cycles are driven by the combination of high fixed costs, which require high throughput, highly transparent retail prices and highly price-sensitive consumers, and occur in an 'intensely competitive market'.[20]

Coles

Coles expresses similar views on causes of price cycles to those refiner-marketers. It states that most retailers in Australia use a high–low pricing strategy that involves offering discounts to the regular board price, facilitated by price support from oil companies.[21]

Coles considers that the price cycle has intensified over time as a result of increasingly vigorous price competition, putting downward pressure on prices that must be offset with higher prices at the end of the price cycle.[22] It states that retailers like it rely on averaging their retail margins between the high and low points of the cycle.[23]

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15 Caltex submission, pp. 92–3; ACCC, public hearing transcript, Sydney, 4 September 2007, p. 31.
16 Caltex submission, p. 72.
17 ibid.
18 Mobil submission, p. 10.
19 ibid.
20 Shell submission, p. 7.
21 Coles submission, p. 6.
22 ibid.
23 ibid., p. 7.

Woolworths

Woolworths observes three generally consistent behaviours:

- major oil companies generally lead prices up at the bottom of a price cycle
- independents generally lead the market down (followed by major retailers over varying periods of time)
- all players determine their prices based on competitor sites within the local area of each site, on a daily and intra-day basis.[24]

Woolworths considers that the independents have to distinguish their offer based on price since the major oil companies have advantages over them in respect of brand perception, location and quality of offer.[25] The majors match the lower prices offered by independents until margins become uneconomic for the major retailers, which then move their prices up to a point where their average margin equals their 'economic margin'. Woolworths states that the time lag between when the major oil companies raise their prices and when the independents match them is also important to independents for maintaining their low price perception.

Woolworths considers that the amplitude of price cycles has increased over the past four years by between four and six cpl as a result of increased competition driving the bottom of the cycle down further, requiring a higher peak price to generate an adequate average return.[26] Woolworths states that the enhanced competition is due to consumers being more aware of price cycles and prepared to change their buying behaviour and retailers being more vigilant about competitor price movements.

Neumann

Neumann states that the low point of the cycle sees margins drop to a margin of three to four cpl that will bring normal profits or below or even go into negative.[27]

A number of petrol retailers have considered the impact on competitors of stopping price cycles. Caltex anticipates that setting a median price instead of a cycle's peak price, its competitors in local areas would immediately match this price and then push prices lower.[28] It expects that this behaviour would continue for many weeks, generating considerably fewer sales for Caltex. It considers it unlikely that all competitors would match each others' behaviour and cease cycling.

An independent retailer gives an example where it attempted to post and hold a median price at a selected number of sites. However, this strategy did not work as competitors quickly matched its prices and then pushed prices lower.

One non-major retailer comments that the consistent outcome of price cycles is that most retailers' prices follow each other so that they are not out of the market for prolonged periods. It also states that its attempts to increase prices to a peak level early in a week were generally unsuccessful.

Another non-major retailer states that it has not attempted to stop or limit price cycles but has, on rare occasions, determined that it would not follow competitors' price increases beyond a certain point. This resulted in competitors matching its lower price.

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24 Woolworths submission, p. 13.
25 ibid., pp. 14–5.
26 Woolworths submission, pp. 15–6.
27 Neumann response to s. 95ZK, pp. 6–7.
28 Caltex submission, p. 88.

Role of independents and new entrants

A number of interested parties make reference to the pricing strategies of independents and new entrants to the market and the roles these parties play in influencing the price cycle. Some parties consider that price cycles originate from the discounting behaviour of independents. Similarly, other parties comment on the introduction of price cycle behaviour upon new entry of independents.

Mobil considers that price cycles are a longstanding characteristic of the Australian market and are a result of the discounting strategy of independents.[29] Similarly Shell considers that price cycles may be a remnant from when independents played a larger role in the retail market.[30]

BP states that there has been some change in price cycle behaviour.[31] In the past, smaller operators used to drive the discount part of the cycle. Major oil company-branded sites would generally match such prices, often with the aid of price support provided by their supplier. Prices would then be driven up by one of the major oil companies withdrawing price support, which would be followed by others, including independents. However, BP says that now discounting is driven by any number of competitors, including major oil company sites and, similarly, the first upward movement in prices can be made by any of a number of competitors, although typically BP, Mobil, Caltex or Coles Express.

APCO Service Stations Pty Ltd (APCO) states that the price cycle in Victoria has existed for up to 15 years, probably triggered initially by independents such as Solo then Liberty. APCO states that discounting is now controlled by the supermarkets and the two majors, and the independents cannot match the discount docket so that prices are not going to the previous lows. However, APCO states that the higher end of the cycle remains.[32]

The Royal Automobile Club of Victoria (RACV) considers that the entry of an independent in Wodonga and Ballarat has introduced price cycle behaviour. In other regional areas, the RACV considers the introduction of price cycles to be driven by supermarket competition.[33]

The Tasmanian Automobile Chamber of Commerce (TACC) points out that Tasmania has in the past had very stable prices. However, it states that more recently, with the entry of United Petroleum, irregular price cycles have developed.[34]

Wholesale supply and the impact of price support mechanisms

The Victorian Automobile Chamber of Commerce (VACC) considers that refineries contribute to the retail price cycle. It suggests that refineries find it difficult to adjust their fuel production to meet the variable demand for fuel. It considers that while the major oil companies could increase storage, they have exhibited a preference for maintaining a constant production rate and using the pricing structure through price support to manage demand.[35]

29 ACCC, public hearing transcript, Melbourne, 20 September 2007, p. 3.
30 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 78.
31 BP submission, pp. 28–9.
32 APCO submission, p. 7.
33 ACCC, public hearing transcript, Melbourne, 24 August 2007, p. 17.
34 ACCC, public hearing transcript, Hobart, 14 September 2007, p. 38.
35 ACCC, public hearing transcript, Melbourne, 24 August 2007, p. 61.

Coles suggests that, in areas where there are local refineries, volume may be more readily available so there is more incentive for the players to aggressively pursue volume strategies. This is in contrast to Darwin and some regional areas where the supply chain is less flexible, such that this may be driving differences in price cycles.[36] The RACV also considers that the sales volume driven mentality of managers of petrol companies 20 years ago may have contributed to the price cycle in some areas.[37]

Mr Jacobson (formally of Trafigura Services Australia) suggests that the price support mechanism used by the major retailers to keep control of their franchisees had contributed to the price cycle.[38] Another witness testified that the provision of price support might have facilitated the growth of the price cycle, but that its removal would not necessarily cause price cycles to cease.

United Petroleum also considers that price support mechanisms play a role in creating price cycles. United Petroleum notes that, during a heavy discounting cycle, one of the oil companies will eventually withdraw price support causing the retail price to rise.[39]

Underlying pattern of demand

A number of interested parties discuss whether underlying demand patterns affect whether price cycles exist.

Neumann Petroleum speculates that the history of price cycles goes back to earlier patterns of demand, when people used to get paid on a Friday and go shopping on a Saturday and fill the car up. Retailers would reduce their price mid week when there was low demand.[40] The Motor Traders Association of Queensland also considers that demand patterns, amongst other factors, may have influenced the price cycle.[41]

Informed Sources considers that the typical weekly frequency of the cycle is driven by consumers purchasing petrol roughly on a weekly basis.[42] It estimates the average frequency of consumer purchases with reference to the average car tank size, the average kilometres driven per week and the typical fuel efficiency.

The Royal Automobile Club of Tasmania (RACT) suggests that Tasmania has no regular price cycles because Tasmanians have a tendency not to shop around. The RACT references a national survey which showed that only 27 per cent of the Tasmanian respondents shop around compared with the national average of 49 per cent.[43]

The Automobile Association of the Northern Territory (AANT) considers that the lack of a clear price cycle in Darwin is because there is relatively less retail competition.[44] However, the AANT also intimates that the absence of price cycles may be caused by relatively different buying patterns amongst consumers in the Northern Territory. In particular, it states that Northern Territory consumers often need to drive for work given that there is less public transport and that therefore they buy on an as-needed basis.[45]

36 ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 20.
37 ACCC, public hearing transcript, Melbourne, 24 August 2007, p. 33.
38 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 48.
39 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 27.
40 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 22.
41 ACCC, public hearing transcript, Townsville,, 23 August 2007, p. 27.
42 ACCC, public hearing transcript, Melbourne, 9 October 2007, p. 58.
43 ACCC, public hearing transcript, Hobart, 14 September 2007, p. 18.
44 ACCC, public hearing transcript, Darwin, 27 August 2007, p. 39.
45 ibid.

11.5 Do consumers take advantage of price cycles?

11.5.1 Interested parties' views

There are two opposing views expressed during the inquiry as to whether consumers take advantage of price cycles. The first view, expressed by the major petrol retailers, is that many consumers are price sensitive and able to respond to the predictable nature of price cycles and time their purchases for the troughs of the price cycle and avoid purchasing on high priced days.

The opposing view is that there is a stable pattern of consumption during the week, irrespective of the nature of price cycles and that the majority of sales are made at a price below the average price provides no relative benefit to consumers.

Petrol retailers

Caltex states in its submission that daily petrol sales respond to price cycles, to the benefit of consumers.[46] Based on its quantitative research, Caltex considers that motorists are price sensitive and modify their purchasing behaviour to take advantage of price cycles. It considers that the price cycles benefit many consumers wishing to take price into account in their purchase decisions. These price sensitive motorists can save money by watching the price cycle and buying petrol when it is cheaper if they can—typically on Tuesday in large metropolitan areas and on Sunday in Perth.

Other petrol retailers generally agree that motorists are accustomed to price cycles and, to various degrees, adjust their purchasing patterns accordingly. Some gave sales volume data to show that price-sensitive consumers have taken advantage of price cycles. Coles states that over 50 per cent of fuel is sold below the average cycle price.[47] Woolworths states that a majority of its volume is sold below the average price across the price cycle, with the greatest volumes occurring on the days leading to the upward part of the cycle.[48] Neumann Petroleum indicates that in Brisbane it sells more at the bottom of the price cycle.[49]

Other parties

The Western Australian Department of Consumer and Employment Protection (DOCEP) states that a University of Western Australia analysis found that there was no meaningful difference in consumption patterns between 2004 (when a price cycle existed in Perth) and 2005 (when no cycle existed).[50] The study found that day of the week, rather than price, was the main driver of consumption and that Thursdays and Fridays were the days of highest consumption and Sunday was the lowest, regardless of whether a price cycle existed or not. DOCEP concludes that prices affect where, but not when, motorists buy unleaded petrol.[51]

DOCEP questions the general claim—that 60 per cent of sales are below the average price for the cycle—is , in aggregate, of benefit to consumers.[52] It states that this fact provides no relative benefit to consumers. It states that the ratio of sales above and below the average price is a construct of the timing and level of the peak of the cycle, the rate at which prices are subsequently reduced and the stable pattern of consumption throughout the week. It states, for example, that high prices in the early

46 Caltex submission, pp. 89–90.
47 Coles submission, p. 7.
48 Woolworths submission, p. 16.
49 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 31.
50 DOCEP submission, p. 14.
51 ACCC, public hearing transcript, Perth, 28 August 2007, p. 4; p. 16.
52 DOCEP submission op. cit., pp. 14–6.

part of the cycle raise the overall average price and result in greater volumes of sales below this average price.

DOCEP considers that a more useful measure of relative consumer benefit is a comparison of indicative retail margins (the difference between the average daily retail price and the average daily TGP).[53] It compared margins in Perth for two periods: 1 October 2004 to 31 December 2004 (when regular price cycles occurred) and 1 October 2005 to 31 December 2005 (when no regular price cycles occurred). It found average margins of 3.48 cpl and 3.02 cpl respectively and concludes that the higher margin during the earlier period suggests that no relative benefit is derived for consumers from price cycles.

The Motor Traders Association of Australia (MTAA) considers that not all consumers are in a position to take advantage of price cycles. Instead it suggests that only the 'locationally lucky' benefit, given that price cycles do not occur at the same place, at the same time, or at all, in some places.[54]

The TACC suggests that given Tasmanians have not, until recently, had price cycles, the community is unaccustomed to taking advantage of these cycles.[55]

11.5.2 Analysis of sales by day of the week

To obtain a better understanding of weekly consumer purchasing patterns, the ACCC has analysed data from selected petrol retailers on average volumes sold on each day of the week for the 2006–07 financial year in capital city and non-capital city markets. All the companies that provided data in response to the ACCC's notices under s. 95ZK of the Act have claimed confidentiality over the volume data.

This set of data is matched with average daily price information sourced from Informed Sources to indicate the general relationship between average daily sales volumes and average daily prices when prices move over the course of a week.

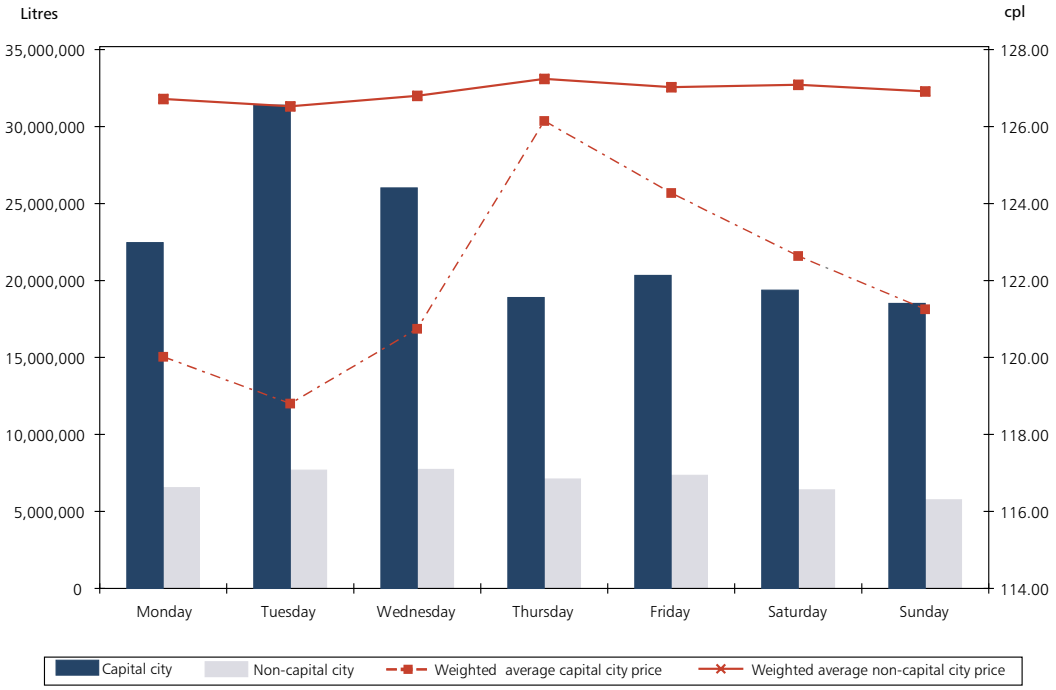
A graph summarising data for the national market is provided below, followed by more detailed analyses for the component markets. Charts with further information about each market are provided in appendix P.

National market

Chart 11.3 illustrates national average volumes sold and average retail prices (weighted by volume in each state) on each day of the week in capital city and non-capital city areas in 2006–07.

53 ibid.
54 ACCC, public hearing transcript, Canberra, 21 August 2007, p. 20.
55 ACCC, public hearing transcript, Hobart, 14 September 2007, p. 44.

Chart 11.3 Average national retail prices and volumes by day of the week: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

Chart 11.3 shows that, in capital city areas, average daily volumes exhibited a pattern of early week high sales followed by a decline to a trough over the weekend. Average prices fluctuated over a week with a trough on Tuesday and a peak on Thursday. About 20 per cent of petrol was bought on Tuesday and 12 per cent was bought on Thursday. In contrast, average daily volumes and retail prices in non-capital city areas were relatively constant over the course of a week.

Market analysis

In capital city markets where regular price cycles were present the following results were found:

- Average volumes were lowest on the day that average prices were highest (and vice versa) in Sydney, Melbourne and Adelaide.
- In Brisbane, average volumes were highest on the day that average prices were lowest and average volumes were lowest on Sunday.
- In Perth, average prices were highest on Wednesday, and lowest on Sunday, while volumes were highest on Friday and lowest on Sunday. Perth had roughly fortnightly cycles in 2006–07 so weekly analysis of sales volumes in this city is less meaningful. We exclude Perth from further comparison with other major capital cities in this analysis.
- Table 11.5 shows that in Sydney, Melbourne, Brisbane and Adelaide, more than 60 per cent of weekly sales were made on the four days of the week (i.e. Sunday, Monday, Tuesday and Wednesday) when the average daily price was below the average weekly price.[56]

56 Note that the average daily price is not itself volume weighted, so this measure may disguise the effect of big intraday price swings on volumes.

Table 11.5 Proportion of weekly volumes sold on days where the average price is below the weekly average price: 2006–07

	Number of days with above average price	Proportion of sales sold on days with above average price (%)	Proportion of sales sold on days with below average price (%)
Sydney	3	36%	64%
Melbourne	3	35%	65%
Adelaide	3	34%	66%
Brisbane	3	38%	62%

Source: ACCC from data supplied under s. 95ZK of the Act.

In capital city markets where there were no regular price cycles, it was found that:

- volumes over the course of a week were stable relative to sales in capital city markets where regular price cycles were present (Hobart, Darwin, Canberra)
- average volumes were highest on Friday and lowest on Sunday in Hobart
- average volumes were highest on Thursday and lowest on Monday in Darwin
- average volumes were highest on Wednesday (when average prices were lowest) and lowest on Sunday in Canberra.

The following results were found in non-capital city markets:

- Volumes were stable relative to sales in capital city markets, where regular price cycles were present.
- In New South Wales and Queensland, average volumes were highest on Tuesday and lowest on Sunday.
- In Victoria, average volumes were highest on Wednesday and lowest on Sunday.
- In South Australia, Western Australia, Tasmania and the Northern Territory, average volumes were highest on Friday and lowest on Sunday.

11.5.3 ANOP survey results on price cycles

The ANOP survey on motorists in urban Australia has provided information about consumers' price cycle perceptions and preferences. Appendix H presents a summary of the survey results.

The survey finds that there is a high level of awareness of price cycles among petrol consumers. The results for the four major capital cities where weekly price cycles are present show that:

- 83 per cent of surveyed motorists believe there is a regular price cycle and 75 per cent think there is a regular weekly cycle. Awareness of weekly cycles is highest in Adelaide (82 per cent) and Melbourne (81 per cent).
- 85 per cent of surveyed motorists believe petrol is more expensive on particular days, with 44 per cent and 43 per cent nominating Friday and Thursday respectively. Monday and Tuesday were the days least mentioned.
- 90 per cent of surveyed motorists perceive that petrol is cheaper on particular days, with 74 per cent nominating Tuesday. Thursday to Sunday were seldom mentioned by the surveyed motorists as cheaper days.
- On average, consumers estimate that prices vary, from the most expensive to the cheapest day, by 13.5 cpl. This compares closely to the highest amplitudes recorded in the analysis shown in table 11.1, which covers 1 January 2007 to 30 June 2007. This is higher than the average amplitudes of price cycles (see table 11.1) calculated from daily average prices over the same period.

The results for Perth show that fewer surveyed motorists think there is a regular price cycle (61 per cent). Forty-two per cent of Perth motorists think there is a regular weekly cycle, while 15 per cent think that there is a regular fortnightly cycle.

The survey also shows that petrol consumers in the four major capital cities where weekly price cycles are present tend to buy petrol on particular days of the week. The survey results are that:

- 68 per cent of surveyed motorists tend to buy petrol on particular days of the week, with 50 per cent buying on Tuesday; Tuesday is nominated more often in Adelaide (64 per cent)
- 59 per cent of surveyed motorists buy on a particular day because of their perception that petrol is cheaper on this day
- only seven per cent of surveyed motorists say they buy on particular days solely because it suits them.

Perth had fewer surveyed motorists reporting buying on particular days of the week (31 per cent). Similarly, fewer people report buying on a particular day of the week solely because it is cheaper (17 per cent). Apparent fortnightly cycles in Perth may make a 'day of the week' approach to buying petrol less attractive.

The survey asks motorists aware of regular price cycles how often they managed to buy petrol when it is cheapest in the cycle. The survey findings are as follows:

- In capital cities with typically regular weekly price cycles, 28 per cent report buying when cheapest in the cycle almost every time and 34 per cent report buying when cheapest most of the time
- In Perth, with its typically regular fortnightly price cycle, eight per cent report buying when cheapest in the cycle almost every time and 28 per cent report buying when cheapest most of the time. It is quite possible that this lower result reflects that with fortnightly cycles the cheapest day of the cycle is a smaller portion of the overall cycle. With a fortnightly cycle a greater proportion of motorists would 'need' to fill up more frequently than the length of the price cycle would allow them to take advantage of price cycle troughs.

Overall, many consumers seem to be aware of regular price cycles and many have adapted their purchasing behaviour accordingly. This is particularly the case for the four major cities with weekly cycles. The relatively low awareness of regular price cycles in Perth may be because of the recent shift from weekly cycles to fortnightly cycles there.

11.5.4 Different types of petrol consumers

Unleaded petrol is a homogenous product with limited brand loyalty. Petrol consumers are generally very sensitive to petrol price. However, there is also a group of consumers that do not care as much about petrol price levels.

The ANOP survey classifies, petrol consumers into three price sensitivity groups based on when they buy petrol: highly sensitive (always try to buy when cheaper), fairly sensitive (usually try to buy when cheaper) and insensitive (just buy when needed). Seventy per cent of surveyed motorists are found to be price-sensitive, with 36 per cent highly sensitive and 34 per cent fairly sensitive to petrol price. The rest are price-insensitive consumers who normally buy petrol when needed.[57]

Compared with price-sensitive consumers, those price-insensitive consumers are either less prepared and/or less able to adapt their purchasing pattern to the changing petrol prices in a market with price cycles.

57 See appendix H on the ANOP survey results.

Petrol retailers, in particular the refiner-marketers, may have used non-price competition, such as promoting fuel card and credit card reward programs, to improve consumers' purchasing commitment with branded petrol. The main target is those price-insensitive consumers—for example, the corporate customers whose companies pay for their petrol purchase.

11.5.5 Do consumers take advantage of price cycles?

While many petrol consumers are price-sensitive and well aware of price cycles, they cannot all take advantage of price cycles. To the extent that consumers are willing and able to change the timing of their purchases of petrol, the presence of regular price cycles permits them to purchase petrol at prices below the average price of cycles.

The day of the week analysis presented in section 11.5.2 indicates that sales volumes and average retail prices on each day of the week are generally negatively related in metropolitan cities where price cycles are present. Broadly speaking, petrol sales made on Tuesday when petrol is relatively cheap are much higher than those made on Thursday and Friday when petrol is relatively expensive. In other petrol markets where there are no regular price cycles, sale volumes over the course of a week are relatively stable. This indicates that some consumers have responded to regular price cycles by purchasing petrol at times when petrol prices are relatively low.

This is consistent with the finding of the ANOP survey summarised in section 11.5.3, which show that most consumers in the four major capital cities with weekly cycles are well aware of regular price cycles and have adapted their purchasing behaviour by buying petrol on particular days, when cheapest.

There is evidence that more petrol is purchased by consumers when prices are relatively low. In Sydney, Melbourne, Brisbane and Adelaide, more than 60 per cent of weekly sales were made on four days of the week (i.e. Sunday, Monday, Tuesday and Wednesday) when the daily average price was below the weekly average price (see table 11.5). Up to 20 per cent of weekly purchases occurred on Tuesday—the day with trough price.

The ANOP survey provides further evidence that consumers have taken advantage of price cycles by purchasing petrol on particular days when it is cheaper. Sixty-eight per cent of motorists in the above four cities tend to buy on particular days, almost exclusively from Monday to Wednesday when prices are relatively cheaper. Fifty per cent tend to buy on Tuesday.[58] Combined with the evidence presented in the preceding paragraph, this suggests that the majority of consumers may take advantage of price cycles by purchasing more petrol when prices were relatively low.

The reality is that while there may be price-sensitive consumers who benefit from cheap petrol on Tuesdays and early Wednesday, there are many consumers who simply buy when they need to or when they can. They do not or are not able to choose the time of purchase to take advantage of retail discounting.

Although price cycles present opportunities for consumers to purchase petrol at relatively low prices, whether they can take advantage of price cycles depends on their willingness and ability to better time their purchase. This willingness and ability to better time their purchase of petrol depends intimately on consumer search costs. The search costs in turn depend heavily on both price volatility and price transparency. Aspects of price volatility have been discussed in this chapter, and chapter 15 will discuss price transparency.

58 Note that surveyed motorists can nominate more than one day.

12 Petrol shopper dockets

The emergence of petrol shopper dockets has often been raised as an issue affecting petrol retailing in Australia. It is not surprising that the current inquiry has attracted further discussion in this area, with submissions received both in support and raising concern.

The inquiry has enabled the ACCC, with the benefit of experience to date and considerable information, to undertake further assessment of the effects of the arrangements on competition and consumers.

12.1 Supermarkets' shopper docket arrangements

12.1.1 Woolworths' shopper docket scheme

The first Australian supermarket to enter petrol retailing was Woolworths in 1996. Woolworths combined the opening of its first petrol site with a special discount offer on fuel for consumers who could produce a Woolworths grocery receipt for a specified dollar amount of groceries—known as a shopper docket.

Woolworths routinely offers a 4 cpl discount on the price of fuel to customers who present a voucher which is obtained when a purchase of $30 or more is made at a Woolworths or Safeway supermarket, a Big W store or other Woolworths subsidiaries. From time to time, Woolworths offers a greater discount on petrol to customers who have purchased a minimum value of goods from a particular retailer within the Woolworths Group.

In August 2003 Woolworths and Caltex announced a proposal to enter into a joint venture for the retailing of motor fuel with up to 450 petrol retail sites. Longer term arrangements (involving up to 500 sites) were announced in March 2004.

Currently, Woolworths operates from 505 petrol outlets across Australia.[1] There are 371 outlets owned and operated directly by Woolworths. The remaining 134 are owned by Caltex and operated by them directly or through their franchisees under an alliance arrangement whereby Caltex supplies petrol to Woolworths for retail sale. All 505 outlets are branded with the dual logos of Caltex and Woolworths.

All petrol sold at these outlets is owned by Woolworths.[2] Transactions for around 60 per cent of fuel sold at Woolworths service stations involve a shopper docket.[3]

When setting petrol prices, Woolworths' policy is to match the lowest price in the local area. Woolworths submitted that the price of fuel at any Woolworths' site is not dependent on Woolworths' shopper docket scheme. Woolworths advised that it does not identify a minimum acceptable price.

Woolworths submitted that the net cost of the fuel discount program is only a fraction of a cent of the average selling price of the 25 000 lines sold in Woolworths supermarkets. It considers that loyalty/reward/promotion schemes are part of the total cost of operating a retail business and enticing customers to come back, to switch brands or to buy more. Woolworths submitted that the cost of the shopper docket scheme is not something that is taken into account in setting individual prices for grocery items and it does not price the over 25 000 product lines it sells on a cross-subsidy or cost recovery basis. Woolworths indicated that the cost of the shopper scheme is borne by the overall business.[4]

1 Woolworths submission, p. 2.
2 Woolworths submission, p. 2.
3 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 70.
4 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 69.

12.1.2 Coles' shopper docket scheme[5]

In July 2003 Coles and Shell entered into an alliance under which Coles took over the management of Shell's core franchise network across Australia. The roll-out of the Coles Express network was completed in March 2004 and there are currently around 600 Coles Express service station sites. Coles Express routinely offers a 4 cpl discount on the price of petrol to customers who have purchased a minimum value of goods or services from Coles' supermarkets or other companies in the Coles Group. From time to time, Coles Express offers special promotions above the standard 4 cpl discount.

Coles submitted that its shopper docket scheme was introduced in 2004 as a competitive response to marketplace developments at the time. It elected to offer a 4 cpl discount by taking into consideration the position of its competitors and the nature of an offer that would represent value to customers.

Coles submitted that its shopper docket scheme replaced its shareholder discount scheme. The shareholder discount scheme was not considered to be consistent with retail loyalty programs around the world, and it was relatively expensive. The intention was to introduce a scheme that is accessible to all customers and rewards them according to their patronage of Coles' group stores.

Coles submitted that its shopper docket scheme is expected to meet two objectives. First, it is expected to act as a loyalty program for the brands within the Coles Group. Second, the alliance venture, Coles Express, is expected to be a growing and profitable business in its own right. Fuel is not used as a loss leader. While Coles admits that it makes a lower return on fuel than its investment warrants, it is nonetheless satisfied with the return on fuel.

When setting petrol prices, Coles' policy is to offer the best value prices to customers while taking into account marketplace occurrences and the objective of making an economic return. In practice, Coles generally matches prices with competitors in local areas. It noted that the higher margins on lower volume sales at the top of the price cycle offset the higher volume sales with thin margins at the bottom of the cycle.

Coles submitted that it prefers not to lead the price cycle as this has an adverse impact on the number of customers that use its fuel outlets. It advised that the decision to increase the price of fuel is made after reviewing its business as a whole as well as its position against business targets, the current supply situation, the volume of fuel being sold on the day in question, the relationship between fuel volume, customer traffic and convenience store sales and market occurrences in the preceding days and weeks.

Coles submitted that there is a very important relationship between fuel, fuel margins, fuel customers and convenience store sales. Coles submitted that, at the commencement of the alliance, 60 per cent of alliance revenue came from fuel sales while 40 per cent came from convenience store sales. Over time, revenue from convenience stores has grown so that it now represents about 50 per cent of the alliance's revenue. To illustrate the importance of convenience stores, Coles advised that it offers an additional 2 cpl discount associated with minimum purchases from its convenience stores.

Coles submitted that Coles Express funds 1 cent of the 4 cpl discount while the remaining 3 cents are funded by the business (such as Coles Supermarkets, K Mart or Officeworks) which elects to offer a shopper docket promotion. If the business elects to offer an additional discount above 4 cpl it funds the additional cost of the promotion. In the main the supermarkets offer shopper docket promotions. The management team of the business treat the shopper docket scheme as a promotional option in the same category as a catalogue or TV advertising. The cost of the shopper docket scheme is treated as a

5 ACCC, public hearing transcript, Melbourne, 7 September 2007, pp. 3–37.

marketing expense. Coles advised that the objective of offering a shopper docket promotion is to drive additional sales volumes. Coles submitted that the cost of its shopper docket scheme is not a factor in determining the price of individual groceries.

12.2 Previous consideration of shopper docket arrangements

The ACCC's involvement with shopper docket arrangements in the past has arisen primarily from the possible application of the exclusive dealing provisions of the Act and the consequential receipt of third line forcing notifications.

12.2.1 Exclusive dealing and third line forcing notifications

In certain circumstances, the competition provisions of the Act prohibit conduct known as exclusive dealing. One form of exclusive dealing, third line forcing, involves the supply of goods or services on condition that the purchaser acquires goods or services from a particular third party, or a refusal to supply because the purchaser will not agree to that condition.

In the case of shopper docket arrangements, third line forcing conduct may arise through the offer of discounted fuel on condition that the purchaser acquires, for example, groceries, or credit card services or liquor from a third party. The party at risk of engaging in third line forcing conduct is the party offering the discounted fuel.

While third line forcing is prohibited under the exclusive dealing provisions of the Act, the Act also provides processes for obtaining immunity for parties proposing to engage in third line forcing conduct that is in the public interest.

One way in which parties may obtain immunity is to lodge what is known as a notification with the ACCC. Under this process, a person who engages in or proposes to engage in conduct of a kind referred to in ss. 47(6) or 47(7) may lodge a notification with the ACCC.

For a notification concerning third line forcing conduct, immunity from legal action begins 14 days after notification provided the ACCC does not object in that period. The ACCC may at any stage remove the immunity provided by a third line forcing notification if it is satisfied that the likely benefit to the public from the notified conduct would not outweigh the likely detriment to the public resulting from the conduct.

The notification process is a public process involving a public register and consultation with interested parties.

As discussed in more detail in chapter 14, amendments to the third line forcing provisions of the Act came into effect on 1 January 2007. Under the amendments, related companies proposing to engage in third line forcing conduct are effectively treated as a single entity under the Act.

This means that arrangements that involve the offer of goods by one company on condition that the purchaser also acquires goods from the company's related body corporate will not raise concerns under the third line forcing prohibitions.

As discussed later, this is likely to limit the application of s. 47 to a number of the shopper docket arrangements in the marketplace, including some of those previously notified to the ACCC.

While notifications lodged before 1 January 2007 regarding conduct by related companies which at the time could have constituted third line forcing are still in place, the ACCC considers that such notifications are unlikely to provide protection as the notified conduct no longer amounts to conduct of a kind described under ss. 47(6) or 47(7) of the Act.

Importantly, with or without notification, the ACCC will be limited in pursuing shopper docket arrangements involving the forcing of related company products. That is, shopper docket arrangements between related companies (including many of the supermarket arrangements) will no longer constitute a contravention of ss. 47(6) or 47(7) of the Act and, accordingly, the ACCC will no longer be able to pursue such arrangements under these sections with or without notification in place.

12.2.2 ACCC consideration of shopper docket notifications

The first notifications concerning a shopper docket arrangement were lodged by Australian Independent Retailers Pty Ltd (AIR) in 1996 and related to the introduction of Woolworths' arrangements. These were the first of over 200 notifications concerning petrol shopper docket arrangements lodged with the ACCC between 1996 and 2003. Many of these notifications were lodged by individual petrol stations. Details are set out at appendix Q.

Following notification of Coles' shopper docket arrangements in July 2003[6] and the joint venture between Woolworths and Caltex[7], the ACCC undertook a review of these arrangements. The ACCC consulted widely in its examination of shopper docket petrol discount schemes.

The ACCC report, released in February 2004, found that there were significant benefits to consumers from shopper docket petrol discount schemes. The ACCC considered that the proposed arrangements, along with initiatives by competitors in response, would benefit consumers in a number of ways including the following.

- **Lower petrol prices for consumers**. The ACCC considered that the shopper docket petrol discounts would bring lower petrol prices for consumers, and that the involvement of such significant participants as Coles/Shell and Woolworth/Caltex would mean a greater availability of cheaper fuel because there would be more petrol sites offering the shopper docket discounts. In addition, the conduct was generating a culture of discounting, as demonstrated by the competitive response by many independent retailers which were offering their own discounts.
- **Increased non-price competition**. The petrol and grocery sectors were already seeing some variety in the types of loyalty programs being devised in response to those proposed by Woolworths and Coles, notably Metcash/IGA's loyalty scheme. Further, some competitors to the Coles/Shell and Woolworths/Caltex arrangements were considering a number of other innovative responses to attract and retain custom.

The ACCC noted claims that shopper docket schemes would reduce the number of independents operating. However, it did not consider that the shopper docket schemes in themselves could be said to be responsible for many of the effects on smaller independent businesses. The ACCC considered that shopper docket petrol discounts were the latest innovation in an industry that had been undergoing significant change for some time.

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6 A notification was lodged by Eureka Operations Pty Ltd in July 2003 concerning the offer of discount petrol to customers who had bought a specified value of products from companies within the Coles Myer group which included Coles, Bi-Lo and Liquorland. Eureka Operations is wholly owned by Coles Supermarkets Australia Pty Ltd and is the sole supplier of petrol to Coles Express sites.

7 Woolworths continued to rely upon the notifications lodged by itself and AIR.

The ACCC noted that the independent sector had responded with its own shopper docket petrol discounts and loyalty schemes.

Since the release of its shopper docket report, the ACCC has received over 600 notifications concerning petrol discounting. Some of the notifications were lodged by Coles and Woolworths and concern extensions to their existing shopper docket arrangements. Other notifications were lodged by independent retailers regarding alternative shopper docket and loyalty schemes such as Servo Savers.[8] Other notifications lodged concerned localised arrangements between individual supermarkets (and other types of retailers such as hotels, butchers, telecommunications providers, automotive repairers, pharmacies) and fuel retailers, or between groups of supermarkets within the same brand and a chain of petrol retailers. Details of notifications received are set out at appendix Q.

Submissions

A number of submissions addressed the issue of shopper dockets. Additionally, the issue of shopper dockets was covered during hearings.

A number of parties have raised concerns about the impact of the supermarkets' shopper docket arrangements.

Fueltrac alleged predatory pricing by the supermarkets and considers that, as a consequence of shopper dockets, independent fuel retailers are now price followers rather than price leaders. The SSA submitted that the Woolworths and Coles shopper docket schemes are anti-competitive because they are not available to all petrol retailers that wish to participate.

NARGA expressed concern about the increasing market share of Woolworths and Coles in petrol retailing and several parties raised concerns about the impact of shopper dockets on grocery and petrol prices. MTAA, MTA Queensland and the AANT raised concerns that Woolworths and Coles have increased grocery prices to cover the cost of their shopper docket arrangements. The RACV submitted that, in November 2006, the long-held (20 years) average price volatility of 10 cpl increased to 14 cpl as a result of the 4 cpl discount available under the shopper docket schemes.

Several parties raised concerns about the impact of shopper dockets on consumer behaviour and consumer choice. The VACC and APADA expressed concern that shopper dockets create a loyalty system whereby consumers no longer pay attention to board prices. United considers that, as a result of shopper dockets, consumers pay less attention to board prices because their attention is focused on the 4 cpl discount. Matilda also believes that consumers are paying less attention to price. 7-Eleven considers that shopper dockets have transformed consumer behaviour such that non-supermarket aligned retailers see little benefit in discounting.

AAA submitted the results of ANOP's AAA Survey of Motorists Attitudes 2007, which found that 79 per cent of motorists surveyed have used shopper dockets and 48 per cent of these were regular users. The survey also found that regular use of shopper dockets had increased from 19 per cent in 2003 to 40 per cent in 2005 and 48 per cent in 2007. It also found that consumers who use shopper dockets are relatively price conscious.

Many parties, including Mobil, United, 7-Eleven, Liberty, BP, Trafigura and APCO Service Stations Pty Ltd, consider that the entry of the supermarkets into petrol retailing and the introduction of shopper docket schemes has resulted in established fuel retailers losing sales volume and market share to the

8 See appendix Q for further information about the Servo Savers scheme.

supermarkets. United, Liberty and BP consider that over time, this loss of market share has, for the most part, been recovered.

Several submissions noted that independent fuel retailers, particularly those in rural and regional areas, have been most affected by the introduction of shopper dockets. Bennets Petroleum considers that consumers are travelling further to buy groceries and petrol to the detriment of independently operated service stations in small towns. APADA considers that shopper dockets have resulted in a reduced number of service station sites and CAFTT is concerned that an adequate number of market participants be maintained. Neumann Petroleum submitted that shopper dockets have had a negative effect on margins.

Against this, the RACT submitted that while shopper dockets have had some impact on individual independent retailers, there has been little impact on independent chains of retailers. DOCEP submitted that shopper dockets have had no impact on the proportion of independent retailers in Western Australia, which have consistently had the cheapest fuel in Perth since 2004.

Some parties submitted that the industry is undergoing significant change regardless of the introduction of shopper docket schemes. Caltex submitted shopper dockets have accelerated, rather than initiated, the trend towards larger retail sites with higher volumes and large convenience stores. It considers that high volume sites are needed to be competitive and this has resulted in some smaller independents leaving the market. Woolworths submitted that the drive for unit cost efficiency has resulted in the closure of uneconomic sites and an objective for all participants to reduce costs.

7-Eleven submitted that the current trend in retail margins will continue whether shopper dockets remain in the market or not.

Some submissions considered that shopper dockets have not had a significant effect on the industry. AAA submitted that shopper dockets are similar to a loyalty scheme and, while they may attract customers, they are not necessarily anti-competitive. Shell submitted that shopper dockets have not influenced price cycles.

Several parties noted that shopper docket schemes have been a positive development. CAFTT and RACWA submitted that shopper dockets have been of benefit to consumers. RACWA considers that shopper dockets appear to offer a genuine discount. RACT considers that shopper dockets have created competition in the market and resulted in reduced petrol prices.

12.3 Impact of shopper docket arrangements on competition

The key competition concern with regard to Coles' and Woolworths' shopper docket arrangements is the argument that supermarkets may have the ability to leverage their strong positions in the grocery sector into the petrol retailing sector, leading to anti-competitive effects in the market.

In the course of this inquiry, the ACCC has sought to assess this concern by considering evidence of:

- the impact of shopper docket arrangements upon the volume and market share of petrol retailers
- the impact of shopper docket arrangements upon the number of site numbers operated by petrol retailers
- competitive responses to supermarket shopper docket arrangements.

12.3.1 Industry views

Impact on volume and market shares

Shell submitted that before its alliance with Coles Express its sites captured approximately 16 to 17 per cent of total national volume sales. Since forming the alliance, Shell has shifted its operational focus toward fuel wholesaling.[9]

Shell estimated that approximately 65 per cent of its current wholesale sales are to Coles Express. Shell submitted that since the roll-out of its alliance arrangement with Coles was completed in March 2004 this percentage has remained fairly stable.[10]

Caltex submitted that as a fuel wholesaler half of its petrol sales are directed towards Woolworths. Caltex acknowledged that the alliance with Woolworths has been the key driver of its volume growth since 2001.[11]

Caltex's volume of total petrol supplied in Australia has increased from approximately 4 billion litres at the beginning of the decade to approximately 6 billion litres today. Caltex contended that this increase is a combination of supply to Woolworths and the natural growth of the market.[12]

Mobil submitted that there has been a significant impact on the marketplace as a result of shopper docket arrangements. Mobil contended that it, along with others, has lost volume and market share due to these arrangements. Mobil considers that the supermarkets' shopper docket arrangements are a compelling and competitive offer. It considers that there is no doubt that the supermarkets have grown their share over a very short time and have hurt many competitors in the marketplace, including Mobil. [13]

During 2005 Mobil introduced a fuel discount offer. Mobil has indicated that it has been pleased with the impact this program has had on its volume.[14]

BP submitted that the initial impact of shopper docket arrangements offered by the supermarket chains was a loss of volume in the vicinity of 4 per cent. BP acknowledged that by the end of 2006 it had virtually recovered this volume.[15]

United submitted that the introduction of shopper docket arrangements during 2003 stripped independents of between 15 to 30 per cent of their base volume. United submitted that its volume suffered until 2005–06, when it introduced ethanol. United has recovered and improved its volume since the introduction of ethanol, with petrol sales between 5 to 10 per cent higher than 2003 levels.[16]

7-Eleven submitted that, after an initial reduction in its volume following the entry of Coles Express, there has been a recovery and increase in its volume levels. 7-Eleven attributes this to an increase in the number of stores that it operates. In particular, 7-Eleven has seen healthy growth in the Queensland market.[17]

Neumann Petroleum submitted that it had a drop in volume after Shell and Coles and Caltex and Woolworths initiated their alliances. Neumann Petroleum noted its volume has since stabilised and increased, in part due to growth in the number of retail outlets it operates.[18]

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9 ACCC, public hearing transcript, Melbourne, 13 October 2007, pp. 5–7.
10 ACCC, public hearing transcript, Melbourne, 13 October 2007, pp. 60–1.
11 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 23.
12 ibid.
13 ACCC, public hearing transcript, Melbourne, 20 September 2007, p. 17.
14 ibid, p. 18.
15 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 77.
16 ACCC, public hearing transcript, Sydney, 3 September 2007, pp. 39–40.
17 ACCC, public hearing transcript, Melbourne, 7 September 2007, pp. 56–7.
18 ACCC, public hearing transcript, Brisbane, 22 August 2007, pp. 27–8.

Gull asserted that it is well recorded that the supermarkets chains' shopper docket arrangements have provided a significant boost to the volumes sold at participating service station sites. Gull contended that this increase in volume has been derived by attracting customers away from those petrol retailers that were previously price discounters.[19]

Liberty submitted that its fuel wholesaling base has been affected by the introduction of shopper docket arrangements. Liberty explained that the average volume it supplies to individual sites has decreased. At the same time, Liberty's total volume has remained consistent from month to month. Liberty submitted that its customer base has increased significantly to achieve the same volume results.[20]

Matilda Fuel Supplies submitted that the introduction of shopper docket arrangements has had a significant impact on its volumes. Matilda has identified a flow-on effect from this reduction in volume, with decreased shop sales due to lower customer numbers.[21]

MTAA contended that the supermarket chains control close to 50 per cent of market, measured by volume sales. The MTAA asserted that this has been a key factor in seeing a volume shift away from independents.[22]

TACC submitted that since the introduction of shopper docket arrangements the supermarket chains have achieved higher volume levels, while the TACC's membership has experienced reduced levels. TACC considers the volume decrease has been somewhat balanced out by the closure of smaller service station sites.[23]

Changes to site numbers

MTAA contended that anecdotal evidence suggests that there has been a marked decline in retail site numbers since the entry into, and increased prominence in, the market of the Coles/Shell and Woolworths/Caltex operations.[24]

The MTAA submitted there is a direct relationship between the introduction of shopper docket arrangements and the exit of participants from the sector. The MTAA contended that shopper docket arrangements are contributing to the decline in the number of retail sites.[25]

The MTAA asserted that the total number of Australian service station sites had declined from approximately 9000 to 6500 over the previous five- to eight-year period.[26] However, under questioning at hearings the MTAA admitted that it used a timeframe for site reductions which pre-dated the entry of Coles Express into the market.

Coles Express asserted that poorly located sites with low volumes, no significant shop sales or other income and no compelling proposition for customers, may have declined in number but, according to industry analysts, have been doing so for decades. Coles Express argued the decline in these types of sites supports a strong correlation between low fuel volumes and low profitability.[27]

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19 ACCC, public hearing transcript, Perth, 28 August 2007, p. 56.
20 ACCC, public hearing transcript, Melbourne, 5 September 2007, pp. 94-5.
21 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 55.
22 ACCC, public hearing transcript, Canberra, 21 August 2007, p. 6.
23 ACCC, public hearing transcript, Hobart, 14 September 2007, pp. 41–2.
24 Motor Trades Association of Australia submission, p. 4.
25 ibid, p. 5.
26 ACCC, public hearing transcript, Canberra, 21 August 2007, p. 9.
27 Coles Group Limited submission, p. 3.

Coles Express submitted that since it has been in the retail fuel business it has not observed a significant reduction in the number of sites overall. Coles Express believes refiner-marketer site numbers have remained much the same and independent chains are growing and competing aggressively.[28]

Woolworths submitted that it does not track industry site numbers on a national basis; however, its empirical observation is that when examined over the last 30 years there does not appear to be any sudden increase in the number of site closures across the board.[29]

Woolworths asserted that it is not aware of any evidence to suggest that the entry of supermarkets into petrol retailing has had a direct and appreciable effect on site closures.[30]

Mobil indicated it has completely restructured its own retail operations, with approximately 250 service stations (over 40 per cent of its network) closing during the last six years.[31]

Caltex submitted that it has reduced the number of company owned sites over the past 10 years to improve network financial performance.[32]

Caltex explained the process of divestment is part of a trend in service station rationalisation that has been occurring for 30 years, aimed at increasing site throughput, diversifying sales and divesting sites with poor economic performance or potential.[33]

Caltex indicated that the entry of the supermarket chains, and the associated introduction of shopper docket arrangements, has encouraged it to invest in sites that have the potential to be high-volume, high-efficiency sites with good shop sales.[34]

Shell asserted that during the late 1990s and the early part of this decade, petrol retailing was becoming increasingly competitive. Shell's strategy was to move towards fewer, bigger retail sites to spread the fixed costs of each over more fuel sales.[35]

BP submitted that the petrol retailing sector has moved into a phase where shopper docket arrangements are viewed as a normal facet of the business environment. BP has responded by questioning how robust its own business model will be into the future. BP expects to continue to invest in its sites into the future, with a special focus on its convenience offer.[36]

7-Eleven considers it will most likely remain situated in the three eastern seaboard capital cities it currently operates in. 7-Eleven expects to grow by approximately six fuel sites per year.[37]

United submitted its strategy is to grow its petrol retailing network in regional areas of Australia. This strategy is predicated on the conviction that there is less direct competition with the supermarket chains in these areas. United argued that the most important reason for concentrating on regional Australia is that it does not have to compete with shopper docket arrangements.[38]

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28 ibid.
29 Woolworths Limited submission, p. 6.
30 ibid.
31 Mobil Oil Australia submission, pp. 6–7.
32 Caltex Australia submission, p. 3.
33 ibid.
34 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 28.
35 Shell Australia submission, p. 6.
36 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 80.
37 ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 55.
38 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 24.

United submitted that it has acquired a number of sites across Australia in recent times. United stated it has acquired:

- the Metcash network in Perth, which was formerly a Mobil distributorship
- Andrews Oil in South Australia, which was a Mobil distributorship
- Darwin Petroleum in Northern Territory, which was a Mobil distributorship
- three Mobil distributorships in regional News South Wales
- smaller distributorships, such as Performance and Excel in New South Wales.[39]

The United network currently stands at approximately 236 sites, making it Australia's largest independent fuel retailer.

Liberty submitted that as a wholesale supplier of petroleum products it has increased the number of individual sites that it supplies over the past two years. Liberty estimated that each year approximately 25 new petrol retailers purchase from it and come under its brand.[40]

Neumann Petroleum indicated that its volume has stabilised due to a growth in the number of retails outlets it owns or services. Neumann Petroleum identified a trend of smaller independent service stations wanting to align with the Neumann Petroleum brand since the entry of the supermarkets.[41]

APADA considers the emergence of supermarkets has accelerated reductions in the number of service station sites in Australia. APADA believes this is especially the case in country areas, where there is only so much of the pie to go round.[42]

DOCEP reported that in Western Australia most site closures since 2001 have been company controlled or price supported sites. Of the 17 per cent increase in supermarket sites in Western Australia, almost all of the sites that have changed ownership have been from a refiner-marketer to a supermarket chain. The proportion of sites operated by independent operators has increased slightly.[43]

Competitive responses

Coles Express submitted that the array of competitive responses to shopper docket arrangements has been significant and has eroded some of the initial benefit gained through having a fuel discount scheme.[44]

Mobil developed a fuel discount program in 2005, which is offered throughout the Mobil branded franchised network as well as by some branded distributors. The program offers a 4 cpl discount for a minimum $5 worth of purchases in the service station shop.[45] Since Mobil launched the program, it has been generally pleased with the overall results.[46]

Scott Group of Companies has introduced a fuel discount program at its Mobil branded service stations in Victoria. This program mirrors the one offered by Mobil through its franchised network. Customers receive 4 cpl off the price of fuel if they spend a minimum of $5 in the service station shop.[47]

39 ibid., pp. 20–3.
40 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 102.
41 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 28.
42 ACCC, public hearing transcript, Melbourne, 24 August 2007, p. 78.
43 Department of Consumer and Employment Protection submission, p. 8.
44 ACCC, public hearing transcript, Melbourne, 7 September 2007, p. 67.
45 Mobil Oil Australia submission. p. 10.
46 ACCC, public hearing transcript, Melbourne, 20 September 2007, p. 18.
47 ACCC, public hearing transcript, Mount Gambier, 11 September 2007, p. 32.

Caltex noted that improving its convenience store offer is a key element to ensuring sales growth and profitability in the current competitive market. Caltex noted that approximately 70 per cent of petrol retailers' gross margins come from what they sell in their shop, not from petrol.[48]

BP entered into a partnership with Citibank Mastercard in 2006 to implement a fuel discount offer. BP indicated that both it and Citibank agree that the fuel discount offer has been a success and met their expectations. BP stresses that the offer is relatively new, meaning a degree of caution regarding the offer's success is necessary.[49]

BP explained that its current retail strategy, focusing on growing convenience store sales, is very much about investing in a part of the market which consumers find more and more attractive, given lifestyles and access to 24-hour convenience items.[50]

United submitted it responded to the introduction of shopper docket arrangements by retailing ethanol fuel. United introduced its ethanol product during 2005 and 2006.[51]

United considers that its competitive advantage gained through the introduction of ethanol product is likely to reduce over time, as other petrol retailers move into this area. United sees the volume increases it has achieved through ethanol as temporary. Once other retailers introduce the product, United suspects that its volume will return to the levels achieved before the marketing of ethanol. However, United is considering other strategies to retain customers once its competitive advantage through ethanol products is dissipated.[52]

Neumann Petroleum has implemented a shopper docket arrangement. The offer is a 4 cpl on the price of fuel when customers produce a docket from either a Coles or Woolworths supermarket. The offer is fully funded by Neumann Petroleum. Redemption rates are in the vicinity of 25 to 30 per cent for all customers purchasing fuel from Neumann Petroleum sites.[53] Neumann Petroleum is also promoting its convenience stores.[54]

APCO Service Stations previously offered a 2 cpl shopper docket discount to customers of Franklins supermarkets. When Franklins ceased to operate, the discount offer was discontinued.

APCO has initiated a redevelopment of its sites, to attract higher foot traffic and volume. This process has included adding carwashes to some sites. APCO has also attempted to enter into agreements with fast food chains, for shared use of sites. These measures have been employed to provide a return on the cost of development.[55]

Matilda Fuel Supplies has introduced an in-store 'buy and save' program. This program involves customers receiving a 4 cpl discount on the price of fuel, if they purchase selected products within the store. Initially these products were milk and bread. The offer now extends over a range of products. Matilda submitted that the program has had an uptake of less than 10 per cent; however, it has assisted with increasing foot traffic through Matilda's stores.[56]

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48 ACCC, public hearing transcript, Sydney, 4 September 2007, pp. 27–8.
49 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 78.
50 ibid., p. 79.
51 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 40.
52 ibid.
53 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 27.
54 ibid, p. 29.
55 ibid., pp. 21–2.
56 ACCC, public hearing transcript, Brisbane, 22 August 2007, pp.55–6.

Gull submitted that its strategy is to present an improved shop and convenience offer, to complement a competitive fuel offer. This response is directed at growing non-fuel sales.[57]

MTAA, whose constituency includes most Australian service station owners with the exclusion of the supermarket operations, has indicated that it believes there are very few competitive discount schemes currently being conducted by its independent members.[58]

The MTAA believes there are numerous third line forcing notifications still in place with the ACCC that were lodged by independent chains and small independents; however, it is unlikely that these schemes are still operative and effective. The MTAA does not see them as a feature of the market anymore.[59]

SSA indicated that a shopper docket scheme launched by the SSA, as a competitive response for the independent sector to utilise, has been scaled down since its inception. The SSA's intention was to provide independents with the opportunity to match the supermarkets' discount schemes. The initial launch of the scheme reached approximately 170 independent sites around Australia.

The SSA considers that its shopper docket scheme has been unsuccessful for a variety of reasons. The SSA found the commitment shown by the independent sector has not been as strong as required. To be effective, the scheme requires individual businesses to promote it aggressively to their own customer base. This has not occurred. Exacerbating the problem, the SSA believes for an independently branded scheme to be successful a considerable amount of marketing money and media coverage is required. The SSA asserted that it does not have the requisite funds available to satisfy these requirements.[60]

MTA Queensland submitted that independent service station operators can respond to shopper docket arrangements with a superior shop offer. MTA Queensland noted many older sites are being retro-fitted, to move with the times.[61]

12.3.2 ACCC analysis

ACCC analysis of retail market shares is set out in chapter 5. This analysis confirms comments made during the inquiry that Coles Express and Woolworths have the two largest market shares by volume in the Australia petrol retailing sector. The ACCC notes that supermarket chains have increased their petrol sales considerably since 2002–03.

The initial impact of the Coles Express/Shell and Woolworths/Caltex arrangements on the supermarket chains' competitors was significant in terms of volume and market share. Refiner-marketers and independent chains reported a decline in petrol sales immediately after the introduction of shopper dockets, which continued until 2005–06.

Since then, the ACCC notes that BP has reported recovery of its lost volume. ACCC analysis also shows that BP has largely recovered its market share. Mobil's volume and market share have halted their erosion; however, they remain at a significantly lower level.

Similarly, independent chains such as 7-Eleven and United have submitted that their volumes have increased in recent times. The ACCC notes that 7-Eleven has recovered its market share, although in part because of additional sites. United has increased its volume and market share by growing its petrol retailing network in regional areas of Australia.

57 ACCC, public hearing transcript, Perth, 28 August 2007, p. 48.
58 ACCC, public hearing transcript, Canberra, 21 August 2007, p. 25.
59 ibid.
60 ACCC, public hearing transcript, Canberra, 21 August 2007, pp. 44–6.
61 ACCC, public hearing transcript, Townsville, 23 August 2007, pp. 21–2.

Among the other independent chains, ACCC analysis indicates that some have recovered their volume and market share, again with a greater number of sites, while others have halted their decline, but remain with a lower market share.

As discussed in chapter 5, overall the market share of the independent chains has not substantially changed over the period.

The ACCC notes that since 2005 there has been a gradual shift in the market shares of the two supermarket chains. Coles Express' volume and market share increased substantially between 2003–04 and 2005–06 but have since declined marginally. By contrast Woolworths' volume has continued to increase. Although Woolworths has continued to increase the number of its sites, the rate of increase has declined over the past two years.

The ACCC notes that a central argument expressed by industry representatives has been that the introduction of shopper docket arrangements has lead to the exit of many small to medium sized competitors from the market. Following from this contention, it has been argued that competition in the petrol retailing sector is declining.

As noted in chapter 5, there has been a general trend of rationalisation in the number of Australian service station sites over the past 20 to 30 years. It is evident that this trend is continuing as, among other things, refiner-marketers divest their less profitable sites. The ACCC observes that petrol retailers across the retailing spectrum continue to prioritise the acquisition of sites which can achieve high volume and high foot traffic.

The ACCC notes that the divestment of sites by refiner-marketers and the exit of some small independents from the sector have provided an opportunity for independent chains to expand their networks. As noted above, United is one independent chain to take advantage of this opportunity. United has become the largest independent retailer in Australia, assisted by a program of acquisitions. United has acquired distributorships from both refiner-marketers and small independents.

The ACCC considers a trend is emerging with small independents seeking to enter into agreements to fall under recognised brands. Liberty and Neumann Petroleum have both reported an increase in the number of sites they supply and brand in recent times. It appears that some of the small independents have identified that the benefits of being part of a branded network outweigh those of remaining unaligned.

In that regard, the ACCC notes most industry participants consider that the introduction of shopper docket arrangements has made it harder for small independents with low volume sites to compete.

There is little doubt that the supermarkets' shopper dockets have been the source of significant competitive challenge to independent service stations and that they, along with other factors, may have contributed to the exit of some retailers. However, the ACCC has seen no evidence to suggest a rapid increase in the number of independent retailers exiting the industry since the introduction of the supermarkets' shopper docket arrangements. Information provided to the ACCC suggests a trend of site transfers within the industry. It is likely that the number of retail sites continues to decline in line with the long-term industry trend.

There is no evidence supporting the view that the independent sector as a whole is in danger. Indeed, a number of independent chains have increased their size and market shares over the past five years.

The ACCC notes that petrol retailers have responded to Coles Express and Woolworths' shopper docket arrangements through a range of initiatives. Competitive responses have been launched by refiner-marketers, independent chains and small independents. These responses have included:

- the introduction of other shopper docket arrangements, including those linked to convenience store purchases
- increased focus on non-fuel/convenience offers
- the identification of niche markets, such as ethanol retailing.

The ACCC notes a number of petrol retailers have attempted to replicate the schemes introduced by the supermarket chains. Neumann Petroleum and APCO are two independent retailers which have attempted to introduce their own shopper docket arrangements. In addition, the Servo Savers scheme has allowed numerous smaller independents to participate in a shopper docket program.

The ACCC acknowledges the difficulties for small independents to enter into and implement co-ordinated petrol discount schemes. The problems encountered by the SSA, when attempting to instigate an independent shopper docket scheme, reveal the advantages of being part of a multi-site, branded network. It is apparent that the refiner-marketers and independent chains have had more success in implementing discount schemes than their small independent counterparts.

The ACCC notes there are petrol retailers who now offer fuel discounts based on convenience store purchases. Mobil and Matilda have introduced these offers as an alternative to forming partnerships with other retailing parties. BP has introduced a credit card discount scheme which applies to both purchases of fuel and goods from its convenience store.

The ACCC notes the two supermarket chains have introduced convenience store discount offers, to complement their existing shopper docket arrangements. Coles Express' customers can obtain an extra 2 cpl discount, if they spend $2 or more on in-store items. Woolworths' customers can obtain an extra 4 cpl, if they spend $5 or more on in-store items. The supermarket chains' enhanced discount offers underline the responsiveness evident in the contemporary petrol retailing market.

Petrol retailers that have introduced competing shopper docket arrangements have indicated that they have generally been satisfied with the impact the schemes have had on their volume levels. The ACCC notes the measure of success for these retailers differs from that of the supermarket chains. The ACCC notes these schemes have arrested volume erosion caused by the entry of the supermarkets and some petrol retailers have reported modest increases in their volumes and foot traffic since introducing the schemes.

While petrol retailers may identify viable partnerships with retailers, the ACCC acknowledges these arrangements will not have the same pulling power as those involving Coles and Woolworths. Consumers make grocery purchases on a regular basis, in most cases from one of the two largest grocery retailers in Australia. Consequently, no competing scheme is likely to be as successful as those offered by Coles and Woolworths.

The ACCC notes that the potential for growth in convenience store sales has become a focus of many petrol retailers competing against Coles Express and Woolworths' shopper docket arrangements. Submissions have indicated that a number of retailers, both refiner-marketer and independent, are focusing on their convenience offer and are in the process of implementing programs to redevelop their sites. There is general consensus amongst industry participants that growth in non-fuel sales is of vital importance to their future competitiveness and profitability.

The ACCC considers United's competitive response to shopper docket arrangements—launching ethanol product on a national scale—demonstrates the potential for independent petrol retailers to compete if they are able to identify niche markets. The ACCC notes that the competitive advantage attained from exploiting niche markets may be short-lived. United has indicated that once more retailers decide to offer ethanol its competitive advantage will be eroded. While the advantage may not be permanent, it is still an effective means to attract consumers to the brand and develop customer loyalty.

12.4 Impact of shopper docket on prices

12.4.1 Impact on petrol prices

In its 2004 report on shopper dockets, the ACCC considered that one of the main public benefits from shopper dockets was lower petrol prices for consumers. The ACCC expected that shopper docket discounts would bring lower petrol prices to consumers and that the involvement of such significant participants as Coles/Shell and Woolworths/Caltex would mean a greater availability of cheaper fuel because there would be more petrol sites offering shopper docket discounts. In addition, the ACCC considered that shopper docket arrangements were generating a culture of discounting, as demonstrated by the competitive response by other market participants.

In the context of the current inquiry, the ACCC commissioned ANOP Research Services to undertake a survey of motorists in the greater urban areas of mainland Australian capital cities to provide information about consumer attitudes on a range of issues relating to the price and purchasing of unleaded petrol.[62] The survey was conducted in early November 2007 with 775 motorists interviewed. The survey found the following:

- In excess of 75 per cent of motorists have used a shopper docket and 49 per cent of motorists regularly use shopper dockets. ANOP noted that usage may have peaked as the survey results showed a slightly lower total usage incidence compared to a survey undertaken for the AAA in May 2007.
- There are more shopper docket users (41 per cent) who buy petrol only when they need it, rather than on the basis of price
- Nearly 3 in 10 (29 per cent) of motorists do not check prices at other service stations before using a shopper docket.

During the inquiry, concerns have been raised that shopper dockets have resulted in inflated retail petrol prices. If it is the case that board prices have increased as a result of shopper docket schemes, then consumers are not getting a real 4 cpl discount and the benefit for consumers of discounted petrol prices would be less than claimed or may even be non-existent.

The ACCC has undertaken a number of petrol price analyses to assess the impact of shopper dockets on retail petrol prices. These assessments (discussed later) are based on the board prices of the supermarket chains and do not take account of the 4 cpl shopper docket discount.

The ACCC examined retail petrol prices in the five largest metropolitan cities over similar periods before and after Coles Express began operating in those cities. These periods were three, six and 12 months.

62 A copy of the survey results is provided in appendix H.

The ACCC's analysis indicated that, relative to an independent benchmark (i.e. the ACCC's import parity indicator which reflects movements in the Singapore price for refined petrol and the Australian/US dollar exchange rate), petrol prices were lower after the entry of Coles Express and the Woolworths/Caltex joint venture into the retail petrol market. The extent to which prices were lower varied with cities and time. It ranged from around 0.5 cpl to over 3 cpl.

However, as there are factors that influence the import parity indicator in the short term (such as changes in freight costs) and other factors may influence the retail price of petrol in specific locations (such as local competitive conditions and supply and demand factors), it is not possible to conclude that the entire fall in retail prices was a result of the entry of the supermarkets.

The ACCC also compared the average prices charged by the supermarket chains with the market average prices in the five largest metropolitan cities on a quarterly basis since the entry of Coles Express.

The analysis indicates that:

- Generally, the quarterly average prices of the supermarket chains have been below the quarterly market average prices in the five major metropolitan cities.
- In Sydney, Melbourne and Brisbane, since the third quarter of 2006, the quarterly average prices of one of the supermarket chains have been marginally above market average prices and that:
    - the extent to which they have been above market average prices has been small (by around 0.2 cpl on average)
    - the quarterly average prices of the other supermarket chain have remained below market average prices (and the extent to which they are below market average prices is larger than the extent to which the prices of the other supermarket chains are above market average prices).
- In Adelaide and Perth, the quarterly average prices of the supermarket chains have consistently been below the quarterly market average prices.

In summary, analysis of price data suggests that retail prices were lower following the entry of Coles Express and the Woolworths/Caltex joint venture into petrol retailing. It also indicates that prices at the supermarket chains have generally been lower than market average prices. This suggests that consumers are still getting a real discount.

This information supports a conclusion that shopper dockets continue to generate a public benefit in the form of lower petrol prices for consumers, particularly with respect to price-conscious consumers.

The inquiry has considered a large number of documents associated with the supermarket shopper docket arrangements. The inquiry has not identified any information to suggest that at this time supermarkets chose to implement or continue the arrangements for the purpose of damaging competitors or competition, although shopper docket schemes may have had the effect of damaging some competitors.

This is not to say that shopper docket arrangements in all circumstances will be exempt from ACCC concern. For example, significant increases in the discount offered for extended periods or in a clearly targeted manner may raise concerns about the misuse of market power. The ACCC would consider such arrangements on a case-by-case basis. Further discussion on the application of the misuse of market power provisions (including new provisions) of the Act is at chapter 14.

12.4.2 Impact on grocery prices

During the course of the inquiry, claims have been made that the introduction of shopper docket arrangements has not been beneficial to consumers because they have resulted in increased grocery prices. It is alleged that the supermarkets have increased the price of grocery items to recoup the discount provided on petrol under their shopper docket arrangements.

The price of grocery items is determined by many factors such as: the cost of producing the item, which may include normal business operating costs, labour costs, the costs associated with a disruption to the supply of an essential input and seasonal factors, such as weather conditions; transport costs; discounts associated with bulk orders; costs associated with the operation of a supermarket site (or number of sites) such as electricity, water, maintenance and fit-out; customer demand; and marketing and advertising expenses. While some of these factors remain relatively constant over time, others are dynamic. Additionally, not all factors are relevant to all grocery items.

Given this complexity, it is not possible to accurately gauge the effect that a change in one of the factors, or the addition of a new factor, may have on grocery prices. For this reason, it is not possible to accurately measure any impact on grocery prices as a result of shopper dockets.

However, it is possible to measure the cost of shopper docket schemes in terms of the total value of the discounts offered and to gain some understanding of the relative size and importance of these costs in the context of the broader businesses of Woolworths and Coles.

Woolworths and Coles offer similar discount schemes, with a standard discount of 4 cpl and greater discounts periodically associated with the purchase of a minimum value of groceries or other items.

Coles has advised that the cost of its shopper docket scheme is treated as a marketing expense by all business divisions.

Woolworths has not made a public submission addressing the way it treats the cost of its shopper docket scheme. However, no evidence has been provided suggesting that Woolworths has intentionally increased the price of groceries to recoup the cost of its shopper docket schemes.

Assuming that Coles and Woolworths treat the cost of their shopper docket schemes in a similar way—as a business expense—then it is difficult to conclude this expense in isolation could have a significant effect on grocery prices. No evidence has been put forward to support a view that the supermarkets recoup the cost of their shopper docket schemes via higher grocery prices. Furthermore, in the context of business groups which annually generate billions of dollars in sales and hundreds of millions of dollars in profit, the cost of the shopper docket schemes is unlikely to be significant.[63] The cost of the shopper docket schemes is about a quarter of one per cent of the total annual sales of Coles and Woolworths, which suggests at worst that any effect on grocery prices of the shopper docket schemes is likely to be insignificant.

12.4.3 Impact on petrol price cycles

As discussed in chapter 11, petrol prices in a number of the major metropolitan cities in Australia move in cycles.

During the course of the inquiry, concerns were raised that, as a result of shopper dockets, the amplitude of the petrol price cycle has increased. In other words, there is a concern that peaks are

63 In its 2007 annual report, Coles reported sales of $34.7 billion, an underlying net profit after tax of $792 million and advertising expenses of $341 million. In its 2007 annual report, Woolworths reported total sales of $42 477 million, a net operating profit after tax of $1294 million across all its businesses.

higher and the troughs are lower than would otherwise be the case if shopper dockets were not present in the market.

The movements in the amplitude of price cycles in the major metropolitan cities over time are examined in chapter 11. While it is possible to assess petrol price cycles and identify features and characteristics, it is not possible to determine whether the amplitude of price cycles has increased as a result of shopper docket schemes because there is no basis for comparison. Shopper docket schemes are present in all Australian cities which experience price cycles. A comparison of price cycles before and after the introduction of shopper dockets is not appropriate because it does not enable the possible effects of shopper docket schemes to be isolated. Price cycles may have been affected by factors other than shopper docket schemes over the same period as the comparison.

12.5 Conclusion

The emergence and expansion of shopper docket arrangements over the past 10 years has changed the competitive landscape for the retail supply of petrol. Consumers have enjoyed the benefits of discounted fuel in increasing numbers.

There is little doubt that the shopper docket arrangements have aided the establishment and expansion of supermarkets in petrol retailing and have created significant challenges for those retailers not aligned with the supermarkets.

The introduction of shopper docket arrangements had a significant impact on other retailers' sales volumes and market shares, and they are likely to have contributed to decisions by some to exit the industry.

In recent times, a number of participants have substantially recovered their lost volume and market shares. Some independent chains have increased their size in terms of site numbers. Other participants appear to have halted their decline, but remain at a lower market share. There is no evidence to suggest that the arrangements over the past five years have increased the industry trend of rationalisation in the number of sites.

Other retailers have responded to the introduction of supermarket shopper docket arrangements with a variety of strategies, including competitive promotions and a renewed focus on delivering consumer choice and convenience. In many respects, the arrangements have been a spur for competition of this nature to the benefit of consumers. However, while other shopper docket schemes have assisted competitors to recover some lost volume, the ACCC acknowledges no competing scheme can have the pulling power of those offered by the two main supermarkets.

Having considered significant information, the ACCC has seen no suggestion that the arrangements were a short-term measure designed to damage competition with a view to a return in the future.

To date, the general emergence of supermarket shopper docket arrangements has not had an anti-competitive effect but has delivered discounts to the benefit of consumers and promoted competition from other retailers.

While the ACCC is satisfied that the supermarkets' shopper docket arrangements have delivered a net benefit to date, the ACCC will continue to consider developments in the retail sector as they arise, including changes in the extent of the impact of shopper docket arrangements and their effect on competition.

13 Addressing impediments to competition in petrol refining, importing and wholesaling

The wholesale price retailers pay for petrol is a key component of the prices consumers pay at the bowsers. Excluding taxes, wholesale costs comprise over 90 per cent of retail petrol costs.[1] Competition at the wholesale level is therefore an important determinant of retail petrol prices.

The purpose of this chapter is to assess competition and the impediments to competition in wholesale petrol markets. The degree or vigour of competition in wholesale markets plays an important role in determining wholesale petrol prices.

This chapter draws on the material presented in the preceding chapters, particularly chapters 7 and 8. The material in those chapters will not be repeated. Where relevant, references will be made to previous material.

Petrol wholesalers fall into two groups. Local refiners or refiner-marketers, who source refined petrol from their own local refineries, each other (mostly through buy–sell arrangements) and imports; and independent wholesalers or resellers, who source petrol from refiner-marketers and to a small degree imports.

Competition in wholesale petrol markets occurs between refiner-marketers, between refiner-marketers and resellers and between resellers. The degree of competition in wholesale petrol markets (and in turn wholesale prices) is primarily determined by the:

- vigour of competition between refiner-marketers
- competitive threat posed by independent[2] imports of refined petrol.

Based on a thorough examination and analysis of the evidence provided to the inquiry, the ACCC has formed the following views.

Competition exists in wholesale petrol markets in Australia, but it is not fully effective

A combination of factors has enabled refiner-marketers to dominate wholesale petrol markets and has resulted in wholesale petrol prices above the levels that would be set if competition between refiner-marketers was fully effective. These factors are the:

- location advantages of local refineries
- highly concentrated ownership of local refineries
- commercial dependencies between refiner-marketers
- very small proportion (less than 2 per cent[3]) of the wholesale market supplied by independent imports
- limited prospect of large-scale importing of refined petrol by independents
- extremely low likelihood of substantial new entry into domestic refining.

1 Refer to chapter 9.
2 Independent imports (or independent importers) are imports by parties other than the refiner-marketers.
3 Refer to chapter 3.

There are impediments to the most significant potential competitive threat to refiner-marketers—the large-scale importing of petrol by independents

The most significant potential competitive threat to the refiner-marketers is the large-scale importing of refined petrol by a reseller or independent retailer. This seems unlikely in the foreseeable future. The major impediments to large-scale importing of refined petrol by independents are the:

- lack of access to import terminal facilities of sufficient scale in the major markets
- large share of the retail petrol market held the refiner-marketers and supermarket alliances, which limits the size of the retail customer base available to a large-scale importer
- state and national fuel standards, which make it difficult for independent importers to source sufficient and reliable supplies of competitively-priced refined petrol suitable for the Australian market
- potential for refiner-marketers to 'exclude' independent importers from buy–sell arrangements.

Impediments to importing are self-reinforcing—making the barriers to large-scale independent importing of petrol substantial

The impediments to large-scale independent importing of petrol are self-reinforcing. Most or all of the impediments must be addressed to make the threat credible.

Independent petrol retailers are reluctant to commit to buy large volumes of petrol from a petrol importer unless the importer has an established record of reliable supply at prices competitive with those offered by the refiner-marketers.

Petrol importers cannot establish a record of reliable supply at prices competitive with those offered by the refiner-marketers without access to sufficient import terminal facilities in most major markets in Australia.

Independent owners of import terminal facilities are reluctant to invest in large-scale terminal capacity for an importer without certainty that the importer will import sizeable volumes of petrol over a prolonged period.

This requires an independent petrol retailer to commit to an independent importer without an established supply record.

Buy–sell arrangements may have had the effect of lessening competition in wholesale petrol markets

Buy–sell arrangements between refiner-marketers enable them to efficiently supply fuel in wholesale and retail markets where they do not enjoy a refinery presence.

Nevertheless, the buy-sell arrangements may have had the effect of lessening competition in wholesale petrol markets. Buy–sell arrangements are agreements between competitors that:

- have effectively set a uniform price for a large part of the output of refiner-marketers
- have created a floor on which other wholesale petrol prices are built
- may have reduced the incentives for refiner-marketers to aggressively 'take each other on' in wholesale petrol markets
- may have reduced the incentives for individual refiners to consider alternative sources of supply in states where they do not have a refinery
- have the potential to reduce the competitive threat of large-scale independent importing operations.

The ACCC considers that there is insufficient evidence at this stage to support a conclusion that the buy–sell arrangements contravene the Act.

Nevertheless, participants in buy–sell arrangements may well be advised to seek authorisation of these arrangements on public benefits grounds under s. 90 of the Act.

Changes to the structure of wholesale petrol markets

Petrol markets are subject to continual change. It is possible that changes to the structure of petrol refining, wholesaling and retailing in the future could alter the competitive dynamics in wholesale petrol markets. Some possible changes that were raised during the inquiry are discussed below.

'Sponsorship' of a large-scale independent petrol importing operation by a supermarket

If one of the supermarkets shifted its wholesale petrol purchases to an importer, it may make the establishment of a large-scale importing operation viable. Before its alliance with Caltex, Woolworths sourced large volumes of petrol from importer Trafigura.

The alliance agreements between Coles and Shell, and Woolworths and Caltex, do not end for some time. Moreover, evidence presented to the inquiry indicates Coles and Woolworths are unlikely to favour sourcing petrol from a large-scale independent importer over an alliance with a refiner-marketer.

Formation of buying groups among resellers

It is possible that resellers may form buying groups. Buying groups of a sufficient size would give resellers greater negotiating leverage with refiner-marketers over wholesale petrol prices. Buying groups of sufficient size could also make the establishment of a large-scale importing operation viable and provide the necessary guarantees for large-scale investment in import terminal facilities.

Exit of a refiner-marketer from petrol retailing in Australia

If one of the refiner-marketers exited petrol retailing in Australia and an independent retailer purchased the retail sites, the retailer may be able to gain the volumes necessary to make the establishment of a large-scale importing operation viable and provide the necessary guarantees for large-scale investment in import terminal facilities. However, if the retail sites were purchased by another refiner-marketer, it is unlikely that it would change the present state of competition for the better.

Further consolidation of domestic refining capacity

Further consolidation of domestic refining capacity in Australia is possible. Such a circumstance could reduce existing competitive pressures in wholesale petrol markets. A reduction in the number of parties refining petrol in Australia would increase the degree to which the remaining refiner-marketers depend on one another, possibly reducing the incentives for refiner-marketers to compete against one another in wholesale petrol markets.

Recommendations to reduce or minimise the impediments to competition in wholesale petrol markets

In order to protect and promote competition in wholesale petrol markets, the ACCC recommends:

- a more detailed examination and on-going monitoring of buy–sell arrangements—to detect any adverse effects these arrangements may have on competition in wholesale petrol markets
- subject to meeting environmental policy objectives, Commonwealth and state governments endeavour to align Australian fuel standards with appropriate fuel standards overseas
- undertaking a comprehensive audit of terminals suitable for importing refined petrol into Australia, covering terminal capacity, use and leasing and sharing arrangements—to identify capacity that could become available for use by independent importers
- following the audit, there be on-going monitoring of the use, leasing and sharing of terminals suitable for importing refined petrol into Australia—to discourage 'hoarding' of terminal capacity.

13.1 Competition in wholesale petrol markets

Competition is a matter of degree. In a fully competitive market, each participant's pricing, output and related commercial decisions are constrained by the activity, or potential activity, of other participants. In a less competitive market, the constraints are weaker. This may enable some participants to exercise a degree of market power. Effective competition significantly limits the exercise of market power.

In assessing competition in wholesale petrol markets, the ACCC has examined the degree to which wholesale prices are constrained by competition between refiner-marketers (refiner-on-refiner competition), competition between refiner-marketers and resellers, and competition between resellers.

Specifically, the ACCC has endeavoured to:

- examine the key features and behaviours in wholesale petrol markets and assess whether they are indicative of effective price competition
- examine and evaluate any structural impediments, or potential impediments, to effective price competition in wholesale petrol markets
- examine ways of addressing or minimising any impediments to effective competition in wholesale petrol markets.

The ACCC has also had regard to the combined effects of these considerations.

Wholesale petrol markets in Australia are largely state based.

In each of the eastern mainland capital cities there are two refineries. The home refiner-marketers in these states compete in wholesale markets against one another, and against other refiner-marketers who purchase petrol from the home refiner-marketers and import fuel.[4] The refiner-marketers also compete with resellers who purchase fuel from the refiner-marketers and in some cases import small quantities of fuel.

In Perth there is only one home refiner-marketer, BP. BP competes with other refiner-marketers who purchase fuel from BP and import fuel, as well as resellers.

In other states there are no refineries. These states are supplied by imports and/or interstate fuel shipments.

4 Refiner-marketers also import fuel into their home state.

13.2 Key features and behaviours in wholesale petrol markets

In the course of the inquiry, two key features or behaviours in wholesale petrol markets were discussed at length:

- buy–sell arrangements between refiner-marketers
- the use import parity pricing.

13.2.1 Buy–sell arrangements

Refiner-marketers buy and sell petrol from one another in different states using buy–sell arrangements. A large share of the petrol sold by refiner-marketers to resellers and retailers is obtained from other refiner-marketers under these arrangements. As a result, buy–sell prices have significant effects on other wholesale petrol prices.

Buy–sell arrangements are described in detail in chapter 8.

Buy–sell arrangements have clear benefits. They enable refiner-marketers to compete in wholesale and retail petrol markets in states where they do not have a refinery, without incurring interstate or international transport costs.

The buy–sell arrangements can however lessen competition in wholesale petrol markets. In practice, the buy–sell arrangements effectively set a uniform price for a large part of the output of refiner-marketers. That price then becomes the floor on which all other wholesale prices are built.

The arrangements also create commercial dependencies between refiner-marketers. These dependencies can lead each refiner to be cautious when undertaking competitive actions that might have consequences for their buy–sell 'partners'. In the extreme, buy–sell arrangements can create an environment of tacit (or even explicit) collusion.

Moreover, as resellers are not party to the buy–sell arrangements, the arrangements enable the refiner-marketers to build in margins into wholesale petrol prices. This places resellers and independent retailers at a competitive disadvantage in wholesale and retail petrol markets.

Buy–sell arrangements have generated economic benefits

Buy–sell arrangements have generated two significant economic benefits in the petrol industry.

First, the buy–sell arrangements have assisted refiner-marketers in competing in wholesale and retail markets in states where they do not have refining capacity. Purchasing refined petrol from a refiner with capacity in a particular state enables other refiner-marketers to service their wholesale and retail operations without incurring the expense of transporting petrol from interstate or overseas. Minimising or avoiding these transport costs may have flow-on benefits for consumers.

Second, the buy–sell arrangements have assisted refiner-marketers in maintaining refinery throughput. Home refiner-marketers must supply the vast majority of demand in their home states to operate (relatively) efficiently. In the absence of the opportunity to sell refined petrol to other large wholesalers in the state (i.e. other refiner-marketers), home refiner-marketers would either have to operate their refineries below an optimal level or incur costs in exporting refined petrol interstate or overseas.

Reciprocity of buy–sell arrangements may have lessened competition between refiner-marketers in wholesale petrol markets

The reciprocity of buy–sell agreements create dependencies between refiner-marketers. Each refiner-marketer relies on other refiner-marketers to buy refined petrol from it in some states and sell it refined petrol in other states.

This reliance may have lessened competition in wholesale petrol markets. This may have occurred in three ways.

First, the buy–sell arrangements apply to a substantial percentage of the output of each of the refiner-marketers. Each buy–sell price is determined by reference to a particular IPP formula that differs only marginally from state to state, primarily because of differences attributable to freight or location-based costs. In practice, therefore, the buy–sell arrangements set a substantially uniform price for refinery outputs that are supplied to, and from, the refiner-marketers. This may have a tendency to limit effective price competition between the refiner-marketers for the supply of their refinery outputs.

Second, the buy–sell arrangements may have limited the incentives for refiner-marketers to 'take each other on' in wholesale petrol markets. For example, a refiner-marketer might limit its competitive conduct in a wholesale market in one state—say by not selling to an independent retailer at a price below the buy–sell price even though it has excess petrol stocks—because of a concern this will lead to a competitive response by its buy–sell 'partner' in a wholesale market in another state.

Third, the dependence and the reciprocal obligations and commitments created by the buy–sell arrangements may have reduced the incentives for individual refiner-marketers to consider alternative sources of supply. Consider an example. Say Caltex decided to largely by-pass Mobil by importing refined petrol into Melbourne. Currently, Caltex purchases significant volumes of refined petrol from Mobil's refinery in Melbourne. Unless Mobil is able to find another large wholesale buyer in Victoria, Caltex's action would likely reduce Mobil's profits. By adopting such a strategy, Caltex risks retaliation from Mobil. Caltex sells Mobil large volumes of refined petrol in NSW from its refinery at Kurnell. Caltex risks losing this business in retaliation. This threat would no doubt play a role in any decision by Caltex to alter its source of supply in Melbourne.

If the buy–sell arrangements have lessened competition between refiner-marketers it may be reflected in buy–sell prices. Buy–sell prices in excess of the cost to refiner-marketers of importing petrol would be a cause for concern. As noted in the discussion of import-parity pricing below, the evidence on whether buy–sell prices are set above the refiner-marketers' costs of importing is not conclusive. Further examination is required.

Buy–sell prices have set a wholesale price floor

Buy–sell prices have set a wholesale price floor by establishing the cost to refiner-marketers of selling petrol in wholesale petrol markets. Refiner-marketers have little or no incentive to sell fuel to resellers or independent retailers below the buy–sell price.

For refiner-marketers without a home refinery, the buy price is the cost of acquiring petrol. If the refiner-marketer sells fuel to either resellers or independent retailers below its own buy price it would be doing so at a loss. There are limited incentives for this to occur.

For refiner-marketers with a home refinery, the sell price (largely) reflects the opportunity cost of selling petrol in wholesale petrol markets. For home refiner-marketers, an alternative to selling petrol to a reseller or independent retailer is selling petrol to another refiner-marketer at the sell price.

This alternative limits the incentives for home refiner-marketers to offer a wholesale price below the sell price.

In addition, most refiner-marketers internally transfer fuel to their wholesale divisions at the lowest applicable buy–sell price. As a result, the buy–sell price will form the base price upon which the wholesale division builds its price.

Evidence presented to the inquiry indicates that refiner-marketers rarely offer petrol in wholesale markets below buy–sell prices. Some evidence suggests that some refiner-marketers seek to avoid selling petrol at wholesale prices below buy–sell prices. Caltex told the inquiry that when the market is long in product it is difficult to place excess supplies of fuel. Given the inelastic demand for petrol, putting such petrol on the domestic market could have a substantial effect on the price. In such circumstances, Caltex has on occasion decided to export the fuel instead.[5]

Buy–sell arrangements are agreements between competitors

Only the four refiner-marketers participate in the buy–sell arrangements. A concern raised during the inquiry is that the buy–sell arrangements are a 'club'.

Evidence provided to the inquiry strongly indicates that the refiner-marketers are reluctant to offer petrol in wholesale markets to resellers or independent retailers at buy–sell prices. As discussed below, the refiner-marketers regularly base their wholesale price offers to individual resellers on the cost of the reseller's alternative source of supply. These offers are mostly above buy prices contained in buy-sell agreements. The margins between buy–sell and wholesale prices put resellers and independent retailers at a competitive disadvantage in wholesale and retail petrol markets.

The inquiry heard evidence that resellers, including importers, have unsuccessfully sought to enter into buy–sell arrangements with refiner-marketers.

For example, Mr Mark Kevin (former CEO of Liberty Oil) told the inquiry that when the industry moved from refinery exchange arrangements to buy–sell arrangements, Liberty approached Shell and Caltex 'and asked them to be part of it.'[6] According to Mr Kevin, 'the reaction to that was just, no.'[7]

Mr Barrie Jacobson (former Managing Director of Trafigura) told the inquiry that Trafigura sought to negotiate buy–sell agreements with the refiner-marketers on a number of occasions between 2000 and 2004. Mr Jacobsen stated that Trafigura was either offered buy prices that would be unattractive to its customers or were told they could not be accommodated at the time.[8]

The inquiry was unable to determine the full reasons for Liberty and Trafigura's lack of success in negotiating buy–sell arrangements with the refiner-marketers. However, it appears that Liberty and Trafigura were unable to offer the refiner-marketers reciprocal supply arrangements. For example, Liberty was not importing petrol at the time, making it difficult for it to guarantee reliable supplies to the refiner-marketers.

Moreover, the evidence presented to the inquiry indicates that the recent reduction in the competitive constraints provided by independent importers such as Trafigura and Liberty is attributable to factors other than the inability of Trafigura and Liberty to access buy–sell arrangements with the refiner-marketers (such as state and national fuel standards).

However, artificial exclusion of independent importers or resellers from buy–sell arrangements could

5 ACCC, public hearing transcript, Sydney, 4 September 2007, pp. 65–6.
6 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 83.
7 ibid.
8 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 19.

lessen the potential competitive threat posed by independent imports. For example, an independent importer could try to establish large-scale importing operations in say one or two states and use buy–sell arrangements with refiner-marketers to supply petrol in other states. Exclusion from buy–sell arrangements would undermine such a business model.

In the absence of any exclusionary purpose, an importer that is able to provide reliable long-term supply in a market, in sufficient volumes and on competitive terms, should ordinarily be able to enter into a buy–sell agreement with a refiner-marketer that does not have a refinery or import facility in that market.

Each buy–sell agreement is a commercial contract between competitors in refining and wholesaling. If there was evidence that buy–sell arrangements were exclusionary in nature, or had the purpose or effect of substantially lessening competition, parties to the agreements would be at risk of contravening section 45 of the Act. For example, there may be a breach if buy–sell agreements were underpinned by an arrangement or understanding between the refiner-marketers to exclude other parties (such as independent importers) from a buy–sell agreement on comparable terms.

Conclusions on buy–sell arrangements

Buy–sell arrangements have enabled refiner-marketers to supply fuel in wholesale and retail markets where they do not enjoy a refinery presence in a way that reduces transport and other costs.

Nevertheless, buy-sell arrangements exhibit features which may inhibit competition in wholesale petrol markets. In particular:

- the buy–sell arrangements may have reduced the incentives for refiner-marketers to aggressively 'take each other on' in wholesale petrol markets
- the buy–sell arrangements may have reduced the incentives for individual refiners to consider alternative sources of supply in states where they do not have a refinery (such as importing refined petrol)
- the buy–sell arrangements in conjunction with the import-parity pricing policy, enable the refiner-marketers to effectively set and sustain uniform prices for a substantial percentage of their refinery output
- the buy–sell arrangements in conjunction with the import-parity pricing policy, enable the refiner-marketers to effectively set and sustain a wholesale price floor
- in practice, the prices set by the buy–sell arrangements tend to be available only to the refiner-marketers giving them an advantage over independent retailers and resellers
- if exclusionary, the buy–sell arrangements have the potential to reduce the competitive threat of large-scale independent importing operations.

Having analysed the existing buy–sell agreements and relevant evidence, the ACCC considers that there is insufficient evidence at this stage to support a conclusion that the buy–sell arrangements contravene the Act. The ACCC proposes to continue to examine buy–sell arrangements and will closely monitor the operation and effect of those arrangements to ensure compliance with the Act.

Participants in buy–sell arrangements may well be advised to seek authorisation of these arrangements on public benefits grounds under s.90 of the Act.

13.2.2 Import parity pricing

Import parity pricing (IPP) is the practice of selling domestically-refined petrol in wholesale petrol markets at a price comparable to the cost of importing petrol into given locations in Australia.

IPP is described in detail in chapter 7.

As described in chapters 7 and 8, refiner-marketers set wholesale petrol prices by referring to formulas notionally based on an import-parity price.

Buy–sell prices typically have the following components.

Buy–sell price = Singapore benchmark + quality premium + freight + wharfage + insurance and loss

The wholesale prices at which the refiner-marketers supply petrol to resellers typically have the following components.

Wholesale price to resellers = buy–sell price + wholesale margin + add-ons (such as delivery)

These formulas form the basis of negotiation between refiner-marketers (in determining buy–sell prices) and between refiner-marketers and resellers (in determining other wholesale prices).

Import-parity pricing is efficient in a market where imports are the marginal source of supply

As noted in chapter 3, refiner-marketers supply over 98 per cent of the petrol sold in Australia. Refiner-marketers currently produce around 85 per cent of this and import the other 13 per cent.

Evidence presented to the inquiry indicates that imports of refined petrol are the marginal source of supply. Without regular and on-going imports of refined petrol, the refiner-marketers would be unable to efficiently meet the demand for refined petrol in Australia.

It is quite appropriate and desirable that wholesale petrol prices are based on the cost of importing petrol.

For instance, in order for investors to make efficient decisions concerning the reduction, maintenance or expansion of domestic refining capacity or the expansion of import terminal facilities, the wholesale price should as accurately as possible reflect the cost of the alternatives. For example, a decision by a refiner-marketer to close a refinery will at least partly be based on a comparison of the cost of sourcing petrol by continuing to operate the refinery and the cost of buying petrol on the wholesale market. In order for this decision to be efficient, the wholesale price should reflect the cost of the alternative source of supply—importing refined petrol.

Wholesale prices based on the cost of importing petrol are also consistent with the outcome of an effectively competitive market. Effective competition pushes prices to the marginal cost of supply. In the wholesale petrol market, the marginal cost of supply is the cost of importing refined petrol.

Comparison of wholesale petrol prices and cost of importing refined petrol

Although wholesale prices are based on an IPP formula, it does not necessarily follow that wholesale prices are based on the relevant costs of importing petrol. As noted above, wholesale prices are based on a number of components which may or may not accurately reflect the cost to relevant parties

of importing petrol. Moreover, a number of these elements are the subject of negotiation. Basing wholesale petrol prices on an IPP formula does not necessarily mean the prices are equal to the cost of importing petrol (i.e. that they truly are import parity prices).

A relevant question in this regard is whose import costs are relevant. In Australian wholesale petrol markets, the relevant import costs are the import costs of refiner-marketers. As noted above, refiner-marketers import around 13 per cent of the refined petrol sold in Australia. Imports by independents are less than 2 per cent.

Are buy–sell prices above the refiner-marketers' costs of importing fuel?

Refiner-marketers have told the inquiry that buy–sell prices are significantly influenced by the alternative supply options available to the buyer (including imports).[9]

The ACCC has undertaken an examination of the refiner-marketers' buy–sell agreements and buy–sell prices with the aim of assessing whether the prices mirror the costs to refiner-marketers of importing fuel at the same time and location. The analysis proved inconclusive. There are some factors, such as the uniformity of approach that permeates the buy–sell pricing formulas, which give some cause for concern. On the other hand, there were no obvious signs that buy–sell prices are substantially above the refiner-marketers' actual costs of importing fuel.

Wholesale prices paid by resellers with a credible importing operation are close to the resellers' costs of importing fuel

Confidential evidence provided to the inquiry indicates that the refiner-marketers supply resellers at wholesale prices based on the resellers' costs of importing fuel rather than on the refiner-marketer's costs of importing the fuel. The evidence suggests that refiner-marketers have a very good idea of the full range of costs resellers would potentially incur in importing fuel and negotiate wholesale prices up to that limit. These prices are mostly above buy–sell prices.

Wholesale prices paid by resellers without a credible threat to source imports tend to be above other wholesale prices

If a reseller does not have a credible threat to import refined petrol or to source refined petrol from an importer, its negotiating leverage is limited.[10]

Evidence presented to the inquiry indicates that the wholesale prices paid by these resellers are generally higher than buy–sell prices and the prices paid by resellers with credible importing options.

Conclusions on IPP

Import-parity pricing is efficient in markets, such as wholesale petrol markets, where imports are the marginal source of supply. A wholesale price based on the cost of importing petrol is also consistent with the outcome of an effectively competitive market.

Wholesale petrol prices in Australia should be based on the cost incurred by the refiner-marketers in importing refined petrol. This is the appropriate IPP benchmark.

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9 For example, in relation to buy–sell prices, Caltex stated 'Pricing is negotiated based on an efficient import by the purchaser for supply into that location taking into account the source of the import, cargo mix and cargo size (based on available tankage).' Caltex submission, p. 21.

10 There are exceptions to this such as the wholesale prices and other terms negotiated by Coles and Woolworths.

Evidence presented to the inquiry indicates that the wholesale prices resellers and independent retailers pay for refined petrol are above the appropriate IPP benchmark. Refiner-marketers are able to negotiate wholesale petrol prices with resellers and independent retailers based on the potential costs to the reseller or retailer of alternative sources of supply of Australian grade fuel. In the majority of cases, these costs are higher than the import costs of refiner-marketers. This outcome is neither economically efficient nor consistent with a view that competition between refiner-marketers is fully effective.

The entry of a large-scale importer would put pressure on wholesale petrol prices. Impediments to large-scale importing of petrol and the likelihood of this occurring are discussed next.

13.3 Impediments to price competition in wholesale petrol markets

In the course of the inquiry, the ACCC identified the following features or characteristics of wholesale petrol markets that have the potential to restrain competition and restrict downward pressure on wholesale petrol prices:

- location advantages of local refineries
- high degree of ownership concentration of local refineries
- commercial dependencies between refiner-marketers
- impediments to large-scale importing of refined petrol by independents
- impediments to entry into local refining.

13.3.1 Location advantages of local refineries

There are advantages in locating petrol refineries close to the source of demand in Australia. The major location advantage enjoyed by local refineries is the lower costs of importing crude oil compared with refined fuels. Other advantages derived from location are easier access to the market, the ability to offer customers more secure and reliable supplies of refined petrol and the lack of alignment between Australian and overseas fuel standards. The location advantages of local refineries underpin the current profitability of the refiner-marketers.

13.3.2 Ownership concentration of local refineries

Petrol refining in Australia is also highly concentrated. There are two petrol refineries in each of the eastern capitals and one petrol refinery in Perth. This high degree of concentration is the result of the small size of petrol markets around Australia and the economies of scale in petrol refining.

The high degree of concentration limits the incentives for strong wholesale price competition between refiner-marketers. The profit-maximising strategy of refiner-marketers within a state is not to 'take each other on', but to price up to the limits the market will tolerate.

13.3.3 Commercial dependencies between refiner-marketers

There are inherent dependencies between refiner-marketers. Each refiner-marketer relies on other refiner-marketers to supply it with refined petrol in states where it does not have refinery. Each refiner-marketer relies on other refiner-marketers to buy refined petrol from it where it does have a refinery. These dependencies underpin the buy–sell arrangements between refiner-marketers. As discussed in

the analysis of buy–sell arrangements (see section 13.2.1), these dependencies reduce the incentives for refiner-marketers to compete aggressively over price and share in wholesale petrol markets and to seek alternative sources of supply.

13.3.4 Impediments to large-scale importing of refined petrol by independents

The strength of the competitive constraint that resellers can exert in wholesale petrol markets depends on the price they can source refined petrol from refiner-marketers. In turn, this depends on whether the threat of increasing independent imports of refined petrol is credible.

In 2006–7, independent imports supplied less than 2 per cent of the refined petrol sold in Australia.

For the competitive constraint imposed by independent imports to be significantly strengthened, there must be a credible threat of a sizeable increase in imports. Increasing independent imports at the margin, while undoubtedly increasing the negotiating leverage of some resellers, will not make competition in wholesale petrol markets fully effective. If independent imports can expand, but only marginally, refiner-marketers will 'exercise power over the rest of the market'.

A large-scale importing operation is likely to source lower priced and more secure supplies of fuel. Such an operation will also provide resellers, who do not have an importing capability, with a credible supply option outside the refiner-marketers. Both would have a significant impact on competition in wholesale petrol markets and wholesale petrol prices.

Independent operators face a number of potentially significant impediments in importing petrol products. These are:

- Australian fuel standard specifications for ULP grade fuel
- the availability of import terminal facilities
- access to retail markets.

These impediments are unlikely to persistently obstruct small periodic volumes of imports of refined petrol in particular locations.

These impediments are, however, more substantial for an importer attempting to establish a large-scale national importing operation.

Australian fuel standard specifications for ULP grade fuel

The Australian Government announced new Australian fuel standards in 2001. These standards were introduced progressively between January 2002 and January 2006. Over this time, the vast majority of fuel refined in the Asian region was not compliant with the standards.

Different standards were introduced by different state governments. Some differences in fuel standards across states persist.

Fuel standards have substantial environmental benefits. It must also be recognised however, that fuel standards that are out of alignment with major overseas fuel standards can reduce the competitive constraint imposed by independent imports in wholesale petrol markets.

The lack of alignment of Australian fuel standards with major overseas standards has reduced the supply of Australian grade refined petrol available to independent importers.

The lack of alignment of Australian fuel standards has had the effect of:

- reducing the volumes and batch sizes of refined petrol available to independent importers
- requiring independent importers to import refined petrol above the quality required by the fuel standards
- increasing freight costs for imported refined petrol and reducing the reliability of imported supply.

Woolworths told the inquiry that the volumes of Australian-grade fuel it requires are not available from independent[11] Asian refineries. When these refineries do produce Australian grade fuel, it is in special batches and is not available at an attractive price.[12] This was one of the major reasons why Woolworths moved away from imported product to domestic supply from Caltex.[13]

Neumann Petroleum told the inquiry that the prices of imported fuel are higher than the prices of fuel available from refiner-marketers because importers have to source a higher octane product compared with the local market.[14]

Trafigura told the inquiry it had to switch from Asian refiners to Italian, Egyptian and Saudi Arabia refiners to meet the Australian fuel standards. This raised its freight costs and reduced the reliability of its supply.[15]

The new standards also affected refiner-marketers who had to reconfigure their local refineries to comply with the standards.[16] The cost and supply disadvantages were however less than those experienced by independent importers.

The Australian fuel standards played a key role in the reduction of independent imports into Australia. Independent imports decreased from around 5 per cent of the wholesale market in 2002–03 to around 2 per cent in 2006–07. Over the same period, the share of imports by the refiner-marketers increased from around 5 per cent to 13 per cent.

Mr Mark Kevin, (former CEO of Liberty Oil) told the inquiry that the Australian fuel standards effectively cut out the independents' ability to import, or ability to threaten to import. According to Mr Kevin, this took imports or the threat of imports out of the negotiating basket with the refiner-marketers.[17]

The higher costs of imported refined petrol, combined with the reduced negotiating leverage of resellers, resulted in higher wholesale petrol prices. Refiner-marketers implemented wholesale price increases through the addition of quality premiums to buy–sell and other wholesale petrol prices. The size of the premiums increased over time as fuel standards tightened.

Evidence presented to the inquiry reveals there are differences in the quality premiums that apply within states. This is the case even though there are no differences in fuel standards within states. The intra-state differences in quality premiums confirm the view that quality premiums are only loosely based on the cost of importing higher quality fuel. Evidence presented to the inquiry indicates the quality premiums paid by resellers are influenced by their individual negotiating leverage, including the credibility of their threat to import refined petrol that meets Australian fuel standards.

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11 Woolworths defined independent refineries as refineries not linked to a refiner-marketer.
12 ACCC, public hearing transcript, Sydney, 4 September 2007, pp. 92–3.
13 Before its alliance with Caltex, Woolworths had a supply arrangement with Trafigura for imported fuel using terminal facilities at Vopak's Port Botany terminal and Trafigura's Hastings terminal. Woolworths submission, p. 3.
14 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 9.
15 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 32.
16 Shell told the inquiry that the Australian standards have made domestic refineries more susceptible to supply interruptions. Shell told the inquiry that during 2003-04 it had many refinery glitches and 'disastrous' reliability. ACCC, public hearing transcript, Melbourne, 13 September 2007, pp. 28–30.
17 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 72.

Fuel standards may restrict the competitive threat posed by independent imports for some time

The inquiry was presented with varying views on whether the difficulties the Australian fuel standards pose for independent importers are likely to persist.

Trafigura[18], Neumann Petroleum[19] and United Petroleum[20] told the inquiry that it is becoming less difficult to obtain fuel consistent with Australian standards. This is partly the result of improvements in the quality and standards of fuel from Asian refineries.[21]

On the other hand, Woolworths stated that the rigidity of the Australian fuel standards still inhibits the independent sourcing of imports and prevents access to product from large efficient overseas refineries.[22] Woolworths told the inquiry that imported fuel would not be a credible proposition for it until at least after 2010.[23]

Differences in state-based fuel standards compounded the problem

As noted in chapter 6, Western Australia, Queensland and South Australia introduced differing fuel standards ahead of the Commonwealth fuel standards.

Differences in state fuel standards can limit interstate trade in refined petrol and therefore the potential for competition between refiner-marketers located in different states. It is also possible that differences in state fuel standards may discourage overseas refineries from refining fuel to meet Australian standards. Instead of refining to meet a national standard, the refinery may have to refine to meet the highest state standard to achieve a commercial scale.

As noted in chapter 6, state differences in fuel standards are narrowing.

Availability of import terminal facilities

Independent importers require the use of terminals suitable for the importing and storage of refined petrol. Most import terminal facilities are owned and used by the refiner-marketers. There are a number of independently-owned import terminal facilities (such as Vopak in Sydney) that are used by independent importers and the refiner-marketers.

Import terminal facilities around Australia are described in detail in chapter 3.

Current and planned import terminal capacity may not enable a large-scale expansion of independent imports

There is a significant difference between the import terminal facilities necessary to support a small-scale importing operation in a particular location and the facilities necessary to support a large-scale national importing operation.

Current and planned expansions of import terminal facilities may support further smaller-scale localised importing operations, but not larger-scale national importing operations.

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18 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 32.
19 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 11.
20 ACCC, public hearing transcript, Sydney, 3 September 2007, pp.11-2.
21 ACCC, public hearing transcript, Darwin, 27 August, 2007, p. 23
22 Woolworths submission, p. 17.
23 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 92.

Woolworths noted:

> The ability of independent petrol retailers to access reliable, long term supply from the large refineries in Singapore, China and Indonesia, will require a complementary access to large domestic storage facilities and sufficient volumes to justify an independent importing capacity. [24]

Similarly, United Petroleum told the inquiry that it would not have the requisite storage facilities in all markets to access more of its fuel from international sources.[25]

Three factors limit the availability of import terminal capacity to independent importers.

Most import terminal facilities are owned or leased by refiner-marketers

Most of the import terminal facilities around Australia are owned by the refiner-marketers. Moreover, the refiner-marketers have leased significant amounts of the capacity of independently owned facilities. This limits the import terminal capacity available to independent importers.

A concern of the ACCC is that the refiner-marketers could artificially restrict import terminal capacity available to independent importers by leasing capacity in excess of their needs. The inquiry has not been provided with evidence to suggest this is occurring. Nevertheless, the ACCC considers it prudent to monitor leasing arrangements and the use of all import terminals (including the use of import terminal facilities owned by the refiner-marketers) to reduce the prospect of the 'hoarding' of capacity.

Independent import terminal facilities not be available nationwide

Unless a large-scale importer is able to negotiate buy–sell arrangements with the refiner-marketers, it would most likely require access to import facilities in all or most states of Australia.

Independent import terminals currently storing petrol products in Australia are:

- NSW—Vopak operates a terminal at Port Botany, Sydney
- Victoria—Trafigura operates a terminal at Hastings
- Queensland—Neumann operates a terminal in Brisbane
- Western Australia—Terminals West stores imported fuel at a terminal in Kwinana, as does Coogee Chemicals
- Northern Territory—Vopak operates a terminal in Darwin
- Tasmania—Marstel operates a terminal at Bell Bay.

There are currently no independent import terminals in Adelaide or Hobart.

There are currently some constraints that limit the capacity or availability of these independent import terminals. For instance, the Hastings terminal is for sale making its future availability uncertain. Neumann's Brisbane terminal facility is constrained by wharfage restrictions which limit the size of the cargo that can be taken to the terminal.[26] Bell Bay terminal is not running at full capacity, but upgrades are currently underway.[27]

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24 Woolworths submission, pp. 3–4.
25 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 14.
26 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 5.
27 ACCC, public hearing transcript, Melbourne, 10 October, pp. 58–60.

Access to the import terminal facilities of the refiner-marketers

One potential solution is for the refiner-marketers to offer access to their import terminal facilities. MTTA stated:

> …..there would need to be either a massive investment made in those terms for an independent importation operation to be viable, or for there to be some form of regulatory control mandating a certain amount of tankage be made available for this purpose and for access to appropriate offloading and handling facilities to be made available under certain circumstances.[28]

Some of the refiner-marketers are utilizing almost all of their available terminal capacity. Caltex[29] and Shell[30] told the inquiry they have very little, if any, spare capacity available to offer an independent importer.

Mobil told the inquiry it could provide some space at its Melbourne (Yarraville) and Adelaide (Birkenhead) terminals to third parties; however, such arrangements have not occurred in recent times because, according to Mobil, third party access has not been sought.[31]

It is clear from the evidence provided to the inquiry that some refiner-marketers and independent terminal operators have capacity that could be made available to independent importers on appropriate terms and conditions. It is not clear whether the availability of this capacity is well known to independent importers or what is required to make it available to independent importers.

Conclusions on current import terminal capacity

Currently available import terminal capacity is unlikely to support a large-scale national petrol importing operation. However, it will support increases in importing activity in a particular locations. The ACCC recommends a comprehensive audit of import terminal capacity in Australia to identify import terminal capacity that could become available for use by independent importers.

Investment in import terminal facilities is required to enable large-scale importing

In most markets there appear to be limited physical constraints to expanding existing import terminal facilities. Some planned expansions are detailed in box 13.1.

The inquiry has been told that the cost of setting up a terminal facility similar to Neumann's Brisbane terminal would be around $45-$50 million.[32] Although this does not seem prohibitive, there are impediments to setting up a large-scale national importing operation.

Owners of import terminal facilities are reluctant to invest in large-scale terminal facilities without a long-term commitment from an importer to import sizeable volumes of petrol. For example, Marstel prefers contracts of at least three years.[33] Vopak told the inquiry it usually requires a commitment of at least five years.[34]

However, independent importers are generally unable or unwilling to provide commitments of that duration without some certainty they will have a market for the petrol they import. This requires independent petrol retailers to commit to buy large volumes of petrol from a petrol importer over a prolonged period.

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28 MTAA, submission, p. 3.
29 ACCC, public hearing transcript, Sydney, 4 September 2007, p. 8.
30 ACCC, public hearing transcript, Melbourne, 13 September 2007, p. 46
31 ACCC, public hearing transcript, Melbourne, 19 September 2007, p. 56 and p. 64.
32 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 13.
33 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 61
34 ACCC, public hearing transcript, Darwin, 27 August 2007, p. 26.

However, independent petrol retailers are reluctant to commit to buy large volumes of petrol from a petrol importer unless the importer has an established record of reliable supply at prices competitive with those offered by the refiner-marketers.

This requires import terminal operators to invest ahead of a long-term commitment from an importer or retailers.

Box 13.1: Planned expansions of import terminal facilities

BP recently opened a new 25 ML diesel storage tank in Mackay, Queensland to cater for the large growth in demand by the resources industry.[1]

Caltex plans to invest $60 million to strengthen its terminal infrastructure in Australia over the next three years.[2]

Vopak is currently building an additional 75000 cubic metres of capacity at Port Botany to come on-line in October 2008, with a second build phase to add another 85000 cubic metres probably in 2009.[3] Vopak is currently undertaking conceptual design work on additional tankage at its Darwin facility which, in addition to chemical storage, may be made available to store Opal (low aromatic petrol).[4]

Marstel, who recently purchased the Bell Bay terminal from Mobil, is reconditioning and reconfiguring the terminal to provide around 30 ML of ULP storage.[5]

Neumann is considering increasing its current terminal storage and has plans to relocate to a berth that has a deeper draught, therefore overcoming some of the existing constraints at its Brisbane terminal.[6]

Stuart Petroleum has announced plans to build an import terminal and diesel refinery with Scott Group at Port Bonython in South Australia. The 80 ML capacity diesel terminal is due to be operational by late 2009. The diesel refinery is expected to be constructed after the completion of the terminal, and will have a capacity of at least 100 ML per year.[7]

Notes
1 BP submission, p. 19.
2 Caltex submission, p. 13.
3 ACCC, public hearing transcript, Darwin, 27 August 2007, p. 17.
4 ACCC, public hearing transcript, Darwin, 27 August 2007, p. 10.
5 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 59.
6 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 8.
7 Reuters UK, *Stuart Petroleum plans diesel refinery in Australia*, 8 August 2007, viewed 31 October 2007, http://uk.reuters.com/article/oilRpt/idUKSYD9796620070808

Access to the retail market

As noted in chapter 5, the refiner-marketer branded sites and supermarket co-branded sites sell over 90 per cent of the retail petrol sold in Australia.

To obtain the volumes to source reliable supplies of competitively-priced refined petrol from an overseas refinery, an independent importer would either have to gain the business of the majority of the independent retailers, or encourage other retailers or supermarkets to switch their wholesaler.

A number of parties told the inquiry that independent retailers are reluctant to purchase petrol from an independent importer without guarantees of supply at a price competitive with the offer of refiner-marketers.

APCO told the inquiry that obtaining petrol from an independent importer creates security of supply concerns.[35] BP told the inquiry that a reseller or independent retailer relying on imports faces risks (from shipping delays for example) which mean they have to run higher levels of working capital.[36]

Encouraging a large supermarket or retailers aligned with a particular brand to switch wholesalers is also difficult.

Evidence presented to the inquiry indicates retailers aligned with a brand face significant impediments to changing wholesalers, including difficulties in exiting long-term supply arrangements and the loss of investments in branding.

The impediments to a large supermarket 'sponsoring' a large-scale importing operation are discussed in section 13.4.1.

Other possible impediments to importing of refined petrol

A number of other factors can impede or delay importing operations including wharfage constraints, access to well-located land of sufficient size, licence approvals, product quality testing, freight costs, the costs of hedging risks and finance costs.

Conclusions on barriers to large-scale independent importing of petrol

For an independent importing operation to place significant downward pressure on wholesale petrol prices it must be able to supply a substantial portion of the market. The establishment of a large-scale national importing operation is unlikely in the foreseeable future. A large-scale national importer requires access to:

- large volumes of reliable and competitively-priced fuel from an overseas supplier
- sufficient import terminal facilities in most major markets
- a sufficient share of the retail market in which to sell the fuel.

The impediments to large-scale importing of petrol are self-reinforcing. Most or all of the impediments must be addressed to make the threat of large-scale importing credible.

13.3.5 Impediments to entry into local refining

New entry into local refining is highly unlikely. With the possible exception of refineries of specific products in specific locations, the future is one of rationalisation of capacity as refiner-marketers endeavour to improve refinery throughput.

There are a number of impediments to entry into local refining. In total these are substantial.

Large sunk capital costs—BP stated that the capital cost of a new refinery would be in the order of A$3 billion.[37] This is a significant investment, most of which would be lost if the refiner at a later time decided to exit. There is much less risk in setting up a large-scale importing operation.

Lack of economies of scale—Refiner-marketers in Australia are inefficiently small. Investment in a new refinery of similar size to those currently operating in Australia will expose the investor to risk from competition from larger-scale refineries overseas.

35 ACCC, public hearing transcript , Ballarat, 21 September 2007, pp. 9–11
36 ACCC, public hearing transcript, Melbourne, 5 september 2007, p. 22.
37 BP submission, p. 18.

Entry would result in significant over capacity—Although the refiner-marketers in the major capital cities are operating at or close to capacity**,** an additional refinery of commercial scale would push the market into excess capacity. This would have the effect of reducing margins.

Low demand growth—According to BP, domestic petrol demand is growing at between 0 per cent and 1 per cent per year. Domestic demand for diesel is forecast to grow at 4 per cent per year.[38] Any excess capacity created by new entry will take a long time to dissipate.

Latent capacity—Entry may occur where there is currently no refining capacity such as South Australia. Such entry is likely be discouraged however by the latent refinery capacity at Port Stanvac.

Access to a sufficient share of the retail market—A key consideration for a potential entrant in local refining is to ensure it will have access to a sufficient share of the retail market in which to sell the petrol. This may be difficult given the established retail networks of the refiner-marketers. Access to a sufficient share in the retail market would most likely require the refiner to supply Coles or Woolworths.

The inquiry was not provided with evidence of significant plans for expansion of local refining activities or entry by overseas refiners.[39] Instead, the picture is one of declining capacity as a result of tightening fuel standards and refinery closure. For instance, in 2003, after several years of poor profitability, Mobil made the decision to 'mothball' its Port Stanvac refinery with a view to restarting refining operations if market conditions suggest this would be a viable and sustainable option. However, despite recent improvements in the refining business environment, Mobil has not decided to resume operation of the Port Stanvac refinery.[40]

13.4 Potential changes to the structure of petrol markets

Petrol markets are subject to continual change. It is possible that changes to the structure of petrol refining, wholesaling and retailing in the future could alter the competitive dynamics in wholesale petrol markets. Some possible changes that have been raised during the inquiry are discussed below.

13.4.1 Is it likely that Coles or Woolworths will 'sponsor' the entry of a large-scale importer?

Coles and Woolworths are large retailers of petrol. The combined share of Woolworths/Caltex and Coles Express/Shell in petrol retailing is over 40 per cent (see chapter 5). This has provided Coles and Woolworths with significant buying power in wholesale petrol markets.

A key issue raised during the inquiry was whether Coles or Woolworths could credibly bypass the refiner-marketers by sponsoring the entry of a large-scale national importer of refined petrol.

The ACCC notes that before its alliance with Caltex, importer Trafigura supplied Woolworths with petrol sold through its outlets.

The alliance agreements between Coles and Shell, and Woolworths and Caltex, do not end for some time.

Evidence presented to the inquiry indicates Coles and Woolworths are extremely unlikely to favour large-scale importing over an alliance with a refiner-marketer.

38 ibid.
39 BP Australia suggested that there may be some increase in output at Australia refineries through capacity creep (through process improvements) and by the use of biofuels. BP submission, p. 18.
40 Mobil submission, p. 3.

Access to a network of retail sites/re-branding of sites

The major reason supermarkets entered petrol retailing is to cross-promote the sales of groceries through shopper dockets. Currently, Coles Express/Shell has around 600 co-branded sites. There are around 500 Woolworths/Caltex co-branded sites.

Switching to imported refined petrol would require Coles or Woolworths to re-brand the sites they own and find replacement sites for those they do not own.

Woolworths owns around 370 retail sites and co-owns around 134 with Caltex. The costs of re-branding the sites it owns would be significant. More importantly, access to well-located alternative sites would be extremely difficult.

Requirement to import into most states

Coles Express and Woolworths retail petrol across Australia. In the absence of buy–sell arrangements with refiner-marketers, a large-scale importer would require import terminal facilities of sufficient scale in most states to meet Coles or Woolworths' needs. As noted above, independent import terminals are available (or could be available) in many, but not all states. It is likely that a large-scale importer would have to invest in new terminal capacity.

Supply and quality risks

Coles or Woolworths are unlikely to risk supply disruptions. Disruptions to supply could undermine confidence in Coles and Woolworths as petrol retailers and ultimately their shopper docket schemes. Risks associated with the reliability of shipping and the availability of fuel of Australian standard would have to be borne by Coles or Woolworths.

The reputations of Coles and Woolworths could also be at risk if any imported fuel is contaminated. Before Woolworths' alliance with Caltex, Coles attempted to differentiate its offer from Woolworths by 'marketing' it offered 'clean' fuel. Under the current alliances, these risks are reduced by the strong incentives for Shell and Caltex to protect their brands.

Coles and Woolworths have 'locked in' significant concessions in wholesale petrol contracts limiting the potential benefit from sponsoring a large-scale importer

Coles and Woolworths have considerable bargaining leverage with the refiner-marketers. At the time of negotiating their original alliances, the possibility of aligning with a different refiner-marketer likely enabled the supermarkets to strike favourable terms and conditions for wholesale petrol. These favourable terms and conditions limit the potential benefit from sponsoring the entry of large-scale importer.

13.4.2 Formation of buying groups by resellers

Resellers and importers could consider forming buying groups to:

- collectively bargain with refiner-marketers over wholesale petrol prices or
- collectively bargain with overseas suppliers of refined petrol.

Collective bargaining creates the potential for resellers to broker better wholesale deals with refiner-marketers. Evidence provide to the inquiry indicates that bringing large volumes to the negotiating table can generate better deals from refiner-marketers.

Similarly, subject to the availability of import terminal facilities, it may be worthwhile for importers to jointly negotiate with overseas refiners or brokers. This will enable the importers to bring a large volume to the table and potentially secure more attractive pricing terms.

Some independents appear reluctant to enter into collective bargaining arrangements. For example, APCO told the inquiry that it has never seriously considered joining with other independents to import larger volumes.[41] Mr Mark Kevin (former CEO of Liberty Oil) suggested that this is because many independents feel uneasy about their rivals and are wary of Trade Practices Act issues.[42] On the other hand, both United Petroleum[43] and Neumann[44] indicated that they would consider joint shipping with another independent.

Collective bargaining arrangements can raise issues under the Act. These are discussed in chapter 14.

13.4.3 Exit of a refiner-marketer from petrol retailing

If one of the refiner-marketers exited petrol retailing in Australia and an independent retailer purchased the retail sites, the retailer may be able to gain the volumes necessary to make the establishment of a large-scale importing operation viable.

As discussed above, to be a substantial competitive threat, an importer requires guaranteed sales of large volumes of petrol. This is necessary to:

- be in a position to offer an overseas refiner sufficient volume to receive reliable supplies of competitively-priced refined petrol, and
- underpin investment in large-scale import terminal capacity.

In turn this requires the importer (or its wholesale customers) to have a commensurate presence in retail petrol markets. This may be the case if an independent retailer was able to purchase the sites of one of the refiner-marketers.

13.5 Recommendations to reduce or minimise impediments to competition in wholesale petrol markets

To protect and promote competition in wholesale petrol markets, the ACCC makes the following recommendations.

More detailed examination and on-going monitoring of buy–sell agreements

The ACCC recommends a more detailed examination and on-going monitoring of buy–sell agreements to fully assess whether they are exclusionary in nature, or have the purpose or effect of substantially lessening competition in contravention of section 45 of the Act.

The ACCC is concerned that the buy–sell arrangements may have had the effect of lessening competition between refiner-marketers in wholesale petrol markets.

41 ACCC, public hearing transcript, Ballarat, 21 September 2007, p. 12.
42 ACCC, public hearing transcript, Melbourne, 10 October 2007, p. 78–9.
43 ACCC, public hearing transcript, Sydney, 3 September 2007, p. 16.
44 ACCC, public hearing transcript, Brisbane, 22 August, 2007, p. 12.

The ACCC is also concerned that the refiner-marketers could thwart attempts by independent parties to establish petrol importing operations by refusing, or otherwise making it difficult, to negotiate reasonable buy–sell agreements.

The purpose of the further examination of buy–sell agreements is to detect any anti-competitive conduct by refiner-marketers in wholesale petrol markets, should such conduct occur.

Alignment of Australian fuel standards with appropriate fuel standards overseas

The ACCC recommends that, subject to meeting environmental policy objectives, Commonwealth and state governments endeavour to align Australian fuel standards with appropriate fuel standards overseas.

The purpose is to limit any unnecessary adverse impact Australian fuel standards may have on the ability of importers (including independent importers) to source reliable supplies of competitively-priced fuel from overseas refiners or brokers.

Audit of import terminal capacity and leases in Australia

The ACCC recommends a comprehensive audit of terminals suitable for importing refined petrol in Australia. The audit should cover current and future terminal capacity, current and future use of terminal capacity, and details of terminal leases and terminal sharing arrangements.

The audit should cover import terminal facilities owned by the refiner-marketers and independently-owned facilities.

A primary purpose of the audit is to identify import terminal capacity that could become available for use by independent importers.

On-going monitoring of import terminals

The ACCC recommends that following the audit, there be on-going monitoring of the use, leasing and sharing of terminals suitable for importing refined petrol into Australia.

A primary purpose of the monitoring is to guard against any attempts by refiner-marketers or other parties to 'lock-up' import terminal capacity which in turn would make it difficult for the establishment or expansion of independent petrol importing operations.

14 The role of the Trade Practices Act 1974 in addressing impediments to competition

Under its terms of reference, the ACCC is directed to inquire into current impediments to efficient petrol pricing and possible methods to address them. This chapter focuses on the Trade Practices Act:

- explaining the provisions of the Act that are relevant to petrol pricing
- examining the extent to which the provisions of the Act can and should be used to address impediments to efficient pricing
- identifying amendments to the Act which should be considered to improve competition and efficient pricing in the petroleum industry.

This chapter addresses:

- the history and role of prices surveillance and price monitoring
- recent amendments to the Act to facilitate collective bargaining
- recent judicial developments in the interpretation of s. 45
- recent amendments to s. 46 relating to predatory pricing
- recent amendments to s. 47 relating to third line forcing.

Developments relating to ss. 45 and 46 of the Act are of particular significance in the context of petrol pricing.

The ACCC considers that recent decisions relating to the interpretation of s. 45 have had a detrimental impact on the extent to which the Act can address anti-competitive conduct regarding petrol pricing. The ACCC has recommended that amendments to this section be considered to ensure that the Act can be used effectively to guard against collusion in this area.

During the course of this inquiry, parliament enacted amendments to s. 46 addressing predatory pricing. These amendments have been the subject of widespread public comment and discussion. While judicial consideration will almost certainly be necessary before the effect of these amendments can be fully appreciated, the ACCC has endeavoured, in this chapter, to provide some guidance on how it sees these provisions applying to current practices relating to petrol pricing.

14.1 Prices surveillance, price monitoring and collective bargaining

14.1.1 Surveillance and monitoring under Part VIIA of the Act

Under the provisions of Part VIIA of the Act, the ACCC has powers to:

- conduct prices surveillance (as defined in the legislation)
- monitor prices in industries where, in the view of the relevant minister, particular circumstances require it
- where directed by the relevant minister, conduct a formal inquiry into prices or pricing—such as the inquiry upon which this report is based..

It is useful to outline briefly each of these powers in turn.

Prices surveillance

Under the provisions of Part VIIA dealing with prices surveillance, a company that has been 'declared' in relation to particular goods and services cannot increase the price of those goods or services it sells (which relevantly become 'declared goods or services') without first notifying the ACCC.

The object of Part VIIA, as regards prices surveillance, is to utilise surveillance only in markets where, in the view of the minister, competitive pressures are not sufficient to achieve efficient prices and protect consumers.[1]

The notification requirement is central to the ACCC's formal prices surveillance function. Under the price notification provisions, a declared person must notify the ACCC of a price rise if the proposed price is higher than the price level operating for the previous 12 months. Failure by a declared company to notify regarding declared goods or services gives rise to a breach of the Act and the declared person can be fined.

Under Part VIIA, the ACCC must assess price notifications by declared companies for declared goods and services against statutory criteria set out in the Part,[2] including the need to:

- maintain investment and employment, including the influence of profitability on investment and employment
- discourage a person who is in a position to substantially influence a market for goods or services from taking advantage of that power in setting prices
- discourage cost increases arising from increases in wages and changes in conditions of employment inconsistent with principles established by relevant industrial tribunals.

The ACCC cannot object to the prices notified by a declared company or to prices which are lower than those notified. Moreover, while a declared company is required to observe the notification procedures, there is no obligation upon it to comply with decisions made by the ACCC.

The ACCC maintains a public register of price notifications, as well as its own decisions and the reasons for those decisions.

1 Section 95E of the Act.
2 Section 95G(7) of the Act.

Price monitoring

Quite apart from the prices surveillance power just discussed, another function of the ACCC under Part VIIA is to monitor prices, costs and profits in any industry or business that the minister directs it to monitor and to provide to the minister a report on the results of such monitoring.[3] As the words of Part VIIA make clear, the monitoring may relate to the supply of goods or services in a specified industry, or to the supply of goods or services by specified persons.

The price monitoring powers under Part VIIA extend to enabling the ACCC to obtain relevant information or documents, and there are penalties if they are not provided.

Price inquiries under Part VIIA

The ACCC's function under Part VIIA also extends to the conduct of formal price inquiries where the minister, by notice in writing to the chairman of the ACCC, requires the ACCC to hold an inquiry into a specified matter or matters or approves such an inquiry.[4] This inquiry into petrol prices has been conducted by the ACCC pursuant to this power on approval of the minister. The powers of the ACCC in the conduct of these formal inquiries are extensive. They include the power to summons and examine witnesses, to obtain documents, to take evidence in private and to require persons to provide information in writing. Again, failure to cooperate at such an inquiry may constitute an offence under the Act and fines may apply.[5]

Informal monitoring of petrol prices

Quite apart from these powers and their exercise, the ACCC has informally monitored petrol prices from 1 August 1998 when petrol prices were deregulated. Indeed, this monitoring of petrol prices commenced when the Australian Government announced that prices surveillance of petrol prices would cease on 20 July 1998 at the request of the then Treasurer, the Hon. Peter Costello, and the then Minister for Industry, Science and Tourism, the Hon. John Moore.[6] Information on the informal monitoring of petrol prices has already been outlined in Chapter 2.

14.1.2 Prices surveillance of petrol prices before August 1998

Before 1 August 1998 the four major oil companies were declared under s. 22 of the *Prices Surveillance Act 1983* for sales of all grades of petrol and diesel. Under this section the declared companies were required to formally notify the ACCC of proposals to increase wholesale prices above the previously endorsed wholesale price.

Under the arrangements developed for the oil companies, the ACCC calculated maximum wholesale prices based on import parity and endorsed proposed prices by the oil companies provided they were not in excess of these calculated prices.

The Australian Government announced the deregulation of petrol prices effective from 1 August 1998 in a joint statement by the then Treasurer, the Hon. Peter Costello, and the then Minister for Industry, Science and Tourism, the Hon. John Moore, on 20 July 1998.

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3 Section 95G(5) of the Act.
4 Section 95H of the Act.
5 See Part VIIA, division 3, subdivision C of the Act.
6 Joint statement, The Treasurer, the Hon. Peter Costello and Minister for Industry, Science and Tourism, The Hon. John Moore, *Petroleum marketing reforms*, 20 July 1998.

The joint statement noted that:

> Price surveillance of petrol prices and the setting of a maximum endorsed wholesale price has had an adverse effect on the retail petrol market. In the capital cities, the maximum endorsed wholesale price has acted as a target for prices at the end of a discount cycle. In the country, the maximum endorsed wholesale price has acted as a price floor underwriting the price paid by country consumers.

This comment reflected the conclusion reached by the ACCC in its 1996 inquiry report.

In a media release on 15 August 1996, which outlined the conclusions of the ACCC report, it was stated:[7]

> The price controls do not serve a very useful purpose. In most capital cities, they only restrain prices occasionally, and on those occasions only a little. At other times, the setting of the prices in fact facilitates price coordination, not competition, encouraging companies at times to charge the maximum price rather than a lower one. In rural areas the controls have been avoided to a significant degree by oil companies selling through distributors who are not subject to price restraints. In addition there have been some harmful side effects on the efficiency of the industry.

Currently ACCC formal prices surveillance is confined to services provided under monopoly structures such as Australia Post's ordinary letter service and Airservices Australia's provision of air navigation services.

Submissions to the inquiry have not proposed or advocated a return to formal prices surveillance. Indeed they have suggested that regulatory intervention should be kept to a minimum. For example, the WA RAC stated in evidence:

> We are concerned that any outcome of this inquiry may be to more heavily regulate the industry. We believe that the level of regulation we have here in Western Australia at the state level is about as far as you would want to go. We believe that consumer pressure is the best to keep the market competitive, but that relies on transparency and easily available price information. [8]

The industry characteristics of the petroleum industry have already been outlined in chapters 3 to 12. It is apparent from this discussion that the industry is not characterised as a monopoly structure at any level. The ACCC has identified impediments to competition in the industry in chapter 13; however, it does not regard these impediments as warranting a return to formal prices surveillance under Part VIIA, at least not currently.

14.1.3 Formal monitoring of petrol prices

Although inquiry participants did not advocate invocation of the prices surveillance powers under Part VIIA, some submissions to the inquiry favoured the adoption of formal price-monitoring arrangements for the fuel industry. These calls for monitoring of a more formal kind came from industry and consumer associations.

For example, the AAA and its affiliates supported more formal monitoring of petrol prices. In a written submission to the inquiry, the AAA stated:

> ACCC should formally monitor prices, costs and profits in the petrol industry, consistent with the prices surveillance provisions in Part VIIA of the Trade Practices Act. Monitoring should be conducted on a regular and ongoing basis.[9]

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7 ACCC, *Inquiry into the petroleum products declaration*, August 1996.
8 ACCC, public hearing transcript, Perth, 28 August 2007, p. 62.
9 AAA submission, p. 8.

Formal monitoring was also supported by the WA RAC . Reasons advanced for price monitoring were similar to those suggested by the AAA submission, such as that:

- motorists do not fully understand petrol price movements—the provision of more detailed consumer focused information from the ACCC would assist in addressing this problem.
- extra scrutiny would possibly reduce the likelihood of departures in petrol prices from what might be expected under market conditions.

The view of the ACCC is that formal price monitoring under Part VIIA of the Act is appropriate and useful where it is necessary to increase price transparency, particularly in industries where there is concern over pricing practices.

14.1.4 Expanded informal monitoring of petrol prices by the ACCC

Quite apart from the question of whether formal surveillance or monitoring of petroleum prices is warranted, some participants at the inquiry did support expanded informal monitoring of petrol prices by the ACCC.

For example, the Tasmanian Government submission stated:

> The Tasmanian Government strongly recommends that the ACCC continue to monitor petrol prices, and consider the merits of regular reporting on prices in urban centres and regional areas of Australia, on a consistent basis.[10]

Likewise, in its submission, the NRMA stated:

> That there continues to be a lack of sufficient market transparency to justify the volatility in retail markets. We therefore advocate the need for greater price monitoring by the ACCC and other regulatory authorities (such as the NSW Department of Fair Trading) to determine the extent to which cyclical pricing constitutes anti-competitive behaviour.[11]

In a similar vein, the WA RAC expressed the following view:

> We also believe that at a national level the ACCC can pick up a more formal price monitoring arrangement for the fuel industry, particularly regular reporting on the state of the wholesale market and distribution arrangements in regional areas, not just to monitor those prices, because it's one thing to monitor. Where you can add most value to the community is to act on that monitoring where you find distortions of the market by publicly highlighting those distortions and using that to expose inconsistencies and perhaps excess profits. [12]

Among the oil majors, BP, Caltex and Mobil, commented on the ACCC's approach to monitoring petrol prices, suggesting some changes in approach.

In general the major oil companies and supermarket chains either explicitly supported continued monitoring by the ACCC or did not recommend removal or cessation of monitoring by the ACCC.

An example of the attitude taken by the oil majors can be found in the following statement by BP in its submission:

> We support continued price monitoring by the ACCC and we recommend that the ACCC obtain access to highly detailed retail price information; including hourly price data by site where applicable. This would allow the Commission to accurately follow micro-dynamic price moves and precisely analyse occurrences of inconsistent pricing behaviour, and identify the entities responsible for this. This would allow the ACCC to be very specific about any issue that arise. [13]

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10 Tasmanian Government submission, p. 11.
11 NRMA submission, p. 13.
12 ACCC, public hearing transcript, Perth, 28 August 2007, p. 62.
13 BP submission, p. 40.

In summary, while prices surveillance of petrol prices is not supported, there does appear to be general support for the ACCC to have some form of price monitoring role. However, some of the reasons advanced for price monitoring appear to be directed to improving consumer understanding of retail price movements—in particular, price volatility. Measures to improve retail price transparency at the retail level of the industry are discussed in chapter 14, section 14.1.

14.1.2 Collective bargaining

A number of submissions have stated that independent retailers cannot obtain fuel at wholesale prices that allow them to compete with the refiner-marketers and supermarket brands.[14] The ACCC has heard evidence that independent retailers are disadvantaged by a lack of bargaining power compared to the refiner-marketers and supermarkets.[15]

The ACCC recognises that small businesses may have greater power to negotiate over terms and conditions if, rather than negotiate individually, they combine with other small businesses to collectively bargain with wholesale suppliers. Groups may argue that individually, they have very little prospect of being heard on terms and conditions of supply, including price. They may argue that a group may have a volume great enough to make a difference in terms of supply. Collective bargaining may also increase the information available to assist with informed decision making and provide opportunities to consider proposals that small businesses could not obtain individually.

While competitors that act collectively in negotiations over price and other terms and conditions may be at risk of breaching competition laws, the Act provides several avenues by which protection can be afforded to such arrangements where it is in the public interest to do so.

The authorisation process

In the past, businesses have been able to obtain protection for collective bargaining arrangements through the authorisation process under Part VII of the Act. The process is open and transparent, involving public consultation and the issuing of a draft decision before the ACCC's final decision on whether to grant authorisation.

The ACCC is required to deal with authorisation applications within six months. Importantly, from January 2006 the ACCC has made available a streamlined authorisation process for collective bargaining by small business. This is an expedited process where the ACCC undertakes to issue a draft determination within 28 days of receiving an application for authorisation and to issue a final determination within three months of receiving an application. Recent applications have been dealt with in approximately two months.

The new notification process

Amendments to the Act that commenced on 1 January 2007 have provided small businesses with an easier and faster process for obtaining protection from liability for collective bargaining. At present, the protection is obtained by lodging a notification with the ACCC. The protection automatically commences 28 days after the notification is lodged (unless the ACCC objects) and lasts for three years. Like authorisations, collective bargaining notifications are considered through a public process.

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14 Service Stations Association, submission, pp. 3–5; Motor Trades Association of Queensland, submission, pp. 6–7.
15 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 37; ACCC, public hearing transcript, Melbourne, 24 August 2007, pp. 51–2.

It should be noted that the legislation sets a transaction limit of $3 million per participant per year, although this can be varied by regulation for specific industries. In March 2007, regulations were made increasing this limit to $15 million for petrol retailers.[16] This means that petrol retailers wishing to negotiate collectively can each acquire up to $15 million worth of fuel per annum under the protected arrangements.

While it offers many advantages, the new notification process won't suit everyone. For example, the process is best suited to arrangements between groups of identified, consenting participants. It is not well suited to more loosely defined groups with membership that changes regularly. Changes in proposed arrangements can also be difficult to accommodate. Finally, individual retailers may have their own specific issues or may feel they are better off negotiating individually.

Public benefit and detriment

Protection for collective bargaining is available under the Act where the public benefit from the collective arrangements outweighs any public detriment. While both the authorisation and notification processes have been streamlined, each application or notification will need to be considered on its merits and proposals must be supported by an explanation of how the arrangements will deliver public benefits and why any detrimental impact on competition will be low.

Collective bargaining by petrol retailers

The ACCC believes that the procedures described above are effective and accessible tools to help independent retailers address the competitive disadvantages they face due to their relative lack of bargaining power. The potential benefits of collective bargaining among independent retailers were recognised by several witnesses.[17]

Independent retailers should explore opportunities to collectively bargain at the wholesale level and discuss the various options for obtaining protection under the Act with the ACCC. The inquiry heard evidence of the challenges involved in organising participants to bargain collectively. However, the ACCC believes that motor trade bodies in each state and territory can play an important role in this process and should assist their members in this area. The VACC, for example, indicated that it was considering this possibility.[18]

While some witnesses expressed fears that suppliers might refuse to deal with independent retailers that had decided to negotiate collectively, no evidence was presented to support these claims. The collective bargaining provisions of the Act do not compel anyone to deal with a collective. Rather, their object is to enable small businesses to improve their bargaining position when dealing with other parties. In the context of the petrol industry, these provisions could enable independent retailers to acquire fuel on terms that will enhance their ability to compete with larger competitors in the market. Based on the evidence presented to the inquiry, the ACCC believes these provisions, properly implemented, should assist in achieving this goal.

16 Regulation 71A of the Trade Practices Regulations.
17 ACCC, public hearing transcript, Canberra, 21 August 2007, p. 17; ACCC, public hearing transcript, Townsville, 23 August 2007, pp. 17–8; ACCC public hearing transcript, Ballarat, 21 September 2007, p. 45.
18 ACCC, public hearing transcript, Ballarat, 21 September 2007, p. 45.

14.2 Part IV

14.2.1 Section 45 and the petrol industry

Highly visible petrol marker boards let consumers know what price a service station is charging at that time. Just as that price level is visible for consumers, it also serves to alert a competitor to any price increase. If a fuel retailer sees the price upswing of their competitor and decides to follow, this could not, of itself, amount to a contravention of the Act. This is because there is no contract, arrangement or understanding between the competitors to fix prices.

Broadly, s. 45 of the Act prohibits the making of, and giving effect to, anti-competitive 'contracts, arrangements and understandings'. It is generally considered that an 'understanding' is the lesser test of the trilogy and captures informal agreements.

The term 'understanding' was recently the subject of interpretation in a decision of the Full Federal Court in *Apco Service Stations Pty Ltd v ACCC* [2005] FCAFC 161. The Full Court found that, to establish that the parties to an alleged cartel had reached an 'understanding', there must be a meeting of minds between the parties. The decisive consideration was that the trial judge had found there was no expectation by the initiating respondents that Apco's readiness to receive calls meant it would match price increases advised by the initiating respondents.[19] In those circumstances, the Full Court said there was no more than a hope or factual expectation that Apco would act in a particular way, and that fell short of an understanding.[20]

The reasoning in Apco was applied by Gray J in *ACCC v Leahy Petroleum Pty Ltd* [2007] FCA 794 where he found that certain conduct by petrol station owners and distributors in the Geelong region did not breach the Act. Broadly speaking, that conduct comprised regular communications by one of the parties to one or more of the other parties on proposed future petrol pricing changes and the recipient of the information regularly (but not always) following that proposed price change.

While, on the one hand, it might be said that these cases simply applied well accepted principles concerning the expression 'understanding', the ACCC is concerned that they disclose a subtle but significant shift in the nature of the commitment that must be found to establish the existence of an understanding. Earlier decisions of the Federal Court interpreted the term to include an expectation regarding future conduct consciously or intentionally engendered in one person by the words or conduct of another person. However, the more recent decisions suggest that an understanding will not be regarded as having been reached in those circumstances; rather, there is a need for at least one of the parties to give or accept a commitment, obligation, undertaking or assurance that they will act in a certain way. Advice from senior counsel indicates that these recent decisions are open to this interpretation. Senior counsel's advice is in appendix R.

The ACCC is concerned that these recent decisions provide a basis for defendants to argue that it must now be found that a party has assumed an obligation or given an assurance to act in a particular way before an understanding can arise. If this argument was accepted, the ACCC's ability to prosecute alleged price fixing and market sharing would be impaired. The capacity to 'catch' such conduct is inextricably linked to the ability to prove the existence of a contract, arrangement or understanding.

19 [2005] FCAFC 161 at [43].
20 [2005] FCAFC 161 at [46] and [51].

It would be a retrograde development if the word 'understanding' was to be construed so restrictively that no amount of coordination on pricing between competitors can fall foul of the Act unless one of the parties can be shown to have given or accepted a commitment, obligation, undertaking or assurance to act in a certain way regarding their pricing.

Public expectation of what amounts to price fixing may vary from this restrictive view. An example of what might be considered by the public to amount to 'price fixing' is set out below:

> At 7am every day, Petrol Station A tells Petrol Station B the price it proposes to retail its petrol at from 9am that day. Petrol Station B generally accepts the information but does not respond. Petrol Station B generally (but not always) adjusts its price to the level of Petrol Station A at or around 9am although it does not consider itself obliged to change its price.

The ACCC has consistently communicated to the public that parallel pricing of itself is not price fixing. However, the ACCC is concerned that the effect of recent cases is that competitors may safely provide or receive information on each other's future pricing insofar as they have not made a commitment, or regard themselves as obliged, either to provide that information or to act upon the information.

A further issue impacting upon the ability of the ACCC to prosecute alleged cartels relates to the acceptance of inferential evidence by the court. In many investigations concerning alleged cartels, in the absence of one of the participants coming to the ACCC and confessing (either pursuant to the ACCC's immunity/leniency policy or for other reasons), the ACCC will not have direct evidence of the making of an arrangement or understanding. Where the ACCC brings proceedings without such direct evidence, it must ask the court to infer from all the surrounding circumstances that such an arrangement or understanding existed. In the *Leahy Petroleum* case in particular, the Federal Court showed a reluctance to accept inferential evidence.

Legislative amendment

In the ACCC's view, an approach to s. 45 that recognises that the conscious or intentional creation of an 'expectation' regarding future conduct may be sufficient to constitute an understanding best reflects parliament's intention in enacting s. 45 of the Act.

The ACCC believes that an amendment to the Act to clarify the meaning of the term 'understanding' may well be appropriate. The amendment recommended by the ACCC, which is based on the advice of senior counsel, is set out below. It sets out a number of factual matters the court may take into account in determining whether an understanding has been arrived at and specifically provides that it is not a necessary element of an understanding that the parties to the understanding be committed to giving effect to it.

The ACCC recommends that consideration be given to an amendment to provide for the following:

(a) The court may determine that a corporation has arrived at an understanding notwithstanding that:

  (i) the understanding is ascertainable only by inference from any factual matters the court considers appropriate

  (ii) the corporation, or any other parties to the alleged understanding, are not committed to giving effect to the understanding.

(b) The factual matters the court may consider in determining whether a corporation has arrived at an understanding include but are not limited to:

  (i) the conduct of the corporation or of any other person, including other parties to the alleged understanding

  (ii) the extent to which one party intentionally aroused in other parties an expectation that the first party would act in a particular way in relation to the subject of the alleged understanding

  (iii) the extent to which the corporation was acting in concert with others in relation to the subject matter of the alleged understanding

  (iv) any dealings between the corporation and any other parties to the alleged understanding before the time at which the understanding is alleged to have been arrived at

  (v) the provision by the corporation to a competitor, or the receipt by the corporation from a competitor, of information concerning the price at which or conditions on which, goods or services are supplied or acquired, or are to be supplied or acquired, by any of the parties to the alleged understanding or by any bodies corporate that are related to any of them, in competition with each other

  (vi) whether the information referred to in (v) above is also provided to the market generally at the same time

  (vii) the characteristics of the market

  (viii) the likelihood of the information referred to in (v) above being useful to the recipient of the information for any purpose other than fixing or maintaining prices;

  (ix) the extent to which, if at all, the communication referred to in (v) above was secret or intended by the parties to the communication to be secret.

While the precise form of words would be a matter for the drafter and the parliament, such an amendment would have the effect of largely restoring the law regarding the meaning of the term 'understanding' to that which existed in 1974.

14.2.2 Section 46 and predatory pricing

Introduction

A key objective of the Act is to enhance the welfare of Australians through the promotion and protection of well-functioning, competitive markets. A key section of the Act in this regard is section 46. Under s. 46, corporations with a substantial degree of market power are prohibited from taking advantage of that market power for an anti-competitive purpose. A recent amendment to s. 46 (s. 46(1AA)) prohibits a firm with a substantial market share from sustained below-cost pricing for an anti-competitive purpose.

These provisions are designed to protect and foster competition in Australian markets. Importantly, they do not exist to shield inefficient business operators from the rigours of fair competition.

The primary aim of this section of the report is to raise a number of the key issues in assessing retail petrol pricing under the new provision, s. 46(1AA). The aim is not to conclude whether or not current pricing in retail petrol markets breach s. 46(1AA)—this would require a far more exhaustive investigation; rather, this section attempts to provide broad guidance on the ACCC's current views.

Predatory pricing and s. 46

In general, predatory pricing occurs where a firm reduces the price at which it sells a product for a period of time, with the aim of achieving greater profits over time by altering the structure of, or behaviour in, the market(s) in which it operates.

Before the recent amendments to s. 46, there were no provisions in the Act specifically dealing with predatory pricing. However, in the well-known cases of *Queensland Wire* and *Boral*,[21] the High Court has considered predatory pricing behaviour in the context of s. 46(1) of the Act. Under section 46(1):

A corporation that has a substantial degree of power in a market shall not take advantage of that power in that or any other market for the purpose of:

(a) eliminating or substantially damaging a competitor of the corporation or of a body corporate that is related to the corporation in that or any other market;
(b) preventing the entry of a person into that or any other market; or
(c) deterring or preventing a person from engaging in competitive conduct in that or any other market.

On 25 September 2007, as part of a number of amendments to s. 46, a specific provision (s. 46(1AA)) came into effect with the purpose of 'targeting anti-competitive below-cost pricing by corporations with a substantial market share.'[22]

Under s. 46(1AA):

> A corporation that has a substantial share of a market must not supply, or offer to supply, goods or services for a sustained period at a price that is less than the relevant cost to the corporation of supplying such goods or services, for the purpose of:
>
> (a) eliminating or substantially damaging a competitor of the corporation or of a body corporate that is related to the corporation in that or any other market; or
> (b) preventing the entry of a person into that or any other market; or
> (c) deterring or preventing a person from engaging in competitive conduct in that or any other market.

21 *Queensland Wire Industries v BHP* (1989) 167 CLR 177; *Boral Besser Masonry v ACCC* (2003) 215 CLR 374.
22 Trade Practices Legislation Amendment Bill (No.1) 2007, Supplementary Explanatory Memorandum, p. 1.

According to the second reading speech, a primary aim of s. 46(1AA) is to:

> 'provide further guidance to courts in relation to predatory pricing'.

The key challenge in implementing s. 46(1AA) is to capture predatory pricing without reducing the incentives for legitimate competitive pricing.

The recent amendments to s. 46 also included the introduction of s. 46(4A). This new provision sets out certain matters the court may consider when assessing an allegation of predatory pricing under s. 46(1) and contains terms that are also used in s. 46(1AA).

Under s. 46(4A):

> Without limiting the matters to which the Court may have regard for the purpose of determining whether a corporation has contravened subsection (1), the Court may have regard to:
>
> (a) any conduct of the corporation that consisted of supplying goods or services for a sustained period at a price that was less than the relevant cost to the corporation of supplying such goods or services; and
>
> (b) the reasons for that conduct.

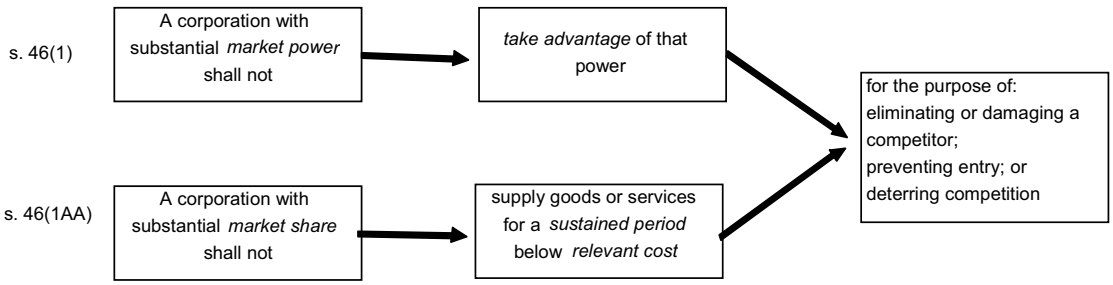
The purpose of Part IV of the Act is to protect competition, not competitors. By its nature, competitive conduct creates winners and losers. Firms that are successful in designing superior products, offering better service to consumers or lowering their costs of production and prices thrive in the marketplace. Firms that cannot keep up lose market share and ultimately leave the market. A firm lowering its prices in the market to attract more custom will hurt its competitors.

Dual prohibition of anti-competitive conduct

With the introduction of s. 46(1AA), there now exists a 'two-track' process under the Act by which the ACCC may consider allegations of predatory pricing. There are now two separate prohibitions on certain conduct by corporations with either:

- substantial market power—s. 46(1) or
- a substantial share of a market—s. 46(1AA).

The following diagram indicates this two-track process:



Although similarities exist between the two provisions, there are also significant differences.

The most obvious distinction is that s. 46(1) requires a corporation to have substantial market power, while s. 46(1AA) requires a corporation to have a substantial market share. Although the two concepts are related, they are distinct legal concepts.

Another important difference between the two provisions is that s. 46(1) stipulates that a corporation must not 'take advantage' of its market power, whereas this term does not appear in s. 46(1AA). The latter provision instead specifically describes the conduct that a corporation with substantial market share must not undertake. This is discussed in more detail below.

As noted above, both s. 46(1) and s. 46(1AA), require that the corporation must act with one of three proscribed (anti-competitive) purposes.

Under both s. 46(1) and s. 46(1AA), the market that is the subject of a corporation's anti-competitive purpose does not have to be the market in which the corporation has market power or a substantial market share.

Relevance to petrol market

The inclusion of s. 46(1AA) is of potential relevance to the retail petroleum market involving, as it does, the sale of a substantially homogenous product where differentiation between sellers is usually (although not always) achieved by substantial discounting. The most obvious example is the shopper docket discount scheme offered by the retail supermarkets, Coles Express and Woolworths. Other discount schemes also operate in the petrol market and discounting below cost (although not necessarily below relevant cost) frequently occurs in the course of weekly price cycles.

New concepts introduced in s. 46(1AA)

Section 46(1AA) introduced a number of new concepts into the Act, including:

- 'substantial share of a market'
- 'sustained period'
- 'relevant cost to the corporation.

Any discussion of the meaning of these concepts and how they may be measured must be considered as exploratory at this point. As with any new legal concepts, they will ultimately require clarification by the courts.

Moreover, the precise meaning of these terms will depend on the particulars of the matter being investigated. Each circumstance will need to be considered on a case-by-case basis.

With these caveats firmly in mind, the next section provides a broad discussion of these concepts.

Substantial share of a market

The first element of s. 46(1AA) is 'substantial share of a market'. A firm that does not have a substantial market share cannot breach the provision.

These words introduce a new concept into the Act. Before the amendments, s. 46 made no reference to the notion of a 'substantial share of a market' although this notion was relevant to the issue of a 'substantial degree of market power' in s. 46(1). But market share was not determinative of market power. Indeed, courts were often not attracted to measuring market power by reference to market share.

Moreover, even if market power were shown to exist, it was necessary, to establish a breach of s. 46(1), to establish that such power was used to facilitate the impugned conduct. This was captured by the requirement in s. 46(1) that a person 'take advantage' of market power for the anti-competitive purpose. This nexus between the existence of the power and its use for an anti-competitive purpose is not replicated in s. 46(1AA) in the context of market share. Section 46(1AA) is enlivened merely by a participant in a relevant market being found to have a 'substantial share' of that market or another market. This significantly widens the potential operation of the section.

Assessing whether a firm has a substantial market share will require a definition of the relevant market, a calculation or estimate of the firm's market share and an assessment of whether the market share is substantial.

What constitutes a 'substantial' share of a market will differ depending on the particular matter. Care should be taken in attempting to quantify a 'substantial' share in percentage terms, as this will vary between different markets. The word 'substantial' has been considered by the courts both in cases concerning s. 46 and more generally. In terms of s 46, the word would appear intended to signify 'large or weighty' and to capture expressions such as 'considerable', 'solid' and 'big'.[23]

Section 46(1AB) provides further guidance on 'substantial market share'. This provision states:

> For the purposes of subsection (1AA), without limiting the matters to which the Court may have regard for the purpose of determining whether a corporation has a substantial share of a market, the Court may have regard to the number and size of the competitors of the corporation in the market.

Section 46(1AB) recognises that the number and size of competitors may be a good indicator of the degree of market share. Some of the other factors that may be relevant in assessing whether a firm's market share is substantial include the capacity of the firm; the degree of product differentiation in the market; the degree of brand loyalty; the presence and size of sunk costs; and the presence and size of economies of scale. There are no doubt other relevant factors.

'Sustained period'

Section 46(1AA) stipulates that a corporation must not supply or offer to supply goods or services for a sustained period at a price less than the relevant cost of supply to the corporation.

The duration of below-cost pricing is an important consideration in distinguishing between legitimate price discounting and anti-competitive predatory pricing. A retailer offering a weekend price special or occasionally reducing its prices to sell excess stocks of perishable goods is engaging in legitimate competitive conduct that should not be discouraged. On the other hand, an established retailer, facing the threat of entry, who discounts all or most of its products below its relevant costs day in and day out for a period of, say, six months would raise suspicions.

What constitutes a sustained period will vary depending on the circumstances of the particular case. In petrol retailing, where there are persistent price cycles, it is likely that the duration, frequency and timing of price discounting would all be important in determining what is a sustained period. The inquiry has heard evidence that certain retailers do engage in the practice of selling petrol at a price below the wholesale price paid for that petrol, but that this only occurs from time to time and generally only at the bottom of the price cycle. Selling below wholesale cost does not occur at the bottom of every weekly cycle, although there may be periods where it happens regularly for a month or more. Courts may need to consider whether any such selling, if it is found to be below relevant cost, will be supply for a 'sustained period' under s 46(1AA). The duration of each episode of below-cost pricing

23 *Dowling v Dalgety Australia Ltd* (1992) 34 FCR 109.

would be relevant (e.g. for one day a week or five days of the week), along with the frequency and timing of the episodes of below-cost pricing (e.g. whether the below-cost pricing was during periods that other firms would make most of their sales).

In most circumstances, other factors are also likely to be relevant, such as the breadth of the products priced below cost (e.g. whether the firm is offering slow-moving or fast-moving items below cost) and the relative size of the customer group offered the product below cost.

In light of the above, it is difficult to predict with confidence what view a court may take concerning regular discounting in the context of price cycles by a retailer which clearly has a substantial share of the retail petrol market in a particular location or area.

Relevant cost to the corporation

To contravene s. 46(1AA), the supply or offer to supply goods or services must be at a price less than the relevant cost of supply of the corporation.

Relevant costs are those of the alleged predatory corporation. If a firm supplies a product at a price above its 'relevant cost', but that price is less than the costs of a less efficient competitor, then such conduct will not breach s. 46(1AA).

As with the duration of the pricing conduct, the definition and measurement of relevant costs are important factors in distinguishing between legitimate price discounting and anti-competitive pricing.

There are no general rules as to the measurement of relevant costs. Economists have advocated a range of cost standards to assist in distinguishing between legitimate price discounting and anti-competitive pricing, including average incremental costs, average avoidable costs, average variable cost, marginal cost and so on. The clear message from this literature is that no one cost standard is appropriate in all circumstances. There are circumstances where pricing below each cost standard is legitimate competitive conduct—and even circumstances where pricing above each standard may be anti-competitive or predatory. That is not to say that such concepts are irrelevant, but rather that parliament has recognised that the underlying cost to a corporation of supplying goods or services may need to be evaluated differently in different circumstances.

Clearly however, if a firm's prices are sufficient to cover its own appropriately measured total costs, then it cannot breach s. 46(1AA). In the vast majority of cases, however, relevant costs are likely to be well below total costs. In some matters, relevant costs may be close to zero. For example, a firm faced with discarding perishable goods at the end of the day may choose to sell the goods for a nominal price. Despite the price being below the cost of making or acquiring the goods, the nominal selling price may be sensible given the cost the firm would otherwise incur in disposing of the goods.

What constitutes relevant costs will depend on the circumstances. It will likely depend on, among other matters, the duration of the pricing conduct (all else being the same, the relevant cost for a short period of price discounting may be smaller than the relevant cost of a prolonged period of price discounting); whether the firm offered the price discount to all of its customers or just a small group of customers; and whether the firm sells complementary products (for example, a movie theatre selling cheap tickets to generate sales at the concession stand would probably not be caught).

The existence of price cycles in petrol retailing would also be relevant to an assessment of relevant costs. As noted above, the inquiry has heard evidence that certain retailers do engage in the practice of selling petrol at a price below the wholesale price paid for that petrol, but that this only occurs from time to time and generally only at the bottom of the price cycles. In such cases it may be more appropriate to

consider whether prices are below costs over the course of a price cycle, with the relevant costs (and prices) being appropriately weighted by the volumes of petrol sold.

Purpose

As with s. 46(1), the operation of s. 46(1AA), is dependent on the court finding that the purpose for the impugned conduct was one or more of the following proscribed purposes:

- eliminating or substantially damaging a competitor
- preventing the entry of a person into the relevant market or
- deterring or preventing competitive conduct by another person in the market.

However, the absence of a requirement to establish a nexus between the existence of the relevant market share and the conduct, and the lack of any requirement to establish market power, are factors that may lead courts to pay particular attention to purpose as the only requirement within the section limiting what would otherwise be a 'strict liability' operation.

This is particularly so in the case of section 46(1AA)(a), which proscribes the purpose of eliminating or substantially damaging a competitor. At the heart of competition is the notion of damaging a competitor. That is why 'taking advantage' is such a central element to the operation of s. 46(1). This point was recognised by the High Court in *Boral* where the court counselled against jumping too hastily from a finding of purpose to a finding of use of market power.

Another feature of s. 46(1AA) is the absence of any reference to recoupment. Although recoupment clearly figured in earlier drafts of the amendments, it did not find voice in the provision as finally drafted or in any further amendment to s. 46(1). This may reflect a desire by parliament to provide courts with as much flexibility as possible to determine, in any given case, the relevance of the existence or absence of recoupment. The absence of a requirement for recoupment in s. 46(1AA) may widen the potential scope of the operation of the section in the context of the petroleum retail market.

In this context, it should be noted that the ACCC heard evidence of how cycles are led and prices are matched by the various players. In this regard, price matching and undercutting may be viewed quite differently by the courts for the purposes of the Act. Undercutting may suggest that predatory pricing is taking place while matching is much less likely to do so. Accordingly, the conduct of competitors in the relevant market may be particularly relevant in establishing purpose.

Conclusion

The key challenge for courts in implementing s. 46(1AA) will be to capture predatory pricing without reducing the incentives for legitimate competitive pricing. The purpose of the Act is to protect competition not competitors. By its nature, competitive conduct creates winners and losers. The purpose and duration of below-cost pricing are the key considerations in distinguishing between legitimate price discounting and anti-competitive predatory pricing under s. 46(1AA).

Ultimately the interpretation of the new concepts of sustained period and relevant cost, and how they relate to the question of purpose, will be matters to be determined by the courts. Until s. 46(1AA) is subject to judicial consideration, there is likely to be a degree of uncertainty surrounding the impact of this provision, especially on the retail petrol market.

That said, there is some scope for the ACCC to provide guidance on how this provision may operate in certain cases. For example, firms with a lower cost structure that price at a level above their own relevant cost, but below the relevant cost of a competitor, will not be acting in breach of s. 46(1AA). Moreover,

a retailer offering a weekend price special or occasionally reducing its prices to sell excess stocks of perishable goods is engaging in legitimate competitive conduct that should not be discouraged. On the other hand, suspicions could be raised if an established retailer facing the threat of entry discounts all or most of its products below its relevant costs day in and day out, for a period of, say, six months.

As discussed above, factors such as the duration of each episode of below-cost pricing, the timing of below-cost pricing, and the breadth of the products priced below cost are also likely to be relevant. However, as emphasised in this discussion, such assessments must necessarily be made on a case-by-case basis, incorporating the factors that are relevant in each.

14.2.3 Section 47 and third line forcing

Recent changes to s. 47 of the Act

As discussed in previously in this report, the ACCC's involvement with shopper docket arrangements in the past has arisen primarily from the possible application of the third line forcing provisions of the Act and the consequential receipt of third line forcing notifications.

Recent amendments to the third line forcing provisions of the Act will have a significant impact on the application of those provisions to shopper docket arrangements in the future.

Third line forcing and shopper docket arrangements

Third line forcing involves the supply of goods or services on condition that the purchaser acquires goods or services from a particular third party. Third line forcing is prohibited under ss. 47(6) and 47(7) of the Act.

In the case of shopper docket arrangements, third line forcing conduct may arise through the offer of discounted fuel on condition that the purchaser has acquired, for example, groceries or credit card services or liquor from a third party. The party at risk of engaging in third line forcing conduct is the party offering the discounted fuel.

The notification process

While prohibited under the exclusive dealing provisions of the Act, the Act also provides processes for obtaining immunity for parties proposing to engage in third line forcing conduct that is in the public interest.

One way in which parties may obtain immunity is to lodge a notification with the ACCC. Section 93 of the Act provides that a person who engages in, or proposes to engage in, conduct of a kind referred to in s. 47 may lodge a notification with the ACCC.

For a notification concerning third line forcing conduct, immunity from legal action begins 14 days after notification, provided the ACCC does not object in that period. The ACCC may at any stage remove the immunity provided by a third line forcing notification if it is satisfied that the likely benefit to the public from the notified conduct would not outweigh the likely detriment to the public resulting from the conduct.

As discussed earlier, since 1996 the ACCC has received over 800 third line forcing notifications about various forms of petrol shopper docket arrangements. These have included high-profile arrangements of Woolworths and Coles.

Recent changes to ss. 47(6) and 47(7) of the Act

Amendments to ss. 47(6) and 47(7) of the Act came into effect on 1 January 2007. Under the amended provisions, related companies proposing to engage in third line forcing conduct are effectively treated as a single entity. For example, where company A supplies a customer on condition that they also acquire goods or services from related company B, such conduct is no longer conduct of a kind described in ss. 47(6) or 47(7).

Under the amended s. 47(6):

> A corporation also engages in the practice of exclusive dealing if the corporation:
>
> (a) supplies, or offers to supply, goods or services;
>
> (b) supplies, or offers to supply, goods or services at a particular price or
>
> (c) gives or allows, or offers to give or allow, a discount, allowance, rebate or credit in relation to the supply or proposed supply of goods or services by the corporation;
>
> on the condition that the person to whom the corporation supplies or offers or proposes to supply the goods or services or, if that person is a body corporate, a body corporate related to that body corporate will acquire goods or services of a particular kind or description directly or indirectly from another person not being a body corporate related to the corporation.

Impact of amendments upon notifications

The amendments to the third line forcing provisions are relevant to the notification of third line forcing conduct, including shopper docket notifications.

In particular, from 1 January 2007, businesses are no longer eligible to notify arrangements concerning the forcing of products from a related company where such conduct is no longer conduct of a kind described in s. 47.

For notifications lodged before 1 January 2007, while they may remain in force, to the extent that the notified conduct no longer amounts to conduct of a kind described under s. 47, the notification does not provide protection.

Importantly, with or without notification, the ACCC will be limited in pursuing shopper docket arrangements involving the forcing of related company products through the newly amended third line forcing provisions of the Act. That is, shopper docket arrangements between related companies (including many of the supermarket arrangements) will no longer constitute a contravention of ss. 47(6) or 47(7) of the Act, and accordingly the ACCC will no longer be able to pursue such conduct with or without notification in place.

This is not to say that arrangements might not be considered under the other exclusive dealing provisions where appropriate, or other sections of the Act such as ss. 45 or 46 in specific circumstances. These provisions are likely to apply in only very limited circumstances.

To demonstrate the effect of the changes on shopper docket notifications, the Coles arrangements can assist. In July 2003 Eureka Operations Pty Ltd lodged a third line forcing notification concerning the offer of discount petrol to customers that had bought a specified value of products from companies within the Coles Myer group, which included Coles, Bi-Lo and Liquorland. Eureka Operations is a related company to the forced retailers. It is likely that such arrangements would no longer constitute third line forcing, in which case Eureka would be ineligible to notify such arrangements. While the notification may remain in force, it is unlikely to provide any ongoing protection. By the same token, the conduct is unable to be considered under the third line forcing provisions of the Act.

15 Measures to improve price transparency and competition

Measures adopted in Australia to improve price transparency and competition at the retail and wholesale levels of the petrol industry were explored during the inquiry. These measures included direct provision of price information by companies, such as Informed Sources, and regulatory measures introduced by governments. Some state governments have adopted regulatory measures to improve price transparency and competition at the retail or wholesale levels of the industry, outlined in chapter 6. At the retail level of the industry the Western Australian Government has adopted a scheme known as FuelWatch. FuelWatch involves advance price notification by service stations and a requirement to maintain prices at a constant level for a 24-hour period and publicising actual selling prices for petrol on a website and in the media.

At the wholesale level of the market Victoria and Western Australia have legislative requirements associated with terminal gate pricing. The OilCode, which is a Commonwealth measure under the Trade Practices Act, also requires the establishment of terminal gate prices.

This chapter discusses these measures to improve price transparency and competition at the retail and wholesale levels. Section 15.1 discusses measures to improve price transparency at the retail level and section 15.2 discusses the terminal gate pricing concept and its usefulness at the wholesale level of the market.

15.1 Measures to improve retail price transparency

15.1.1 Price transparency and petrol consumers

Price transparency can be described in terms of the costs in time and money for market participants to determine market prices, for transactions that will occur or have occurred. Where these costs are lower, the market has greater price transparency.

In general increased price transparency has benefits for consumers unless it significantly increases the risks of anti-competitive practices among sellers. The more price transparency allows sellers to react

more quickly than buyers to price movements the worse the situation is generally from a competition perspective, and vice versa. An OECD report discusses several cases where redressing price transparency favouring sellers over buyers was a target for competition authorities.[1] There are also some studies indicating increased price transparency can lead to increased price competition.[2] There is also a notable example where government-mandated increases in price transparency appeared to produce higher rather than lower prices in some intermediate markets for ready-mix concrete in Denmark, probably because they facilitated anti-competitive coordination among sellers.[3] These disparate outcomes suggest the importance of pre-existing and future market conditions in determining the likely impact of reforms increasing price transparency.

At a fundamental level a certain minimum amount of price transparency is needed for competition to exist. There would be little likelihood of sellers engaging in price competition if consumers could not reasonably compare prices.

As well as potentially increasing competition, enhanced price transparency can directly benefit consumers by reducing search costs.

Under certain conditions, particularly a sufficiently concentrated market, increased price transparency could increase the likelihood of conscious parallelism and anti-competitive coordination.

Conscious parallelism, while not illegal, can harm consumers. A seller raising its price will watch to see if other sellers follow. When sellers are speedily and precisely aware of price changes in the market the leader is taking a much smaller risk. The leader will quickly know if others have followed its lead or not. If other sellers do follow the lead they are able to do so quickly, and so the leader is 'out of the market' for more price sensitive buyers for a shorter period of time. If other sellers do not follow the lead then the leader can reverse its price rise more quickly when price transparency is higher. This reduced risk of leading price rises is exacerbated where sellers are better and more accurately informed than buyers.

Tacit or outright collusion is also made potentially easier by increased price transparency. This is because it makes it easier for cooperating firms to detect and eventually punish firms that deviate. In turn this makes it easier for anti-competitive coordination to survive for longer.

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1 Organisation for Economic Co-operation and Development, *Price transparency*. Best Practice Roundtables in Competition Policy No. 35, 11 September 2001. Examples mentioned there include: A European Union case featuring the United Kingdom tractor market (European Commission (1992) '92/157/EEC: Commission Decision of 17 February 1992 relating to a proceeding pursuant to Article 85 of the EEC Treaty IV/31.370 and 31.446 (UK Agricultural Tractor Registration Exchange)', Official Journal L 068, 13/03/1992, p. 0019-0033; European Court of First Instance (1994) Judgment of the Court of First Instance (Second Chamber) of 27 October 1994. Fiatagri UK Ltd and New Holland Ford Ltd. v. Commission of the European Communities. Case T-34/92 (European Court Reports 1994 page II-0905). Hungary's Office of Economic Competition has unsuccessfully opposed increased price transparency in the tobacco industry. An Italian Antitrust Authority 2000 case featured detailed information exchange among insurers in Italy. The Korean competition authority was unable to restrict apparent collusive behaviour in the Korean tyre industry where a very high level of price transparency was mandated. Although retail prices were posted they were not binding. This led to inflated posted prices giving a misleading appearance of discounts to consumers. The Swedish Competition Authority failed to stop the sharing of individual firm sale volumes in the Swedish retail petrol market. In the US the DOJ successfully brought a case against Airline Tariff Publishing Company, where information about fares and fare conditions were used in various forms of 'cheap talk' and collusive information exchanges (United States v. Airline Tariff Publishing, Civil Action No. 92-2854, (D.D.C. filed Dec. 21, 1992).

2 Dennis W Carlton, and Jeffrey M Perloff, *Modern Industrial Organization*, second edition (New York: Harper Collins College Publishers), 1994. Chapter 14, 'Information' reviews a 1974 Canadian experiment and US experience of government collection and dissemination of grocery price data leading to falling grocery prices.

3 Svend Albæk; Peter Møllgaard; Per B Overgaard, 'Government-assisted oligopoly coordination? A concrete case', *Journal of Industrial Economics*, Vol. 45, No. 4, 1997, pp. 429–43.

Where there is a concern that a market has a tendency to anti-competitive coordination, the nature of any proposed increase in price transparency needs to be carefully considered. An assessment of whether increased price transparency is likely to have anti-competitive effects relies on considering when both buyers and sellers learn about prices and the capacity of both buyers and sellers to react to price changes. Views expressed to the OECD support the idea that increased price transparency is unlikely to significantly increase the risk of anti-competitive coordination unless the affected markets are already particularly susceptible to such coordination.[4] In other words, some markets are at little risk of anti-competitive coordination even with an extremely high level of price transparency. For example, markets with low levels of concentration, large numbers of sellers and low barriers to entry are likely to be at less risk.

Enhanced price transparency is more likely to benefit consumers the more it is aimed at improving buyer information and options relative to seller information and options. The main evidence of price transparency for petrol consumers in Australia appears to be the prevalence of large headboard signage with each retailer proclaiming their current price. However, the existence of petrol price volatility and weekly cycles makes this prominent signage less of a sign of transparency than it would be in markets with more stable prices. This volatility makes it difficult to know how the signboard price will compare with other retailers in the area, or how it will compare with the same retailer later that day or week. Comparative current price level information is more important due to the high price volatility and is much more difficult for the consumer to get.

A key source of pricing information and a form of pricing commitment in many other markets is advertising. However, in Australia the volatility of the retail petrol price appears to forestall any retailers from advertising their prices beyond the signboards and some company internet sites. With petrol pricing practices inducing cycles and volatility so as to make price commitments and advertising impractical, many consumers are concerned with the search costs associated with retail petrol prices.

15.1.2 Exchange of price information between suppliers, Informed Sources

The direct exchange of price information between suppliers to improve price transparency deserves close scrutiny. The direct exchange of price information between suppliers is conducive to anti-competitive coordination, particularly in concentrated markets.

Informed Sources provides a centralised exchange of retail petrol pricing information. The role of Informed Sources raises particular concerns for the relative levels of price transparency between retailers and consumers in the retail petrol market in Australia. There is little doubt that the Informed Sources service provides an efficient way for petrol retailers to monitor each other's price levels and movements. The speedy electronic notification service has obvious cost efficiencies relative to each retailer driving their neighbourhood in search of price levels. However, this level of transparency is only available to those who subscribe to the Informed Sources service, primarily the refiner-marketers and supermarket chains. Equivalent information is not available to consumers. Activities enhancing transparency only among sellers are more of a concern than transparency enhancement among sellers and buyers.

The more price transparency allows sellers to react more quickly than buyers to price movements the worse the situation is from a competition perspective. This would appear to be the current situation in markets serviced by Informed Sources. It could also extend to a lesser extent in other markets where retailers inform themselves of rival's prices by driving around.

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4 Organisation for Economic Co-operation and Development, *Price transparency*. Best Practice Roundtables in Competition Policy No. 35, 11 September 2001, p. 10.

The direct exchange of prices by sellers alone allows a seller to lead the price up with reduced risk. If others do not respond the leader knows quickly and can reverse the price rise with little loss of price sensitive consumers. Direct exchange of prices by sellers also allows sellers to match rivals' price cuts faster than most petrol buyers can respond to the price decrease. This helps retailers retain customers that otherwise might have been wooed away by rivals' lower prices. If a retailer's competitors can immediately match any price decrease by the retailer, then that price decrease is less likely to allow the retailer to win over customers from competitors. Knowing this, retailers are more reluctant to decrease prices in search of greater sales than they otherwise would be. That would reduce incentives to compete on price and tend to harm buyers.

It is possible that subscription to Informed Sources affects who is likely to lead the price hiking and price discounting stages of price cycles. The risk in being a leader of a price cycle increase is likely to be reduced by subscribing to Informed Sources. As described previously this is because a firm leading the price up can watch carefully for any price matching response. If it does not occur the price leader can quite quickly return to the previous price level. A non-subscriber to Informed Sources leading the price up has a longer time before it gets feedback as to whether or not others have followed, by for example driving around. So it risks losing sales for longer with a price increase.

In terms of leading prices down a subscriber to Informed Sources has a decreased incentive as its actions are transparent to other subscribers, who can quickly follow the price lead down. This reduces the attractiveness of a price decrease for a subscriber to Informed Sources. However, a non-subscriber to Informed Sources leading the price down will have a longer window in which to steal business, as its rivals will not as quickly or reliably know of the price decrease.

The anti-competitive risks associated with the direct exchange of prices can be significantly reduced if the data exchanged is sufficiently aggregated and old. This makes it significantly less useful in terms of potential anti-competitive behaviour but it also becomes less useful for buyers when petrol price changes are relatively rapid. This is in contrast to the individualised and up-to-date price data circulated by Informed Sources. It is possible for direct exchanges of price information among suppliers to have some pro-competitive impacts. For example, these price information exchanges may allow improved decisions on capacity expansions or reductions in some markets. Increased price transparency could conceivably lower barriers to entry. If prices are more transparent to potential entrants they have a better chance of assessing incumbent and industry profitability. This should reduce the risk for new entrants leading to faster larger scale entry. The ACCC notes that these pro-competitive impacts appear to be less relevant for the petrol retailing market. In particular, evidence from Informed Sources suggests that the current subscribers to their price exchange have structured their data provision agreements to exclude this particular potential pro-competitive aspect:

> DR KING: There is a quid pro quo: If I don't provide you with data, no matter who I am I can't get any data?
>
> MR CADD: Let's be clear, one of the reasons why that is there is because the current subscribers would be careful to watch to make sure that an oil major who isn't currently present in this market could come along and buy pricing data and decide how they were going get into the market and why would they help a competitor with an easy break?[5]

In summary, Informed Sources circulates up-to-date individualised price data to its subscribers who are primarily refiner-marketers and the supermarket chains, data which is not available to consumers and other market participants. While the circulation of aggregated and older data would be less of a concern, the circulation of price data on a very frequent, or near real time basis, raises concerns that it

5 ACCC, public hearing transcript, Melbourne, 9 October 2007, p. 68.

could be promoting anti-competitive behaviour among the refiner-marketers and supermarket chains in the retail market.

15.1.3 Price transparency arrangements for consumers in Australia, WA FuelWatch

The *Petroleum Products Pricing Act 1983* (WA) (the PPP Act) was amended in December 2000, following the recommendations of a WA Parliament Select Committee report.[6] This amendment extended the Western Australian Government's price monitoring and control powers for wholesale and retail fuel prices. The Western Australian Government then introduced a comprehensive fuel price monitoring and reporting service in January 2001, known as FuelWatch. There currently are 584 service stations within the FuelWatch boundaries: 303 metropolitan sites and 281 regional sites.[7] The PPP Act applies to approximately 80 per cent of fuel retailers in WA.[8]

Price commitment and the WA FuelWatch arrangement

A key element introduced under FuelWatch was a form of retail pricing commitment, the 24-hour rule, which took effect from 2 January 2001.[9] Under these arrangements fuel retailers are required to notify DOCEP about their next day's fuel prices for ULP, PULP, Diesel, LPG, Ron 98 and biodiesel blends on a daily basis by 2 pm. Retailers must charge these notified prices from 6am the next day for 24 hours.

Prices for the following day are made publicly available on the FuelWatch website and through an automated telephone service after 2.30 pm, enabling consumers to plan their purchases and to find out what will be the cheapest price in their area. A feature of the 24-hour rule is that tomorrow's prices are widely available, by email, internet and mass media, by around 4 pm on the current day. This means that if prices are going up tomorrow, consumers have a window between 4 pm on the current day until 6 am the following day to purchase petrol at the lower prices.

The system allows WA motorists and retailers to be informed about fuel prices for the following day at service stations across the state, and to be assured that the prices will remain constant throughout the day.

The publication of petrol prices on the FuelWatch website and the reporting of prices in the media have increased price transparency for consumers in the market for petrol in Western Australia. This allows consumers to more easily identify where to buy the cheapest fuel. The inability to change prices on an intra-day basis then ensures that prices remain as advised on the FuelWatch website for a period of 24 hours, providing a window for consumers to purchase at that price.

Introducing price commitment, such as through a 24-hour rule, requires the reporting of future prices—future prices are set by retailers knowing they must stick with those prices for 24 hours. With the requirement to commit to prices for 24 hours, retailers are less able to simply lead prices up or signal a future price and then relatively quickly and cheaply return to a different price level. It requires sellers to carefully think about the risk of posting a price that leaves them out of the market for relatively price sensitive consumers for 24 hours. It raises the cost of pricing too high, in terms of lost sales to price sensitive consumers, relative to the case where there is complete pricing flexibility.

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6 Select Committee on Pricing of Petroleum Products, *Getting a fair deal for Western Australian motorists,* 12 October 2000.
7 DOCEP submission, p. 25.
8 ibid., p. 25.
9 The following descriptions of features of FuelWatch are drawn very closely from DOCEP submission, p. 25.

Price commitment also has the potential to reduce consumer search costs. Where prices are more stable, less work is required to maintain knowledge of prices, holding other things constant. To the extent that consumers prefer more stable price levels, fewer price changes may both reduce consumer search costs directly and have a psychological benefit to consumers. Survey results, media reports and submissions to the inquiry attest to the importance placed on price variability and price search costs in the Australian retail petrol market. Most motorists would appear to maintain at least a fairly good idea of petrol prices (appendix H, 1.5), to try and buy petrol when it is cheapest (appendix H, 1.6) and to be concerned with variations in price across a week or within a day (appendix H, 2.1). These are consistent with a high level of concern for petrol price levels and petrol price variability.

This concern with petrol price variability is further reflected in surveyed consumer preferences related to search costs. Particularly strong was the surveyed preference for the same price throughout the day, at 83 per cent (appendix H, 3.9). Also high was the surveyed preference for the same price throughout the day even if it meant any weekly cycle was less regular, at 63 per cent (appendix H, 3.10). This result indicates the level of disenchantment encountered by motorists over the relatively high search costs implied by intra-day price variations.

Intra-day price variations are an important negative consideration for consumers. However the actual current price level tended to engender an even greater concern than intra-day price movements, in general, among surveyed motorists (appendix H, 2.1). This is also supported somewhat by the stated preferences among motorists who generally preferred no intra-day price movements (appendix H, 3.11). Here the majority still had a preference for slightly lower prices, even if it meant intra-day price variability. Still a significant proportion of the overall sample of surveyed motorists—33 per cent—indicated a preference for no intra-day price variation even if it meant a slightly higher average price (appendix H, 3.11).

To summarise, most surveyed motorists are concerned about intra-day price variability. There is an even greater reported level of concern with the price level. In terms of what they would trade off for eliminating intra-day price variability, most surveyed motorists would prefer no intra-day price variability even if it decreased weekly price cycle predictability. There is also a sizable minority that would appear to be willing to face higher average prices if it meant the elimination of intra-day price variability. These results appear to reflect the high search costs and consumer angst associated with intra-day price variability.

General views of participants in the inquiry on FuelWatch

FuelWatch was considered at length during the inquiry. Other inquiries and the ACCC have previously considered FuelWatch. Various reports have commented that it appeared inappropriate to introduce FuelWatch type schemes into markets such as the Northern Territory and Queensland, have expressed concern about the effects of FuelWatch on competition, or have queried the benefits of FuelWatch.[10] Early in the course of this inquiry it became apparent that views on the effects of FuelWatch on the WA market were divergent.

10 Northern Territory Government, *Inquiry into fuel prices in the Northern Territory*, May 2005, p. 15; Legislative Assembly of Queensland, *Inquiry into petrol pricing in Queensland*, April 2006, p. 136, para 693; Senate Standing Committee on Economics, *Petrol prices in Australia*, December 2006, p. 32 para 3.52-3.53.

The administrator of the FuelWatch program, Western Australia's Department of Consumer and Employment Protection (DOCEP), indicated Perth has been the cheapest capital city for unleaded petrol for the past few years and that price transparency was a critical element in placing downward competitive pressure on price levels.[11] DOCEP considers that under FuelWatch regulation:

> ... Perth has become the most competitive market for petrol in Australia.[12]

RACWA supports the scheme and recommends its adoption on a national level.[13]

The AAA considers that the availability of transparent price information is an important part of an open and competitive market.[14] DOCEP considers that the availability of information about petrol prices through FuelWatch and the media encourages retailers to offer lower prices to gain sales.[15] As a result, DOCEP suggests that prices in Perth net of subsidies have been lower than for the eastern capitals from 2004.[16]

Refiner-marketers consider that the WA FuelWatch regulation is problematic because it prevents intra-day discounting.[17] Caltex states that in other metropolitan areas in Australia, consumers benefit from intense competition in markets in which retailers continuously discount fuel to respond to local competition, until the discounting can no longer be sustained and prices return to a profitable level. It considers that this cannot happen as effectively in Perth. [18]

Refiner-marketers contend that the 24-hour rule's limit on intra-day price movements leads to a lessening of competition in the market. Coles considers it a bizarre situation to limit the ability of retailers to respond to their competitors by selling fuel to motorists at lower prices. It considers that WA motorists are arguably missing out on lower prices generated by vigorous intra-day price competition that would otherwise occur.[19] They also suggest the WA regulation reduces competition between fuel retailers.[20]

Woolworths considers that the WA system has had the anti-competitive effect of not allowing price competition through the ability to adjust prices on an intra-day basis.[21]

Caltex also opposed the idea of rules limiting price movements:

> Caltex as a matter of principle is opposed to any regulation that lessens competition so remains strongly opposed to any rules that limit wholesale or retail price movements.[22]

Mobil suggested that petrol prices in Australia are already 'highly visible and transparent to the consumer.'[23]

BP does not particularly support the FuelWatch arrangement.[24]

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11 ACCC, public hearing transcript, Perth, 28 August 2007, p. 5, p. 24.
12 ibid., p. 28.
13 ibid., p. 62.
14 Australian Automobile Association submission, p. 1.
15 DOCEP submission, p. 25.
16 ibid., p. 27–9.
17 Caltex submission, p.98; ACCC, public hearing transcript, Melbourne, 5 September 2007, p.69; BP submission, p. 38.
18 Caltex submission, p. 97.
19 Coles submission, p. 6.
20 ibid., p. 10.
21 Woolworths submission, p. 10.
22 Caltex submission, p. 98.
23 Mobil submission, p. 11.
24 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 69.

Gull Petroleum suggested that FuelWatch has harmed the competitive position of independents as it allows large operators to adopt a strategy of rolling price leaders.[25] Media reports of FuelWatch price information highlight retail stations with the lowest prices. This provides an opportunity for larger competitors with bigger networks of retailers to have rolling price leaders in the market, with different stations under the same banner being publicised as the cheapest for a region or suburb at different times. Operators with smaller networks are less able to employ this pricing strategy placing these retailers at a competitive disadvantage in the market.

It should also be noted that evidence from the industry was not uniformly negative. One witness testified that FuelWatch had made it easier to read the market at almost no cost to the business as the cost was being borne by the taxpayer.

DOCEP noted that since 2001, the absolute number of independent, branded independent and independent chain owned sites has decreased in Perth.[26] However, the proportion of sites operated by independent operators and supermarkets has increased.

Given the divergent views expressed to the inquiry on the benefits and costs of the WA FuelWatch arrangements the ACCC undertook its own preliminary analysis of price transparency measures at the retail level. FuelWatch combines both increased price information and pricing commitment through the 24-hour rule. A number of disparate views have been put to the inquiry regarding its effects on competition, price levels, price cycles, consumer search costs and consumer psychological wellbeing. In the following sections a theoretical assessment of each item is followed by the views of submissions then a preliminary analysis of what has actually happened. In most cases the expectations and analyses discussed are limited to the Perth metropolitan market.

Effect on competition and price levels

The 24-hour rule forces firms to simultaneously determine their own prices for the next day. Therefore individual firms face a challenge in gauging a competitive price of their own. The pricing decision may depend on the actual degree of competition in the market. Deeper price discounting may be adopted in an already more competitive market.

DOCEP suggest that the availability of information about petrol prices through FuelWatch and the media places downward pressure on petrol prices in the Western Australian market.[27] DOCEP suggest that FuelWatch has led to a trend of lower prices in Perth compared to other capital cities.[28] They also present some quantitative assessment of price levels net of subsidies in Perth versus the eastern capitals, finding that Perth's relative prices have been lower since 2003.[29]

Informed Sources said they had performed an analysis of the average price in Perth before and after the introduction of FuelWatch, at the time of the introduction of FuelWatch. They said this analysis indicated that the introduction of the FuelWatch process in Western Australia increased petrol prices in Western Australia by an average of 1c to 1.5c per litre.[30]

25 ACCC, public hearing transcript, Perth, 28 August 2007, p. 56.
26 DOCEP submission, p. 8.
27 ibid., p. 25.
28 ACCC, public hearing transcript, Perth, 28 August 2007, p. 22.
29 DOCEP submission, pp. 27–9.
30 ACCC, public hearing transcript, Melbourne, 9 October 2007, pp. 60–2.

Econometric analysis

The ACCC undertook an econometric analysis of the relative price levels between Perth and the eastern capitals before and after the introduction of FuelWatch. Appendix S provides more details.

The analysis examined the relative price levels between Perth and the average of the eastern capitals. This was assessed using a price margin obtained by taking the average posted retail price and removing elements that would be beyond the scope of FuelWatch to affect. So the price margin is the retail price excluding lagged refined petrol costs (Singapore Mogas95), net taxes and subsidies and indicative fuel quality premiums.

The main finding from this econometric analysis is that the average of the price margin reduced by a statistically significant amount for Perth relative to the eastern capitals in the time since the introduction of FuelWatch. The relevant weekly average price margin was around 1.9 cpl less on average for the period from January 2001 to June 2007 than for the period from August 1998 to December 2000.

These results are robust to using monthly averages rather than weekly averages. This reduces further any influence of weekly price cycles. A decrease of around 1.9 cpl on average is indicated using monthly averages. The results are also robust to using the low points of the week's prices rather than simple weekly average prices. Here the indicative decrease was smaller at around 0.9 cpl on average.

These results have important caveats discussed at 'Limitations of the price level analysis conducted' and in the econometric appendix.

Effect on price cycles

The ACCC notes that the recommendations leading to the FuelWatch arrangements do not appear to be specifically aimed at eliminating price cycles but more generally at helping to prevent wild price fluctuations.[31]

In a reasonably competitive market the introduction of the 24-hour rule and the accompanying increased transparency could lead to price cycles of smaller amplitude and longer duration. They could become less extreme.

The inability for firms to change their intra-day prices implies that the short-term losses from leading the price cycle up are greater. The price leader will lose a significant portion of its more price sensitive sales on the day it leads price up and run the risk of further losing market share if other market participants do not follow suit on the second day of the cycle. Consequently a price leader might be expected to choose to lead the price up by a smaller size to limit lost sales volumes.

However, a retailer that has a greater market share of price insensitive consumers, say through a large share of Fuelcard users, might be more willing to lead the market up regardless of increased price transparency.

The submission from DOCEP points out that data for the period October to December 2004 shows that a price leader maximised its gross profit on the days of higher prices, including the day of leading prices up.[32]

31 Select Committee on Pricing of Petroleum Products, *Getting a fair deal for Western Australian motorists,* 12 October 2000, pp. 28–9.
32 DOCEP, supplementary statement, August 2007, p. 5.

The inability for firms to change their intra-day prices might also be expected to decrease the pace of individual retailers undercutting each other, although this is less clear. Without a 24-hour commitment any undershooting on the price decline can be quickly corrected. However under a 24-hour pricing commitment retailers can only make a single decrease per day. They may become more conservative and wish to avoid undercutting more than they have to. They may try to undercut by as little as possible while still undercutting some competitors. This would maximise their margin per sale on the day. It would also result in a slower decline in price. Other things being equal, it may take a longer time for prices to reach the trough of a cycle.

Reported outcomes

Coles suggests that the WA regulations do not prevent price cycles but that the cycles tend to be smaller in amplitude.[33] BP considers that the laws have not had their intended effect of eliminating price cycles, but rather have changed the pattern of discounting to a 'disjointed, staccato approach.'[34] BP considers that the Perth price cycles tend to be smaller in amplitude relative to eastern states at times, although not necessarily as a result of FuelWatch:

> MR MARKS: All right. Can I ask you, then, about the amplitude of the cycle in Perth, just before I leave this topic. Is there anything you want to tell me about that? Has the amplitude of the Perth cycle been impacted on, do you think, by the legislation or is there nothing peculiar about it?
>
> MR DAVIDSON: No, I don't think the legislation in itself has actually had any material effect on it.
>
> ...
>
> MR MARKS: Is it right, then, to say that the amplitude of the Perth cycle is typical of the other states?
>
> MR DAVIDSON: No, I think at times the data has shown that the amplitude of the Perth cycle is perhaps a little lower than what it has been in some other states at some times.[35]

The inquiry heard evidence suggesting that FuelWatch appeared to have brought about a fortnightly price cycle in Perth that had been in place for the last two years after a period of more erratic cycles.

DOCEP also submitted that price cycles in Perth are generally longer at around 14 days duration compared with 7 days for the eastern states.[36]

ACCC analysis

The expectations reported previously suggest that price cycles in a market with a 24-hour price commitment rule and good price transparency would become longer and of smaller amplitude. However, without a robust model explaining the existence and features of price cycles it is difficult to assess any effects. ACCC analysis of the actual experience of price cycles in Perth indicate that material changes in cycle characteristics only took place a considerable time after the introduction of the 24-hour rule in January 2001.

Cycle duration

Price data show that the annual average durations of price cycles between January 2001 and August 2005 in Perth are only slightly longer than for the other four cities. Around the time the 24-hour rule was introduced (January 2001) and when Coles entered the Perth market (March 2004), the average price cycle duration extended slightly and became less uniform in duration than at other times. On both occasions, the cycles settled down into more stable pattern of more regular weekly cycles after several

33 Coles submission, p. 6.
34 BP submission, p. 38.
35 ACCC, public hearing transcript, Melbourne, 5 September 2007, p. 71.
36 DOCEP submission, p. 28.

months. There was no price cycle during September 2005 to December 2005. Since January 2006 Perth has moved to roughly 14-day price cycles.

The move to a 14-day cycle occurred five years after the introduction of FuelWatch. It is difficult to believe that this change in duration is simply a result of FuelWatch.

Cycle amplitude

Cycle amplitudes might have been expected to decrease with the introduction of FuelWatch. Price data does indicate a small decrease in the annual average amplitude for Perth from 2000 to 2001, when the other capitals all recorded increases (table 11.2). The price data also indicates that the annual average amplitude of price cycles in Perth decreased more strongly from 2004 (table 11.2). The amplitude of the price cycles in the eastern capitals also tended to decrease from around this time, but not as significantly as in Perth. In any event, 2004 was a significant period of time after the introduction of FuelWatch. This later reduction in price cycles amplitude seems to be more broadly aligned with the entry of the supermarkets. 2004 saw the entry of Coles into the Perth retail market. Again, without a robust model explaining the existence and features of price cycles it is difficult to assess these findings.

Effect on consumer search costs and angst

The publication of petrol prices on the FuelWatch website and the reporting of prices in the media have increased price transparency for consumers in the retail petrol market in Western Australia. FuelWatch allows consumers to more readily identify where to buy the cheapest fuel. The inability to change prices on an intra-day basis then ensures that prices remain as advised on the FuelWatch website for 24 hours. A 2006 independent consumer survey commissioned by DOCEP in Western Australia indicated that up to 86 per cent of people use the petrol pricing information provided by FuelWatch to aid their petrol purchasing decisions.[37] The inquiry heard that the survey also indicated that a large portion of consumers satisfied with FuelWatch felt that way because the FuelWatch service 'states the best price and the best deal'. This sentiment and other reported sources of satisfaction appear directly related to search costs.

This is backed up to a large extent by the inquiry's independent ANOP consumer survey. Perth motorists were found to be much less dependent on petrol station signboards and much more likely to be informed by FuelWatch, either directly or through mass media outlets, which in turn are informed by FuelWatch (appendix H, 5.1).

The preceding econometric evidence suggests that a broad measure of Perth margins has decreased on average relative to the eastern capitals since that time. However, motorist perceptions are probably driven more by current headline prices than by decreases in relative measures of margin. Headline prices have generally risen for both Perth and the eastern capitals since the introduction of FuelWatch. Perth's headline price remains distinctly above that for Brisbane due to the Queensland state government subsidy. There is a similar though much smaller effect due to subsidy arrangements in Melbourne. Perth's headline price is also probably inflated slightly relative to the eastern capitals by the somewhat different fuel quality standard applying in WA.

The current level of petrol prices concerns surveyed Perth motorists at least as much as it does surveyed motorists from the eastern capitals (appendix H, 2.2). Despite any decrease in Perth margins relative to the eastern capitals, Perth motorists appear to remain at least as concerned with the absolute level of petrol prices as their eastern capitals counterparts.

37 DOCEP submission, p. 27.

15.1.4 Other price transparency arrangements in Australia

The two price transparency arrangements garnering the most commentary during the inquiry were Informed Sources and the WA FuelWatch scheme. These two arrangements are discussed and assessed in greater detail in the preceding sections. In this section we provide a brief overview of some of the other arrangements noted.

Motormouth

Motormouth is a free service provided by a subsidiary of Informed Sources. Motormouth does not have access to the data supplied by the subscribers to the Informed Sources electronic service. Instead Motormouth uses limited data collected independently by Informed Sources itself, primarily by driving around and noting signboard prices. The prices are generally collected 1-2 times a day. The information is available on the Motormouth website, through an email service and a relatively little used SMS service.[38] Regular Informed Sources subscribers would have access to this pricing information. However, as noted, Motormouth does not use the data provided by its regular Informed Sources subscribers for the Motormouth service. Informed Sources said there was no interest from its subscribers in providing the subscription pricing data, even on delay, to the motoring public.[39]

FUELtrac

FUELtrac collects and provides aggregated historical information on retail petrol prices. Generally its price information is not suited to detailed price comparisons by consumers of petrol price offerings by retailers. Some of its data is provided for free through the AAA website.

ACCC website

The ACCC website contains information for consumers on petrol prices in the five largest metropolitan cities. The website provides regularly updated data on:

- average daily retail petrol prices over the past 30 days
    - this enables consumers to see how average prices have been moving in the last month, the peaks and troughs, and where the current day is placed in terms of the pattern of price cycles in their city
    - this data is updated daily
- the days of the week on which prices were at the bottom and top of the price cycles in the previous four months
    - this provides an indication of when might be the best days of the week on which to buy petrol
    - this data is updated monthly
- the length of price cycles (in terms of the number of days from trough to the next trough) in the previous four months
    - this informs consumers about how long price cycles have tended to last
    - this data is updated monthly.

38 ACCC, public hearing transcript, Melbourne, 9 October 2007, p. 30–31.
39 ACCC, public hearing transcript, Melbourne, 9 October 2007, p. 27–29.

This provides some helpful recent history about petrol price levels and cycles for consumers in these cities. As with FuelTrac and Motormouth its price information is generally not suited to detailed price comparisons by consumers of real time petrol price offerings by retailers. Although the ACCC has access to some more detailed data, it is currently constrained by contractual agreements as to what data it can freely place on its website.

Also on the website is:

- A chart showing how movements in retail unleaded petrol prices in Australia compare with movements in Singapore Mogas95 unleaded prices over the last three months.

The website also provides information on petrol issues generally and also has links to other websites with information on petrol prices and petrol pricing issues.

Voluntary consumer reporting

There is some provision of voluntary consumer sourced pricing information in Australia. For example some radio stations broadcast pricing information relayed from consumers. A larger scale overseas example is Gas Buddy, operating in the United States and Canada. Gas Buddy provides consumers with an incentive to report pricing information by awarding participants points for reporting petrol prices on the Gas Buddy website. The accumulation of points entitles consumers to free petrol and other prizes.

15.1.5 Relative imbalance in price transparency between buyers and sellers

There is currently an imbalance in pricing transparency between buyers and sellers of petrol. This current imbalance in price transparency allows sellers to react more quickly than buyers to price movements, with likely negative effects from a competition and consumer search cost perspective. The issue then is whether the government should consider options to redress this imbalance, both for the potential to increase competitive intensity and the potential to reduce consumer search costs and angst. The ACCC considered that the main options available to redress this imbalance are:

- reducing the potential for price information sharing arrangements among suppliers
- adopting increased pricing information and price commitment rules—a national FuelWatch scheme
- expanding the availability of pricing information to consumers either through Informed Sources or through the ACCC.

Option: Reduce the potential for price information sharing arrangements among competitors

In the petrol context, it is the Informed Sources service where there is very frequent, or near real time, exchange of information between the refiner-marketers and supermarket chains that is of particular potential concern. Highly concentrated petrol markets share many of the features of markets where price co-ordination is likely to be easier and profitable. On the demand side petrol is largely homogeneous, purchases are relatively frequent, and demand is largely stable. On the supply side there tends to be relatively few refineries supplying the market, with large symmetric costs. This often leaves them in a position to match price movements without any underlying understanding to do so. There is therefore a case for removing such mechanisms from the market unless they deliver a net public benefit.

Option: Adopt price commitment rules—a national FuelWatch scheme

The discussion above related to an assessment of the measures to increase transparency of retail petrol prices that have been adopted in Western Australia. There are a number of issues which need to be considered in assessing whether a national arrangement for increased price transparency through increased price information and price commitment rules, such as a FuelWatch scheme, should be adopted. The key issues to consider:

- limitations in the analysis already undertaken that might influence the direction of a recommendation
- the effect of a price commitment arrangement on independents
- whether regional and country markets are sufficiently competitive to benefit from increased price transparency
- the effect of FuelWatch on price cycles and therefore some consumers' ability to predict the days of the week when prices are likely to be relatively low
- the dependence on the media to realise the full benefits of a FuelWatch scheme
- administrative and compliance costs associated with a national scheme.

These are discussed more fully in the following sections.

Limitations of the price level analysis conducted

The key pricing level analysis uses a measure for Perth relative to the eastern capitals average. This allows many items that could be assumed to be relatively common to Australia as a whole, to be implicitly ignored. The measure explicitly allows for lagged Mogas, net taxes and changes in indicative fuel standard premiums.

The fuel standard premiums used are as reported by refiners. WA has had generally stricter fuel standards although the gap in reported premiums between WA and the eastern states has decreased over time. However, the results are robust even allowing for the exclusion of fuel standard premiums.

Two other specific factors have been identified as potentially problematic: transport and port charges. These have not been explicitly modelled. To the extent that imports are a constraint on pricing, the costs of transport and port charges could affect the econometric analysis. Any impact from transport or port charges is likely to be small as it would need to entail a significant change in the relativity between Perth and the other capitals, not simply a change in the level for Perth.

Of potentially greater concern is the possibility that something else entirely has driven the improvement in the relative Perth price margin situation. For example, has Perth's relatively high recent growth and resulting larger market made it more competitive anyhow? Note that the issue here is whether Perth's relative growth rate has been enough to do this, not just its absolute growth rate, as the eastern capitals have grown over this period as well.

Even with these potential concerns it appears highly unlikely that relative price margin has increased in Perth since the launch of FuelWatch. Although some sellers enjoyed increased price transparency, such as those not formerly covered by Informed Sources, buyers as a whole have enjoyed much increased price transparency.

The effect of a price commitment arrangement on independents

Another potential concern is if FuelWatch type arrangements contribute to a reduction in the number of independent service stations, holding other things constant. The arrangements may contribute by allowing large operators to adopt a strategy of rolling price leaders.[40] In effect larger competitors appear to have greater opportunities to use media reports of FuelWatch price information that highlight retail stations with the lowest prices. Measures that could have a tendency to lead to a long-term reduction in independent numbers may in turn lead to a long-term reduction in competitive intensity. It is difficult to isolate what effect FuelWatch alone has on the viability of independents and what, if any, influence that is having on pricing levels.

Effects on regional and country areas

The analysis by the ACCC to date has been confined to capital cities and it is not clear that a price transparency scheme, such as the FuelWatch scheme, would have beneficial effects in other areas. A potential concern is that in less competitive markets a FuelWatch type of scheme could lead to higher prices through anti-competitive effects. As a result further analysis of the effect of the WA FuelWatch scheme on regional and country areas is warranted. If it is concluded that a FuelWatch type scheme is unlikely to lead to lower prices in regional and country areas and has a potential to increase prices in these areas, then the scope of a national FuelWatch scheme would have to be considered. This concern may be particularly important given that in regional and country areas the current Informed Sources service is much less developed than for metropolitan areas. This means that a move to a FuelWatch type of arrangements would not only be giving extra information to buyers, it would also be increasing the amount and type of information available to regional and country retailers.

It is also less clear to what extent FuelWatch has reduced consumer angst over search costs in rural and regional areas. The larger distances and sparser competition in these areas may still leave rural and regional consumers with dissatisfaction over their ability to take advantage of any increase in pricing information

Potential reduced predictability of price cycles.

In the eastern states the regularity of price cycles means that many consumers have been accustomed to knowing the days of the week when price are likely to be at their lowest. The adoption of a FuelWatch type of arrangement may lead to less regular price cycles, and as a result less predictable pricing patterns by day of the week in eastern states' capital cities. As a result the benefit in reduced search costs from restricting intra-day price movements may be offset by less certainty associated with reduced predictability of prices on a day of the week basis. It could be that consumers are affected differently by these changes. Some consumers may place a high value on being able to access information on the internet and through the media, while other consumers may place greater value on organising their purchases by day of the week rules of thumb.

Despite this potential concern, a majority of surveyed motorists were willing to lose some predictability in weekly cycles in exchange for reduced intra-day price variability (appendix H, 3.10). Additionally the price cycle shift that occurred in Perth was five years after the introduction of FuelWatch. It is difficult to say what effect a national FuelWatch scheme would have on price cycles.

40 ACCC, public hearing transcript, Perth, 28 August 2007, p. 56.

Dependence on the media to realise the full benefits of a FuelWatch scheme

It is clear that mass media have played a significant part in the realisation of some of the benefits of the FuelWatch scheme. For example, radio and TV both give significant air time to petrol price notifications, including the cheapest sites around the city and the beginning of new price cycles. These media sources are notable sources of information for Perth motorists (appendix H, 5.2), augmenting the pricing information available through the FuelWatch website and emails.

To receive these media benefits any national system would need to be a reliable supplier of information to the media. This highlights the importance of the robustness of the IT set up for any national scheme. It also suggests some human resource commitment in the form of media liaison, possibly at both the state and local media level, to maintain responsiveness.

It appears that FuelWatch continues to enhance the pricing information available to consumers. However, it may be that some aspects of the anticipated competitive pressure have decreased. For example, the leader of the price hike at the start of each new price cycle is announced on the FuelWatch website and through emails. This is in turn relayed and repeated by various mass media outlets. Despite the apparent negative publicity associated with being the price hike leader, BP has led the price cycle hike almost every time since the start of 2006—it is plausible that the negative publicity for BP from doing this has decreased over time.

Administrative burden of a national FuelWatch scheme

A national FuelWatch scheme could not readily be introduced and withdrawn. It would need national legislation to be enacted. Any future removal of the scheme would then require further legislation. This implies that very careful consideration should be given to the introduction of a national FuelWatch scheme.

Ensuring compliance with a national scheme would require significant new resources. For example, under the current WA FuelWatch scheme all metropolitan retail sites are checked twice per year to ensure compliance.[41] In 2006–07, 144 complaints were received from motorists about retailers selling fuel at other than the notified price. Each potential breach of the regulations required investigation and the imposition of sanctions where warranted.[42]

Since 2001 there have been 46 infringement notices issued to retailers for selling at other than their notified price. Some retailers have been prosecuted following repeated infringements. There have been prosecutions for selling at a price higher than the notified price. There has also been a prosecution for selling at a price lower than the notified price. This engendered considerable media interest. At first glance this would seem to represent an apparent disconnect with the aims of a consumer organisation. However, allowing this kind of behaviour would mean retailers could notify a very high price, survey the competition and then reset prices. It would effectively be allowing the circumvention of the 24-hour rule and the price commitment it entails.

The administrative burden will vary to some extent with the number and types of fuels covered by any scheme. Currently WA FuelWatch covers unleaded petrol (ULP), premium unleaded petrol (PULP), diesel, liquefied petroleum gas (LPG), RON98 and bio-diesel blends. The future potential proliferation of petrol products could increase the demand for coverage of more products and the complexity of administration and the costs of the administration.

41 DOCEP submission, p. 26.
42 ibid.

With the large number of sites implied by a national scheme there is likely to be a number of inadvertent errors by petrol retailers and consumers. Designing and maintaining any system to receive and process the information efficiently is likely to be important. Incorporating bulk uploads of pricing information from retailer groups wherever possible should assist in reducing, but not eliminating, occasional inadvertent pricing errors.

System design should also incorporate the notification of out of stock situations. Again this is aimed at improving consumer outcomes, as notification of cheaper prices is less valuable if the supplier has run out of stock.

Consultation with DOCEP suggests that they may receive more inquiries from the public under FuelWatch than under previous arrangements. However under FuelWatch there is more and better information to address these inquiries.

The ACCC's analysis of the WA FuelWatch arrangements was not able to get an assessment of the costs of administration of the scheme. However, a national FuelWatch program would involve significant additional administrative costs for government. The ongoing commitment to a national FuelWatch scheme in the medium to long term and the sustainability of such a commitment would need to be assessed.

Other options

Expand the availability of pricing information to consumers through Informed Sources

This option would involve making all Informed Sources information publicly available on a website. It also involves making the information more complete by including all petrol retailers.

For this option to be commercially viable the current subscribers would need to be convinced to allow a commercial organisation, such as Informed Sources, to provide the information they provide to Informed Sources to motorists. Informed Sources could provide the information that they obtain from their subscribers as well as their own survey data in a service to motorists either on a website, by email or by SMS message. To be commercially viable this would rely on current subscribers continuing to subscribe to Informed Sources, other industry participants currently not subscribing having an incentive to subscribe and the potential for Informed Sources to charge someone or consumers generally for the provision of its consumer information service.

This option would allow consumers to have access to the same pricing information that the current Informed Sources subscribers have. It would increase the overall information available to consumers relative to what is available to them at the moment. It would decrease one element of the consumer search costs for petrol prices—the ability to look on the internet and compare prices of all retailers would provide a close to real time price comparison that is currently not available to consumers.

Direct government regulation could achieve increased transparency through the requirement of real time provision of petrol prices by retailers over the internet, as also suggested by Gans.[43] This would allow consumers to observe prices at different outlets without having to travel to each outlet to gain this information. Information would be made available through the internet and mobile phones. Increasing the information for even some consumers would be expected to have an impact on the behaviour of these consumers and hence affect petrol prices.

43 This idea was also suggested by Joshua Gans, CoRE Research, supplementary submission, p. 1.

This concept would certainly increase the amount of information available to consumers. However, it would appear that the benefit of this would be reduced without some form of price commitment or a reduction in the apparent volatility in petrol prices. Eventual integration into in-car GPS systems may change this aspect, reducing the need for price commitment by allowing motorists to obtain a genuine, real time, in-car, display of pricing information.

However, it appears that with current technology this option improves information available to consumers but does not much improve the ability of consumers to take advantage of these posted prices. This is because it does not address the variability of petrol prices. In particular it does not address the issue where a consumer can 'know' what prices are available and yet a relatively short time later that price information can be outdated.

The effect of this option on the willingness of retailers to lead price cuts is problematic. Currently non-subscribers to Informed Sources have a longer window than subscribers in which to gain any sales volume benefits accruing from price undercutting. This is because under the Informed Sources arrangement any price cut is quickly known to all other retailers, who then have the opportunity to match the cut. Subscribers to Informed Sources have less incentive to cut prices. Current non-subscribers could undercut their rivals and have a larger window before competitors respond. This larger window increases the incentive to cut prices.

Expand the availability of pricing information to consumers through the ACCC

This option would also involve making Informed Sources style pricing information publicly available on a website. However, this option entails legislation to allow the ACCC to administer the pricing information collection and dissemination. This option implicitly assumes that private provision of the pricing information to the public is unlikely to proceed and that public provision of the information is needed to obtain any of the benefits. This might be because current subscribers prove to be unwilling to allow their pricing information to be forwarded to consumers, other retailers are unwilling to pay the cost of providing the information to Informed Sources or consumers are unwilling to pay enough to cover the costs for the information.

As with the option to expand the availability of pricing information to consumers through Informed Sources there are some potential issues. While increasing the amount of information available to consumers, the reduction in consumer search costs is limited without some form of price commitment or a reduction in the apparent volatility in petrol prices. The effect of this option on the willingness of retailers to lead price cuts remains similarly problematic, as any attempt to cut prices would be quickly known and responded to by competitors. This reduces the incentive to cut the price in the first place.

Although administered by the ACCC, this option need not have the ACCC performing the actual service delivery. Private provision under public funding would be an option. Establishing the preferred delivery mechanism is beyond the scope of this inquiry.

Conclusions on options for increasing retail price transparency

The ACCC is concerned about the effect on competition in the retail market of the direct exchange of retail price information on a near real time basis between the limited numbers of subscribers to Informed Sources.

During the inquiry the ACCC has explored in depth the WA FuelWatch arrangements and has considered the issues involved in adopting on a national basis a price commitment approach, such as the WA FuelWatch scheme. Analysis of pricing results in Perth indicates that there has been some

reduction in average price margins relative to the eastern capitals in the time following the introduction of FuelWatch. However, the preceding discussion also indicates that there are a number of issues that would need to be considered before a national FuelWatch scheme could be contemplated. There are factors that could potentially reduce the benefits from adopting a scheme, such as the limitations of the price level analysis performed, the extra potential harmful effects for rural and regional areas where there is less competition, the potential to affect the presence and influence of independents and the potential for a reduction in the predictability of price cycles for consumers who have adapted to them. The administrative costs of such a scheme are likely to be significant. The dependence on the media for the full benefits to be realised and the associated administrative burden for such a scheme are key factors that may mean the costs are higher than anticipated.

Assessing any system in the style of FuelWatch that incorporates increased price information and price commitment requires great care due to the potential for anti-competitive as well as pro-competitive benefits. Although the inquiry gained a preliminary assessment of the impacts in Perth from the scheme, it is clear that a case–by-case approach is required to assess the potential impacts on competition of any similar scheme. In particular the ACCC has not analysed the application of such a scheme to rural and regional areas. Apparent extra considerations here include the increased potential for anti-competitive effects due to the more concentrated nature of the market, the extra cost in initialisation, administration and compliance and how to decide which areas to cover. In summary, there are potential benefits and potential costs of adopting a national price commitment arrangement that need to be carefully considered.

The other options to increase price transparency have only briefly been considered in the time available for the inquiry.

15.2 Measures to improve wholesale price transparency

15.2.1 Terminal gate prices

As discussed in chapters 6 and 8 there are various requirements at both Commonwealth and some state levels relating to terminal gate prices. At the Commonwealth level—through Oilcode—there is a requirement for wholesalers to publish daily a TGP (terminal gate price) and to give purchasers the option to buy fuel at the TGP. Under the legislated terminal gate pricing arrangements in Victoria and Western Australia there is a requirement for wholesalers to publish daily a TGP and to base sales on that TGP (however, discounts are allowed off the posted TGP).

The TGP is essentially a spot price that a purchaser who arrives at a wholesalers' terminal with a truck could expect to pay for a bulk purchase of wholesale petrol. However, few sales are made at those posted prices. This raises the issue of the relevance of the TGP. This issue is addressed below.

15.2.2 Sales at the posted TGP

Significant evidence was provided to the inquiry that there are few sales made at the wholesale level at posted TGPs.

BP in its submission noted that:

> Over recent years, all sales made on the basis of TGP have been under contracts (i.e. there have been no spot deals).[44]

Caltex in its submission stated that: 'Very few sales are made at TGP'[45]

The Motor Trades Association of Queensland commented:

> It can be stated categorically that small volume independents are unable to purchase fuel at the published terminal gate price.[46]

The Motor Trades Association of Australia commented at the public hearing in Canberra on 21 August 2007 that:

> The so called terminal gate price that's posted is not the price that we either pay or presumably the supermarkets pay.[47]

However, evidence was received that some purchasers do pay the posted TGP. For example, the VACC at the public hearing in Melbourne on 24 August 2007 commented that '… most independents—all independents that I am aware of buy it at TGP plus add-ons'.[48]

There are essentially three reasons why there are not many sales at wholesale at the posted TGPs.

Spot versus contract sales

Firstly, there are benefits to both buyers and sellers in terms of having a contract rather than purchasing on a spot basis. For the buyer, a contract provides certainty of supply and to the seller it provides a guarantee of off-take from the terminal.

As BP commented in its submission when noting that there had been no spot sales:

> This is not a pre-determined outcome and BP would certainly be willing to fulfil spot requests—it reflects that there is mutual advantage for buyers and sellers to enter into term contracts rather than to buy and sell on a spot basis.[49]

APADA in its submission estimated that a relatively high proportion of sales at the wholesale level would be based on contracts. It commented:

> The relatively tight supply situation in Australia means that most distributors, resellers and large commercial customers require certainty of supply, and as such are usually under contract.[50]

Neumann noted the implication spot purchases may have on supply. At the public hearing in Brisbane on 22 August 2007, it stated:

> We tend to steer away from what's deemed to be the spot buyer, only because the - within the bounds of our forecasts that we provide our suppliers it's very difficult to manage very sharp increases or decreases in volumes

44 BP submission, p. 22.
45 Caltex submission, p. 38.
46 MTAQ submission, p. 3.
47 ACCC, public hearing transcript, Canberra 21 August 2007, p. 17
48 ACCC, public hearing transcript, Melbourne, 24 August 2007, p. 54
49 BP submission, p .22.
50 APADA submission, p. 4.

> that traditionally spot buyers moving from one location to another or one supplier to another would impact on your business. [51]

United commented at the public hearing in Sydney on 3 September 2007 that there were a greater number of smaller independents in the industry buying off spot prices a few years ago.[52]

The extent to which there are spot sales is likely to have diminished over time as a result of the tighter overall supply situation in Australia. In these circumstances a desire for certainty of supply may have led more retailers to seek contractual arrangements with wholesalers than was the case in the past

Discounts off TGPs

Many wholesalers provide a discount off the posted TGP.

For example, BP in its submission noted:

> Discounts to TGP apply to all BP customers under a supply contract except in Victoria. These discounts differ by grade. BP does not supply any customers at a premium to TGP[53]

Neumann commented at the public hearing in Brisbane on 22 August 2007 that there were unlikely to be any customers that it supplies at a flat undiscounted TGP.[54]

APADA commented in its submission that:

> The majority of distributors purchase product at the price which on most occasions is below the daily TGP due to the application of a contractual rebate, and then some additional service charges, e.g. brand, equipment/facility rent, etc. etc.[55]

Alternative wholesale pricing arrangements

Finally, while some companies supply at wholesale at their TGP others primarily supply petrol at a wholesale list price. Furthermore, supply at wholesale may also be based on prices linked specifically to import parity prices rather than the posted TGP.

Of the refiner-marketers Shell and BP tend to supply at wholesale at the TGP. For example, BP in its submission stated that: the price at which BP wholesales its fuel to customers is known as its TGP.[56]

On the other hand, the remaining two refiner-marketers—Caltex and Mobil—although they also post a TGP, tend to supply at wholesale on the basis of a wholesale list price. Caltex in its submission noted that:

> Caltex contract wholesale prices are generally not based on published terminal gate prices (TGPs) but instead are based on a wholesale list price (based on MOPS95), which may be discounted, or directly linked to the import parity price.[57]

51 ACCC, public hearing transcript, Brisbane, 22 August 2007, p.19
52 ACCC, public hearing transcript, Sydney 3 September 2007, p. 18.
53 BP submission, p. 22.
54 ACCC, public hearing transcript, Brisbane, 22 August 2007, p. 19.
55 APADA submission, p. 4.
56 BP submission, p. 21.
57 Caltex submission, p. 3.

Liberty noted at the hearing in Melbourne on 5 September 2007 that its purchase price from Caltex for petrol at the wholesale level was based on an import parity price rather than the Caltex TGP or the Caltex reference price.[58]

15.2.3 TGPs follow international prices

It was commented by the refiner-marketers that TGPs move in line with international prices.

BP in its submission noted that:

> There is strong correlation between BP's TGP and Singapore benchmark prices (after adjusting for movements in foreign exchange rates, shipping rates, wharfage costs, insurance & loss and quality premia).[59]

Caltex stated in its submission that 'Changes in TGPs are a good indicator of changes in wholesale prices.'[60]

Mobil in its submission stated:

> Mobil's Australian terminal gate prices (TGPs) reflect all the above market components, excise and other taxes (including GST), local terminal costs and a wholesale marketing margin, to the extent such a margin is achievable competitively. TGP data therefore provides a good guide as to how changes in international crude oil and product prices flow through to wholesale petrol prices in Australia. [61]

The data analysis in chapter 8 indicates that TGPs do tend to move in line with movements in the international benchmark price.

15.2.4 TGPs as benchmark prices

A number of industry stakeholders commented that the posted TGPs could be considered to be a benchmark price or a reference price rather than an indication of actual prices paid in the market.

For example, United commented that the TGP was '… a reference point for most contracts or all contracts …'[62] Liberty commented that it used the TGP as a benchmark.[63]

It was also considered that posting TGPs increases price transparency. For example, Caltex in its submission commented that:

> TGPs are good proxies for changes in international prices, which is useful for price transparency as TGPs are more readily available to the public than international prices.[64]

Neumann noted that one way of ensuring that its TGPs were competitive with other companies was to look at the TGPs of the major oil companies.[65]

58 ACCC, public hearing transcript, Melbourne 5 September 2007, pp. 96–7.
59 BP submission, p. 22.
60 Caltex submission, p. 40.
61 Mobil submission, p. 9.
62 ACCC, public hearing transcript, Sydney 3 September 2007, p. 18.
63 ACCC, public hearing transcript, Melbourne 5 September 2007 p. 98.
64 Caltex submission, p. 49.
65 ACCC, public hearing transcript, Brisbane 22 August 2007, p. 19.

15.2.5 Clearer understanding of the concept of TGP

One of the aims of the Commonwealth and state terminal gate pricing arrangements is to promote transparency in pricing at the wholesale level. By requiring the posting of a TGP there is an increase in transparency, compared with a situation where prices are not published. To that extent this objective is achieved.

However, as noted above, these posted TGPs may reflect, only at the margin, the actual price paid by anyone in the market. Therefore, they should be regarded as benchmark or reference prices, rather than 'actual' market prices.

As benchmark prices they can be useful to market participants as they provide an indication of the possible maximum base prices that are being charged by wholesalers in the market. Furthermore, as movements in these TGPs tend to quite closely reflect movements in international price movements they may provide market participants and consumers with an indication of the likely movement in retail prices.

The operation of the Oilcode is to be reviewed by the ACCC and the Department of Resources, Energy and Tourism after it has been in operation for one year. As a part of the ACCC's role to promote compliance with the Oilcode, significant work has been undertaken to assist the industry to understand the Oilcode including terminal gate pricing. Promotion of a broader understanding of the nature of the posted TGPs under the Oilcode arrangements could be considered in that context.

APPENDIX A:

ACCC letter to the former Treasurer seeking approval to an inquiry into the price of unleaded petrol under sections 95G (3) and 95H (2) of the Trade Practices Act 1974

Australian Competition & Consumer Commission

GPO Box 3648
Sydney NSW 2001

Level 7
Angel Place
123 Pitt Street
Sydney NSW 2000

ph (02) 9230 9133
fax (02) 9223 1092

www.accc.gov.au

14th June 2007

The Hon Peter Costello MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In recent discussions with you concerning retail petrol pricing in Australia, we have addressed two issues. The first related to retail petrol prices in Australia and the second to the detection of anti-competitive practices and conduct in relation to petrol price setting in breach of the *Trade Practices Act 1974* (the Act).

I am writing to you to set out the thoughts of the Australian Competition and Consumer Commission (ACCC) on these issues.

Retail petrol prices in Australia

In light of recent developments in relation to retail petrol prices in Australia, the ACCC considers that it is appropriate to hold a price inquiry under Part VIIA of the Act.

Therefore, pursuant to sections 95G(3) and 95H(2) of the Act, I seek your approval for the ACCC to hold an inquiry into petrol prices. This is against the background of the divergence over recent times between movements in domestic petrol prices and movements in international benchmark prices.

I propose that the inquiry should cover the current industry structure, an assessment of competition in the industry and current impediments to efficient petrol pricing and possible methods to address them. A draft inquiry notice, for the purposes of section 95H of the Act, is attached for your consideration.

Please note that the proposed inquiry relates to the supply of petrol in general and does not relate to the supply of petrol by a particular person or persons. As a result, the price restriction provisions in section 95N of the Act will not apply. This means that petrol prices in Australia will be free to move according to market conditions during the price inquiry.

I propose that the inquiry be completed and a report be provided to you by 15 October 2007.

Anti-competitive conduct

Allegations of price fixing arrangements in relation to petrol prices in Australia have been the subject of a number of investigations and prosecutions by the ACCC in recent years.

There are a number of issues relating to anti-competitive conduct in petrol price setting and otherwise generally, that may require attention by Government. It is our view that addressing the issues raised below will assist the ACCC in detecting and prosecuting cartel conduct in contravention of Sections 45/45A of the Act.

The decision of the Federal Court in the Geelong petrol case raises some immediate issues for us. The ACCC has sought Senior Counsel's advice on the outcome of that case and the prospects for appealing the Court's decision.

We believe that consideration may need to be given by Government to issues designed to overcome the difficulties that the ACCC faced in that case and seems likely to face in future cartel cases.

In summary, these issues relate to the definition of the conduct that would amount to a cartel offence under Sections 45/45A of the Act and the ACCC's ability to satisfy the necessary evidentiary burden of proof.

We will provide further advice to you on these matters in due course, depending on the advice from Senior Counsel and matters that may arise during the course of the Part VIIA Inquiry.

Yours sincerely

Graeme Samuel
Chairman

Trade Practices Act 1974

INQUIRY INTO PETROL PRICES

I, Peter Costello, Treasurer, noting the divergence over recent times between movements in domestic retail petrol prices and movements in international benchmark prices, hereby approve, pursuant to section 95H(2) the *Trade Practices Act 1974* (the Act) the holding of a price inquiry by the Australian Competition and Consumer Commission (the Commission) into the price of unleaded petrol.

Matters to be taken into consideration by the inquiry shall include, but not be restricted to:

- the current structure of the industry;
- the extent of competition at the refinery, wholesale and retail levels, including the role of imports;
- the determination of prices at each of these levels, including the methodology for determining wholesale prices; and
- current impediments to efficient petrol pricing and possible methods to address them.

This is not an inquiry in relation to the supply of petrol by particular persons.

The inquiry is to be completed and a report submitted to me by 15 October 2007.

Dated this day of June 2007.

PETER COSTELLO
Treasurer

APPENDIX B:

Letter from the former Treasurer to the ACCC agreeing to ACCC's request

TREASURER

PARLIAMENT HOUSE
CANBERRA ACT 2600

Telephone: 02 6277 7340
Facsimile: 02 6273 3420

www.treasurer.gov.au

15 JUN 2007

Mr Graeme Samuel
Chairman
Australian Competition and Consumer Commission
GPO Box 520J
MELBOURNE VIC 3001

Dear Mr Samuel

Thank you for your letter dated 14 June 2007 recommending a price inquiry pursuant to subsections 95G(3) and 95H(2) of the *Trade Practices Act 1974* (the Act).

I am very happy to accept your recommendation .

I enclose a notice under subsection 95H(2) of the Act in the terms recommended by you.

I understand that the inquiry can now commence immediately.

Yours sincerely

PETER COSTELLO

Trade Practices Act 1974

INQUIRY INTO PETROL PRICES

I, Peter Costello, Treasurer, noting the divergence over recent times between movements in domestic retail petrol prices and movements in international benchmark prices, hereby approve, pursuant to section 95H(2) the *Trade Practices Act 1974* (the Act) the holding of a price inquiry by the Australian Competition and Consumer Commission (the Commission) into the price of unleaded petrol.

Matters to be taken into consideration by the inquiry shall include, but not be restricted to:

- the current structure of the industry;
- the extent of competition at the refinery, wholesale and retail levels, including the role of imports;
- the determination of prices at each of these levels, including the methodology for determining wholesale prices; and
- current impediments to efficient petrol pricing and possible methods to address them.

This is not an inquiry in relation to the supply of petrol by particular persons.

The inquiry is to be completed and a report submitted to me by 15 October 2007.

Dated this 15th day of June 2007.

P Costello

PETER COSTELLO
Treasurer

APPENDIX C:

List of submissions

Organisation	Number	Status	Date submitted
Andrews, Mr Noel	51	public	04/10/07
APCO Service Stations Pty Ltd	26	public	27/07/07
Arulnayagam, Mr Chrysostom	12	public	24/07/07
Australian Automobile Association	24	public	27/07/07
Australian Petroleum Agents and Distributors Association	18	public	27/07/07
BP Australia Pty Ltd	35	public	03/08/07
BP Australia Pty Ltd	35 (a)	confidential	03/08/07
Caine, Ms Emma	38	public	07/08/07
Caltex Petroleum Pty Ltd	37	public	17/08/07
Caltex Petroleum Pty Ltd	37 (a)	confidential	03/08/07
Casey, Mr Geoff	7	public	16/07/07
Chivers, Mr Josh	50	public	26/09/07
Coles Group Ltd	30	confidential	30/07/07
Coles Group Ltd	30 (a)	public	7/08/07
WA Government Department of Consumer and Employment Protection	15	public	27/07/07
Destefano, Ms Michelle	4	public	15/07/07
Dib Group of Companies	32	confidential	31/07/07
Freestone, Ms Lisa	8	public	17/07/07
Gans, Prof Joshua (CoRE Research Pty Ltd)	3	public	09/07/07
Gans, Prof Joshua (CoRE Research Pty Ltd)	9	public	19/07/07
Heath, Mr Peter	33	public	31/07/07
Hearne, Mr Andrew	22	public	27/07/07
HEH Australian Petroleum Consultancy Co.	17	public	27/07/07
Hull, Mrs Kay The Nationals, Federal Member for Riverina	21	public	31/07/07
Independent Liquor Group Co-operative Ltd	46	public	07/09/07
Lamari, Ms Sarina	45	public	23/08/07
Little-Hales, Mr Gareth	11	public	23/07/07
Littlejohn, Mr David	47	public	30/08/07
Mobil Oil Australia Pty Ltd	25	public	27/07/07
Motor Trades Association of Australia	19	public	27/07/07
Motor Trades Association of Queensland	27	public	30/07/07
National Association of Retail Grocers of Australia Pty Ltd	31	public	31/07/07
Northern Territory Government	40	public	29/08/07
NSW Farmers Association	41	public	30/08/07
NRMA	36	public	03/08/07
Peck, Mr Neville	14	public	27/07/07
Post Office Agents Association Ltd	13	public	27/07/07
Queensland Treasury	39	public	21/08/07
Richmond Shire Council	42	public	03/09/07
Roberts, Mr Graham	2	public	04/07/07
Robinson, Ms Laini	6	public	15/07/07

Organisation	Number	Status	Date submitted
Royal Automobile Association of South Australia	20	public	27/07/07
Sach, Mr Roy	49	public	25/09/07
Service Station Association Ltd	10	public	12/07/07
Shell Company of Australia Ltd	23	public	27/07/07
Shell Company of Australia Ltd	23 (a)	confidential	27/07/07
Sheppard, Mr John	48	public	12/09/07
Tasmanian Government	29	public	30/07/07
Townsend, Mr Glen	1	public	04/07/07
United Petroleum Pty Ltd	28	public	30/07/07
Wagga Wagga Fuel Watchdog Committee	44	public	10/09/07
West, Mr Reginald	5	public	15/07/07
Wood, Mr Peter	16	public	27/07/07
Woolworths Ltd	34	public	01/08/07
Wright, Mr Stan	43	public	07/09/07

APPENDIX D:

List of parties who provided information under section 95ZK

Organisation	Date received
BP Australia Pty Ltd	13/08/07
Caltex Petroleum Pty Ltd	17/08/07
Coles Group Ltd	10/08/07
Gull Petroleum (WA) Pty Ltd	08/08/07
Liberty Oil Australia Pty Ltd	10/08/07
Matilda Fuel Corporation Ltd	10/08/07
Mobil Oil Australia Pty Ltd	17/08/07
Neumann Petroleum Pty Ltd	17/08/07
Shell Company of Australia Ltd	13/08/07
Trafigura Services Australia Pty Ltd	09/08/07
United Petroleum Pty Ltd	17/08/07
Woolworths Ltd and Australian Independent Retailers Pty Ltd	17/08/07
7 Eleven Pty Ltd	10/08/07

APPENDIX E:

List of hearings

Date	Location	Status
21/08/07	Canberra	Public
22/08/07	Brisbane	Public and confidential
23/08/07	Townsville	Public and confidential
24/08/07	Melbourne	Public
27/08/07	Darwin	Public
28/08/07	Perth	Public and confidential
29/08/07	Adelaide	Public and confidential
03/09/07	Sydney	Public and confidential
04/09/07	Sydney	Public and confidential
05/09/07	Melbourne	Public and confidential
07/09/07	Melbourne	Public and confidential
10/09/07	Wagga Wagga	Public
11/09/07	Mt Gambier	Public and confidential
13/09/07	Melbourne	Public and confidential
14/09/07	Hobart	Public
19/09/07	Melbourne	Public
20/09/07	Melbourne	Public and confidential
21/09/07	Ballarat	Public and confidential
03/10/07	Canberra	Public
09/10/07	Melbourne	Public and confidential
10/10/07	Melbourne	Public and confidential
29/10/07	Melbourne	Confidential
02/11/07	Melbourne	Confidential
13/11/07	Melbourne	Confidential
15/11/07	Melbourne	Confidential

APPENDIX F:

List of parties who were called as witnesses to provide information at hearings

Organisation	Representative	Title	Date of appearance
7-Eleven Pty Ltd	Mr W Wilmot	Chief Executive Officer	07/09/07
	Mr J Petit	National Fuel Manager	07/09/07
APCO Service Stations Pty Ltd	Mr Ron Anderson	Managing Director	21/09/07
	Mr P Anderson	Director	21/09/07
	Mr R Anderson	Director	21/09/07
Australian Automobile Association	Mr M Harris	Executive Director	03/10/07
	Mr G Smith	Research Manager	03/10/07
Australian Labor Party	Mr P Knox	Labor Candidate for Riverina	10/09/07
Australian Petroleum Agents and Distributors Association	Mr G Symington	Former General Manager	24/08/07
Automobile Association of the Northern Territory	Ms L Deans	General Manager	27/08/07
Bennetts Petroleum Pty Ltd	Mr T Bennett	Managing Director	14/09/07
BP Australia Pty Ltd	Mr G Hueston	President, BP Australasia	02/11/07
	Mr D Salter	Vice President, Convenience Retail	02/11/07
	Mr M Sturgess	Manager, Integrated Supply and Trading	05/09/07
	Ms R McGrath	Vice-President of Operations	05/09/07
	Mr B Davidson	Manager, Retail Pricing	05/09/07
Caltex Petroleum Pty Ltd	Mr D King	Chief Executive Officer	04/09/07 15/11/07
	Mr A Strang	General Manager, Supply and Distribution	04/09/07 15/11/07
Coles Group Ltd	Mr McMahon	Chief Operating Officer	07/09/07
Coles Group Ltd	Mr P Short	General Manager, Coles Express	07/09/07
WA Government Department of Consumer and Employment Protection	Mr P Walker	Commissioner	28/08/07
	Mr R Gibson	Acting Manager	28/08/07
Fueltrac	Mr G Trotter	General Manager	22/08/07
	Mr C Kable	General Manager	22/08/07

Organisation	Representative	Title	Date of appearance
Gull Petroleum (WA) Pty Ltd	Mr M Mullins	General Manager	28/08/07
Informed Sources	Mr A Cadd	Managing Director	09/10/07
	Mr A Price	Group Strategist	09/10/07
Liberty Oil Australia Pty Ltd	Mr P Edmends	General Manager	05/09/07
Marstel Terminals Pty Ltd	Mr G Catley	Managing Director	10/10/07
	Mr T Gunning	General Manager	10/10/07
Matilda Fuel Corporation Ltd	Mr L O'Keeffe	Director	22/08/07
	Mr G Anderson	General Manager	22/08/07
Member of the public	Mr R Agacy		23/08/07
Member of the public	Mr J Auld		10/09/07
Member of the public	Mr P Milton		10/09/07
Mobil Oil Australia Pty Ltd	Mr M Nolan	Chairman	13/11/07
	Mr P Rea	Retail Sales Manager	13/11/07
	Mr G Henson	Manager, Refining	19/09/07 13/11/07
	Mr M Bergeron	Manager, Refining	19/09/07
Motor Trades Association of Australia	Mr M Delaney	Executive Director	21/08/07
	Ms S Scanlon	Deputy Executive Director	21/08/07
Motor Trades Association of Queensland	Mr A Blums	Chief Executive	23/08/07
	Mr T Kane	Chairman, Service Stations and Convenience Stores of Queensland	23/08/07
	Ms K Dewar	General Manager	23/08/07
Motor Trades Association of the Northern Territory	Mr G Bevis	Executive Director	27/08/07
Motor Trades Association of South Australia	Mr J Chapman	Executive Director	29/08/07
	Mr T Kruys	Chairman, Service Station Division	29/08/07
Motor Trades Association of Western Australia	Mr P Fitzpatrick	Chief Executive Officer	28/08/07
The Nationals	Ms K Hull	Federal Member for Riverina	10/09/07

Organisation	Representative	Title	Date of appearance
National Association of Retail Grocers of Australia Pty Ltd	Mr K Henrick	Chief Executive Officer	21/08/07
	Mr G Van Rijswijk	Senior Policy Advisor	21/08/07
Neumann Petroleum Pty Ltd	Mr C Wright	General Manager	22/08/07
NRMA	Mr A Evans	President	03/09/07
	Mr W. Setkiewcz	Senior Policy Advisor	03/09/07
NSW Farmers Association	Ms B Johnson	Vice-President	10/09/07
	Mr A Forsyth	Secretary, Wagga Council	10/09/07
Oil Industry	Mr M Kevin	Oil Industry Consultant	10/10/07
Riverina Greens	Mr R Goodlass	Member	10/09/07
Royal Automobile Club Of Queensland	Mr G Fites	General Manager	23/08/07
Royal Automobile Association of South Australia	Ms S Hanlon	General Manager, Public Affairs	29/08/07
	Mr M Hanton	Senior Analyst, Public Affairs	29/08/07
Royal Automobile Club of Tasmania	Mr G Goodman	Chief Executive Officer	14/09/07
	Mr D Ling	Chief Engineer	14/09/07
Royal Automobile Club of Victoria	Mr D Cumming	Manager	24/08/07
Royal Automobile Club of Western Australia	Mr D Moir	Executive Manager	28/08/07
	Mr M Upton	Manager	28/08/07
Scott Group of Companies	Mr B Grubb	Chief Executive Officer	11/09/07
	Mr J Clark	General Manager	11/09/07
Service Station Association Ltd	Mr R Bowden	Chief Executive Officer	21/08/07
Shell Company of Australia Ltd	Mr R Caplan	Chairman	13/09/07 29/10/07
	Mr C Midgley	General Manager	13/09/07 29/10/07
	Mr G McGregor	Manager, Retail	13/09/07
	Mr C Deegan	Strategic Analyst	13/09/07

Organisation	Representative	Title	Date of appearance
South Australian Farmers Federation	Ms J Lloyd	Board Member	11/09/07
	Mr D Perkins	Treasurer	11/09/07
South Australian Farmers Fuel Association	Mr A Fischer	Managing Director	29/08/07
Tasmanian Automobile Chamber of Commerce	Mr M Little	General Manager	14/09/07
Tasmanian Government	Mr C Batt	Director of Consumer Affairs and Fair Trading	14/09/07
Trafigura Services Australia Pty Ltd	Mr D Curtis	Director	10/10/07
	Mr B Jacobson	Former Director	10/10/07
United Petroleum Pty Ltd	Mr A Silver	Managing Director	03/09/09
	Mr D Szymczak	General Manager	03/09/07
Victorian Automobile Chamber of Commerce	Mr F Bortolotto	Chairman, Service Station and Convenience Store Division	24/08/07
	Mr D Purchase	Executive Director	21/09/07
	Mr T Conroy	Service Station Division Manager	24/8/07
	Mr R Weatherald	Member	24/08/07
	Mr G Treloar	Board of Managers	21/09/07
Vopak Terminals Australia	Mr R Dickinson	Managing Director	27/08/07
Wagga Wagga City Council	Mr R Kendall	Councillor	10/09/07
Wagga Wagga Fuel Watchdog Committee	Mr E Richter	Chairperson	10/09/07
	Mr E Brooks	Secretary	10/09/07
Woolworths Ltd	Mr R Narsey	General Manager, Petrol Division	04/09/07
	Mr R Jeffs	General Manager, Group Compliance	04/09/07
	Mr T Buskins	Commercial Manager	04/09/07

APPENDIX G:

Media release of 21 September 2007 from the former Treasurer extending the deadline for the inquiry's report to 15 December 2007

TREASURER

www.treasurer.gov.au

NO. 098

ACCC PETROL PRICE INQUIRY EXTENSION

I have today agreed to a request from the Chairman of the Australian Competition and Consumer Commission (ACCC) for an extension of the reporting date of the ACCC's inquiry into petrol pricing across Australia.

The inquiry is to be completed and a report submitted no later than 15 December 2007.

On 15 June 2007 I directed the ACCC to undertake an inquiry into petrol pricing across Australia, pursuant to Part VIIA of the *Trade Practices Act 1974* (the Act).

On 6 September 2007, the Chairman of the ACCC wrote to me and requested an extension of two months from the original reporting date of 15 October 2007 in order to provide a more rigorous and thorough examination of the issues in the inquiry notice.

The ACCC has advised me that its inquiry is well advanced and a vast amount of valuable information has been obtained through submissions, public hearings and from major participants.

The ACCC considers that further hearings are required to enable it to enquire in more detail on a number of specific issues in the inquiry notice.

I am determined that motorists should have full confidence in the price they pay for petrol at the bowser. As such, I want to ensure that the ACCC has the necessary time it requires to undertake a thorough analysis of petrol pricing across Australia.

CANBERRA
21 September 2007

Contact: Renae Stoikos
03 9650 0244

Attachment: The letter from the Chairman of the ACCC and the Treasurer's response are available for download as a Portable Document Format.

EXECUTIVE OFFICE

Australian Competition & Consumer Commission

GPO Box 520
Melbourne Vic 3001

Level 35, The Tower
360 Elizabeth Street
Melbourne Vic 3000

tel: (03) 9290 1800
fax: (03) 9663 3699

www.accc.gov.au

6 September 2007

The Hon. Peter Costello MP
Treasurer
House of Representatives
Parliament House
CANBERRA ACT 2600

Dear Treasurer

As you are aware following my letter to you of 14 June 2007 recommending that the ACCC conduct a price inquiry under Part IIIA of the *Trade Practices Act 1974* (the Act) into the price of unleaded petrol in Australia, you issued a notice under section 95H(Z) of the Act initiating an inquiry on 15 June 2007. Under your notice you requested the Australian Competition and Consumer Commission (ACCC) complete a report and submit it to you by 15 October 2007.

The inquiry is well advanced and an immense amount of documentary evidence has been provided to the ACCC. To date, the ACCC has received forty submissions, many of which contain valuable information. A vast amount of information has also been provided by major participants in the petrol industry in response to notices issued by the ACCC under section 95ZK of the Act. Further information has been obtained through public hearings. While this information is very useful, it is our view and the advice of senior counsel, that further hearings are required to enable the ACCC to enquire in more detail on a number of specific issues.

Given this, and the amount of documentary information received to date, I am requesting an extension of time from the original reporting date in order to provide a more rigorous and thorough examination of the issues in the inquiry notice.

I anticipate that an additional two months would be sufficient to complete the inquiry on this basis and propose that the ACCC complete and submit a report to you by 15 December 2007.

Yours sincerely

Graeme Samuel

Graeme Samuel
Chairman

TREASURER

PO BOX 6022
PARLIAMENT HOUSE
CANBERRA ACT 2600

Telephone: 02 6277 7340
Facsimile: 02 6273 3420

www.treasurer.gov.au

20 SEP 2007

Mr Graeme Samuel
Chairman
Australian Competition and Consumer Commission
GPO Box 520
MELBOURNE VIC 3001

Dear Mr Samuel

Thank you for your letter dated 6 September 2007 on the inquiry that I directed the Australian Competition and Consumer Commission (ACCC) to undertake into the price of unleaded petrol, pursuant to subsections 95G(3) and 95H(2) of the *Trade Practices Act 1974* (the Act).

In your letter you ask for an extension of two months from the original reporting date of 15 October 2007, in order to provide a more rigorous and thorough examination of the issues in the inquiry notice. Under 95K(3) of the Act, I agree to the extension being granted and give notice to you, as the inquiry chair, that the inquiry be completed and a report submitted to me on 15 December 2007.

Thank you for the ACCC's continuing hard work on this important inquiry.

Yours sincerely

PETER COSTELLO

APPENDIX H:

Summary of the ANOP consumer survey in November 2007 commissioned by the ACCC

Unleaded petrol prices in urban Australia: consumer perceptions and purchasing practices summary of November 2007 survey results

ANOP Research Services was commissioned by the ACCC to undertake a survey of **motorists in the greater urban areas of mainland Australian capital cities**. The aim was to provide information about consumer attitudes to a range of issues relating to the price and purchasing of unleaded petrol, to assist with the ACCC petrol price inquiry. The survey was conducted from 31 October–5 November 2007, and consisted of 775 telephone interviews with motorists aged 18 years and over who drive regularly and use unleaded petrol. The sample intentionally **over-sampled Perth motorists** because of the different price cycles in that city resulting from the FuelWatch scheme (which requires prices to be notified 24 hours in advance). The results were weighted at the analysis stage to reflect the urban areas in their correct population proportions. The unweighted sample was as follows:

Mainland capital cities:	**Number of Interviews n=**
• Sydney (including Central Coast)	200
• Outer Sydney (including Newcastle, Wollongong & Canberra)	45
• Greater Melbourne (including Geelong)	166
• Greater Brisbane (including Gold Coast & Sunshine Coast)	106
• Adelaide	55
• Perth	203
Total sample of motorists	**775**

1. Petrol purchasing behaviour and sensitivity

Setting the scene for the analysis of the key issues in the survey, ANOP established some behaviour benchmarks in petrol purchasing:

- Exactly half (50%) of Australia's motorists1 normally buy petrol once a week, with 6 in 10 (61%) of the more price conscious doing so. A quarter (26%) buy petrol more than once a week and this rises to 1 in 3 (33%) among the least price conscious.
- Seven in ten (71%) usually fill up the tank, higher (76%) among the most price conscious and also among the most affluent (81%).
- Nearly 6 in 10 (57%) sometimes buy other items when purchasing petrol but this tends to be an infrequent occurrence. Only 1 in 10 (12%) indulges in other purchasing frequently and they tend to be the less price conscious.
- More than 9 in 10 (92%) pay for their own petrol–but it must be noted the survey is among non premium petrol buyers.

1 This report uses 'motorists' as a shorthand description for the more correct 'motorists in mainland urban areas who use unleaded petrol'.

There is a high level of price consciousness in petrol purchasing with three quarters (76%) paying close attention to petrol prices (33% ***close watch*** and 43% ***fairly good idea***). These figures have been consistent over at least the last four years (AAA survey 2003).

And it follows that about the same proportion (70%) usually tries to buy petrol when it is cheapest (36% ***always*** and 34% ***usually***). This figure may be a little higher than the 6 in 10 previously recorded in a May 2007 comparable sample but it seems to be heavily related to pump price at the time of the surveys. We have used this measure of price consciousness throughout the analysis as a way of shorthanding motorists into three price sensitivity groups. Thus:

- 36% - always try to buy when cheaper
- 34% - usually try to buy when cheaper
- 28% - just buy when need it

Importantly, there is a significantly lesser amount of 'shopping around' in Perth where only 1 in 5 (19%) always tries to buy when cheapest compared to the 4 in 10 (38%) in the rest of urban Australia.

2. Petrol price issues of concern

Motorists rated four issues of potential concern about unleaded petrol prices on a 7 point scale (where 7 is *extremely concerned* and 1 is *not concerned at all*). There is clear order of distinction between three of these concerns.

The greatest concern at the moment is **price variations before holiday periods** which recorded a 68% '7' rating and a 6.3 mean rating (out of 7). These are very high figures indicative of a source of genuine consumer irritation.

Two other issues emerged at the next level of concern–**the current price and price variations between different days of the week**. Both registered around the 50% '7' rating and a 5.8 or 5.9 mean rating. It should be noted that the concern about current pump price is on the increase (it was 5.7 in a comparable sample in May 2007). It would appear that this concern is highly correlated with actual pump price.

The fourth issue was also a concern but at a slightly lower level. **Price variations over the same day** received a '7' rating to a little over 4 in 10 (44%) and a mean rating of 5.5. Importantly, it appears to be Perth motorists who are pulling the average down as this was the only one of the four concerns with a significant Perth difference. This clearly reflects the reality of the Perth situation.

3. Price cycle perceptions and preferences

Nearly two thirds (64%) tend to buy petrol on particular days of the week and they do so overwhelmingly because of a view that petrol is cheaper. However there is a starkly different reported behaviour pattern in Perth where only 3 in 10 (31%) tended to buy on particular days–and of those Perth motorists who did it was almost as much a matter of convenience (10%) as of price consciousness (17%).

There is a high 80% plus awareness of petrol price cycles:

- 8 in 10 (81%) believe there is a regular price cycle and 7 in 10 (72%) think this is a **weekly** cycle.

- A similar 8 in 10 (83%) believe petrol is **more expensive** on a particular day and there is a clear indication that the most expensive days are thought to be Friday (43%) and Thursday (41%). The most price conscious motorists make no distinction between these two days (both 48%).
- An even greater 9 in 10 consensus (88%) exists regarding the belief that petrol is **cheaper** on particular days and there is one day (Tuesday) where opinion dominates (71%)–especially among the more price conscious (78%). Wednesday (24%) and Monday (21%) receive honourable mentions as cheaper days leaving tiny percentages citing the Thursday to Sunday period.
- **Perth** motorists, however, show a significantly lower awareness of a price cycle (61%) and similar 6 in 10 percentages believe in a particular day(s) when petrol is cheaper or more expensive.
- Estimates of price per litre variation between the most expensive and cheapest day result in a mean of 13.4 cents. This figure is a slightly lower 12.3 cents in Perth.
- 6 in 10 motorists (59%) manage to take advantage of the perceived price cycle by purchasing when cheapest (26% *almost every time* and 33% *most of the time*).

While motorists clearly perceive the existence of price cycles over particular days there is a slight preference for **longer cycles with smaller variations**. 49% opted for fortnightly cycles with variations of up to 5c as against 45% opting for weekly cycles with variations of up to 10c. Perth motorists have a clearer preference with 55% going for the fortnightly–flatter option. The more price conscious motorists however, prefer their current purchase pattern–that is a weekly cycle with a larger price variation.

One of the key issues examined in the survey related to **price fluctuation during a day.** Motorists are clearly attracted to the idea of having the same price over the whole day (83%), even if this meant missing out on taking advantage of price variations during that day. The concept loses some attraction if this means a less regular cycle over different days of the week. This scenario still attracts majority support but it is down to 63% (58% among the most price conscious). Perth remains slightly higher at 68%.

The concept loses its majority appeal when motorists are faced with the possibility that the same price over a whole day could result in a slightly higher average price. Support is down to 33%, with Perth a slightly higher 37%.

Daily price fluctuations is an irritant for motorists but not the biggest irritant. Motorist support for the same price over a whole day, while strong in concept, loses its appeal if the proposition is introduced that this will reduce the frequency of lower average prices.

4. Role of supermarket shopper dockets

It has already been established in a number of ANOP surveys that usage of supermarket shopper dockets has been a big marketing success. Total usage has increased steadily to a figure exceeding three quarters of motorists. Regular usage in this survey was measured at 49% of motorists (i.e. *almost always or most of the time*). However, usage may have peaked as the ACCC survey showed a slightly lower total usage incidence compared to a May 2007 AAA survey.

There is some evidence to suggest that the shopper docket scheme does reduce the extent to which motorists shop around for price. There are more shopper docket users (41%) who buy 'discounted' petrol only when it is needed than those who link their use to the price (31%). And nearly 3 in 10 (29%) motorists do not check prices at other service stations before using a shopper docket.

5. Sources of information about petrol prices

The great majority of motorists (86%) inform themselves of petrol prices from service station display boards. This figure however, is a substantially lower 52% in Perth. In Perth there are other sources relied upon to 46%. Perth motorists use television news heavily (27%) and the FuelWatch website (9%). A tally of all FuelWatch mentions totalled 17% in Perth.

Four potential information services were proposed and there was clearly a pecking order of preference, although no one service rivalled service station boards. The four services proposed were:

- An **internet** site with current prices and a local area search mechanism–52%
- An **email** advice service of lowest local petrol prices and alerts–45%
- An **SMS** service; similar to email–38%
- A **telephone number** to call for price information–25%

There is a degree of consistency in these results across the cities (including Perth) and across price sensitivity categories.

ANOP Research Services Pty Ltd 19 November 2007

Australian Competition and Consumer Commission

Unleaded Petrol Prices in Urban Australia: Consumer Perceptions and Purchasing Practices

Prepared by ANOP Research Pty Ltd
November, 2007

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Background

ANOP Research Services was commissioned by the ACCC to undertake a survey of **motorists in the greater urban areas of mainland Australian capital cities**. The aim was to provide information about consumer attitudes to a range of issues relating to the price and purchasing of unleaded petrol, to assist with the ACCC Petrol Price Inquiry.

The survey was conducted from 31 October – 5 November 2007, and consisted of **775** telephone interviews with **motorists aged 18 years and over who drive regularly and use unleaded petrol**.

The sample intentionally **over-sampled Perth motorists** because of the different price cycles in that city resulting from the Fuel Watch scheme (which requires prices to be notified 24 hours in advance). The results were weighted at the analysis stage to reflect the urban areas in their correct population proportions.

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The Sample of Motorists

The unweighted sample was as follows:

Mainland Capital Cities:	Number of Interview n=
-**Sydney** (including Central Coast)	200
-**Outer Sydney** (including Newcastle, Wollongong & Canberra)	45
-**Greater Melbourne** (including Geelong)	166
-**Greater Brisbane** (including Gold Coast & Sunshine Coast)	106
-**Adelaide**	55
-**Perth**	203
Total Sample of Motorists	**775**

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1. Petrol Purchasing Behaviour and Sensitivity

1.1 Frequency of Petrol Purchasing

1.2 Fill Up Tank or Spend Set Amount?

1.3 Additional Purchases When Buying Petrol

1.4 Who Pays for Petrol

1.5 Attention Paid to Price of Unleaded Petrol

1.6 Extent of Buying When Cheapest

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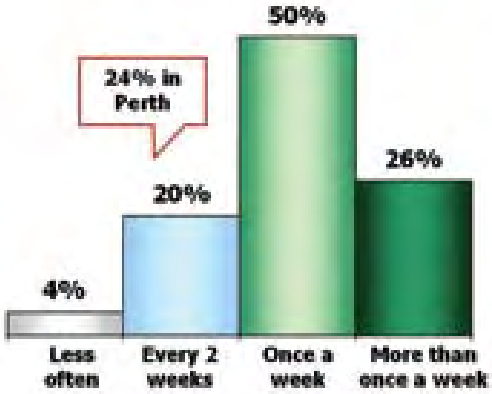
1.1 Frequency of Petrol Purchasing



- The most price sensitive are most likely to buy petrol once a week (61%).
- Perth drivers buy petrol slightly less often.

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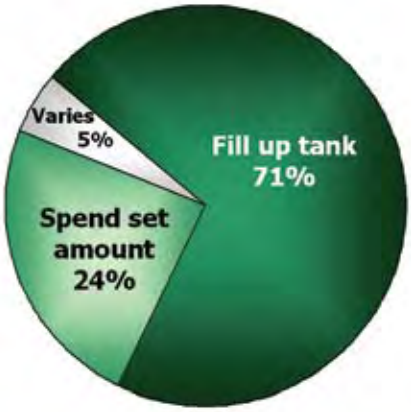
1.2 Fill Up Tank or Spend Set Amount?



- The most price sensitive are more likely to fill up the tank (76%), as are those from higher income households (80%).
- There is no difference between Perth and other cities on this measure.

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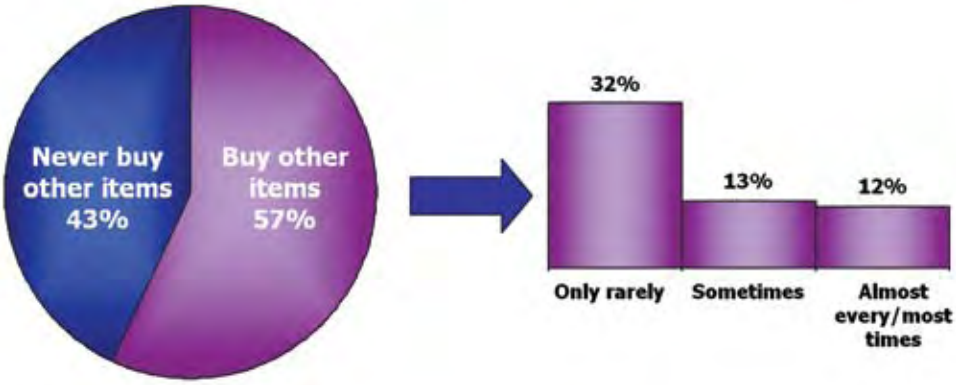
1.3 Additional Purchases When Buying Petrol

- The more price sensitive are less likely to buy other items at the service station when they buy petrol (45%).



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1.4 Who Pays for Petrol

- High income households (20%) and those who don't pay much attention to the price (23%) are slightly more likely to have their petrol paid for.

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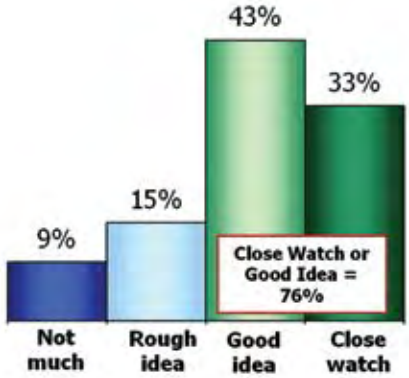
1.5 Attention Paid to Price of Unleaded Petrol



- There is no difference between Perth and other cities on this measure. 76% keep 'close watch' or have 'good idea' in Perth and elsewhere.

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1.6 Extent of Buying When Cheapest

- 70% always or usually try to buy petrol when it's cheapest – but only 59% in Perth do so.

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2. Petrol Price Issues of Concern

2.1 Petrol Price Issues of Concern

2.2 Petrol Price Concerns: Perth vs Other Cities

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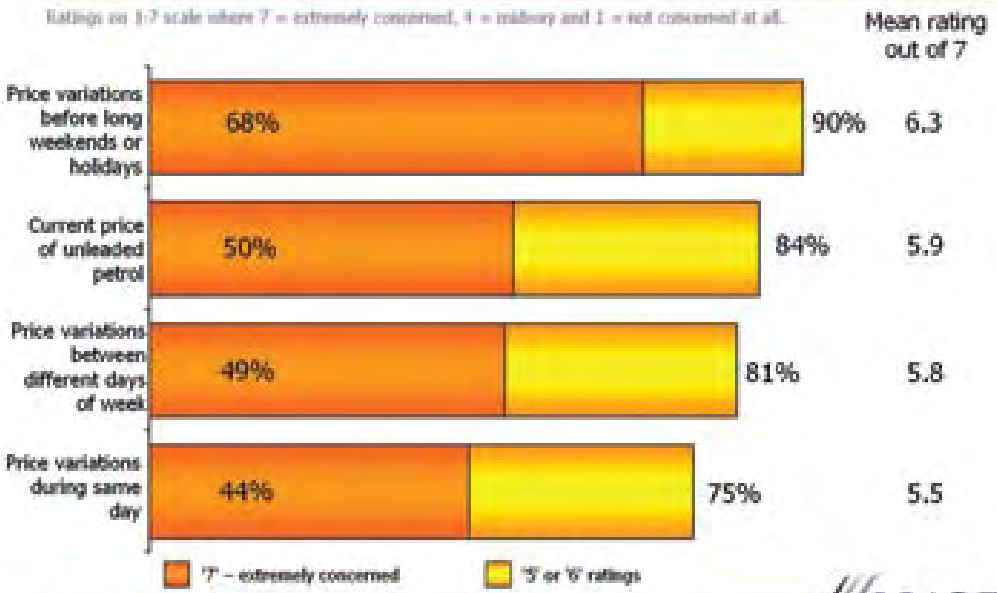
2.1 Petrol Price Issues of Concern

Ratings on 1-7 scale where 7 = extremely concerned, 4 = midway and 1 = not concerned at all.



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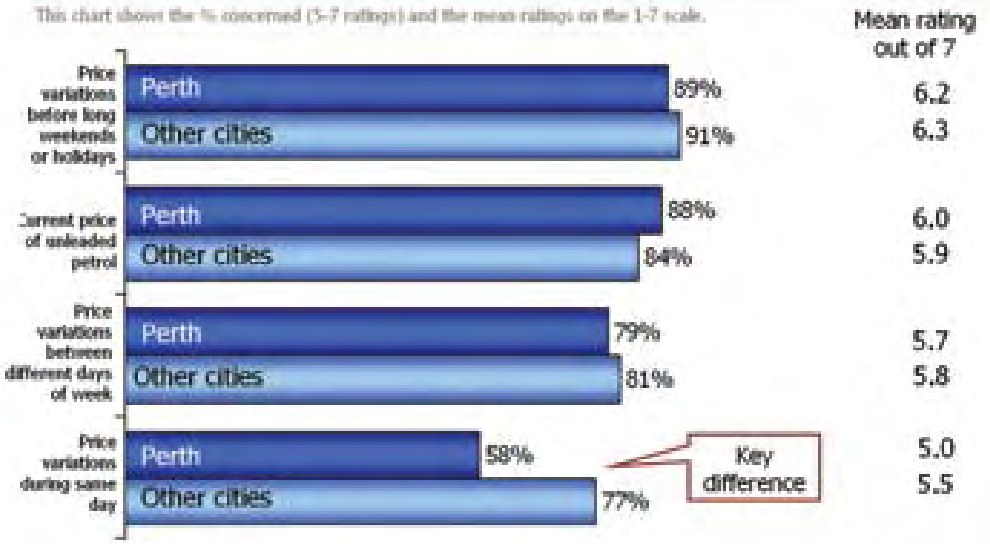
2.2 Petrol Price Concerns: Perth vs Other Cities

This chart shows the % concerned (5-7 ratings) and the mean ratings on the 1-7 scale.



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3. Price Cycle Perceptions & Preferences

3.1 Whether Buy Petrol on Particular Days

3.2 Why Buy Petrol on Particular Days

3.3. Is Petrol More Expensive on Certain Days?

3.4 Is Petrol Cheaper on Certain Days?

3.5 Variation in Price between Most Expensive and Cheapest Day?

3.6 Awareness of Regular Price Cycles

3.7 How Often Buy Petrol When Cheapest in Cycle

3.8 Price Cycle Preferences: *Regular Weekly Price Cycles with Larger Variations vs Fortnightly Price Cycles with Smaller Variations?*

3.9 Preference for Same Price Throughout Day?

3.10 Preference for Same Price If Less Regular Cycle

3.11 Preference for Same Price If Higher Average Daily Price

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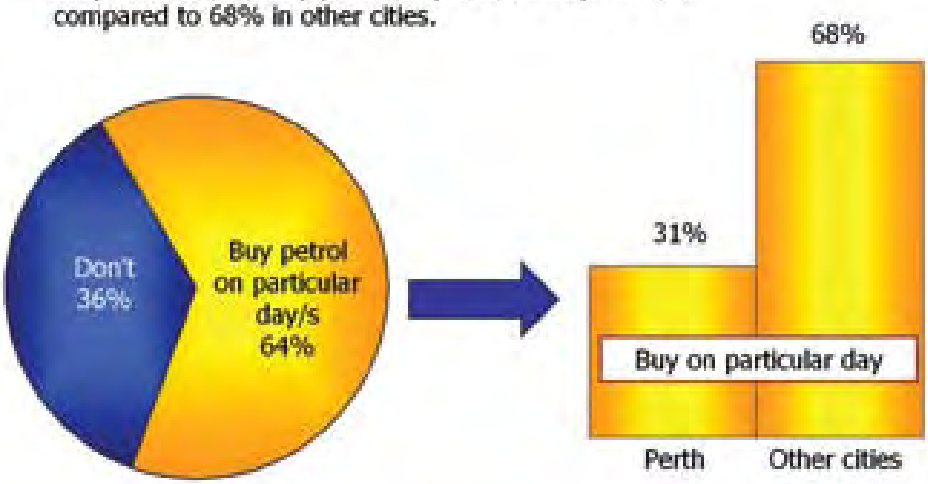
3.1 Whether Buy Petrol on Particular Days

- Only 31% tend to buy petrol on particular days in Perth compared to 68% in other cities.



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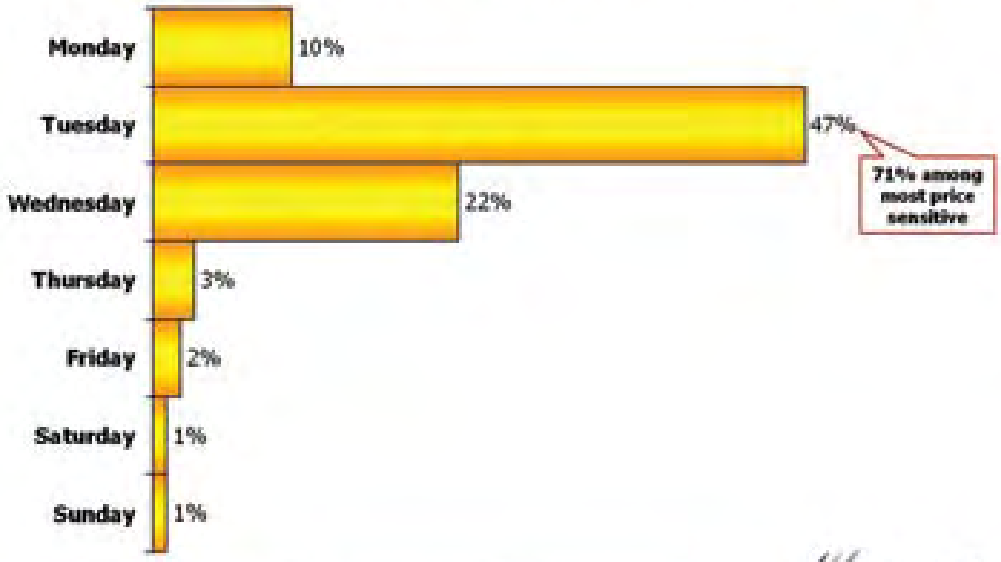
3.1 Cont'd Which Days Tend to Buy Petrol – the 64%

%s are based on all motorists, and add to more than 64% because some mentioned more than one day.



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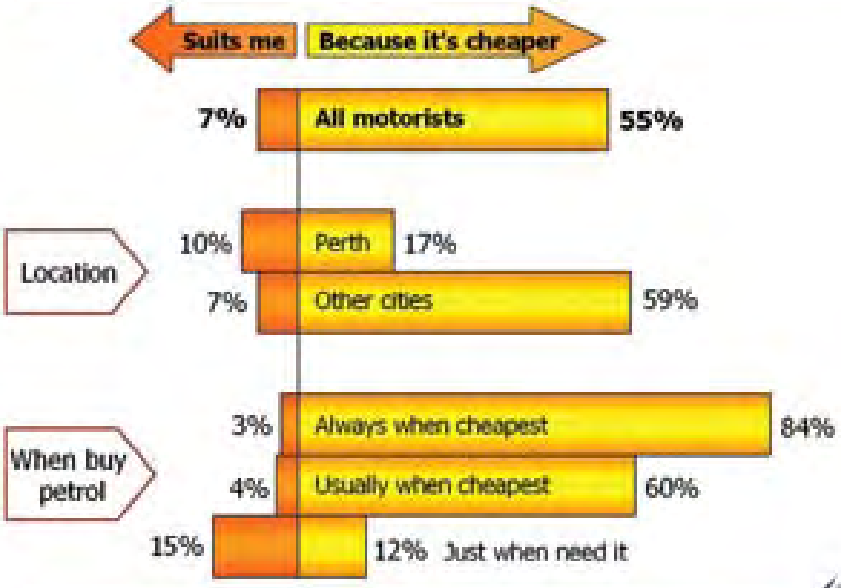
3.2 Why Buy Petrol on Particular Days – the 64%



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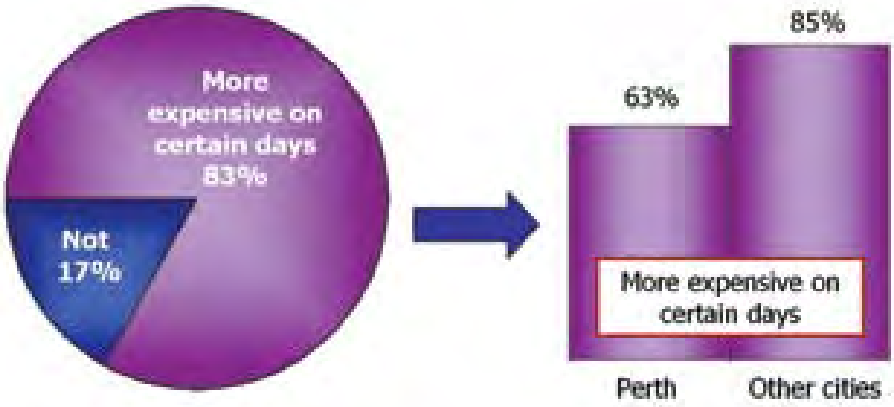
3.3 Is Petrol More Expensive on Certain Days?



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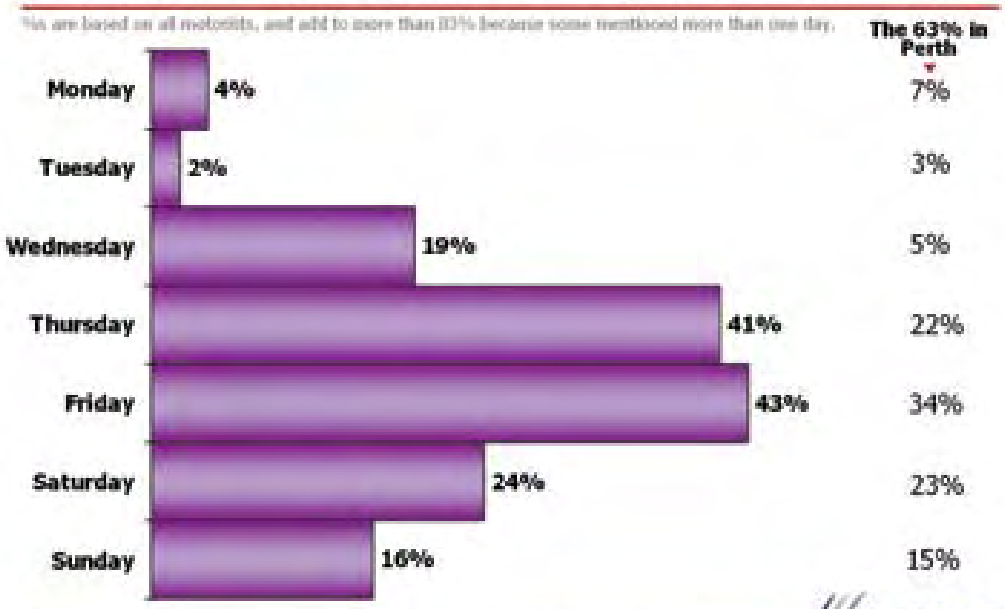
3.3 Cont'd When is Petrol More Expensive – the 83%

%s are based on all motorists, and add to more than 83% because some mentioned more than one day.



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3.4 Is Petrol Cheaper on Certain Days?

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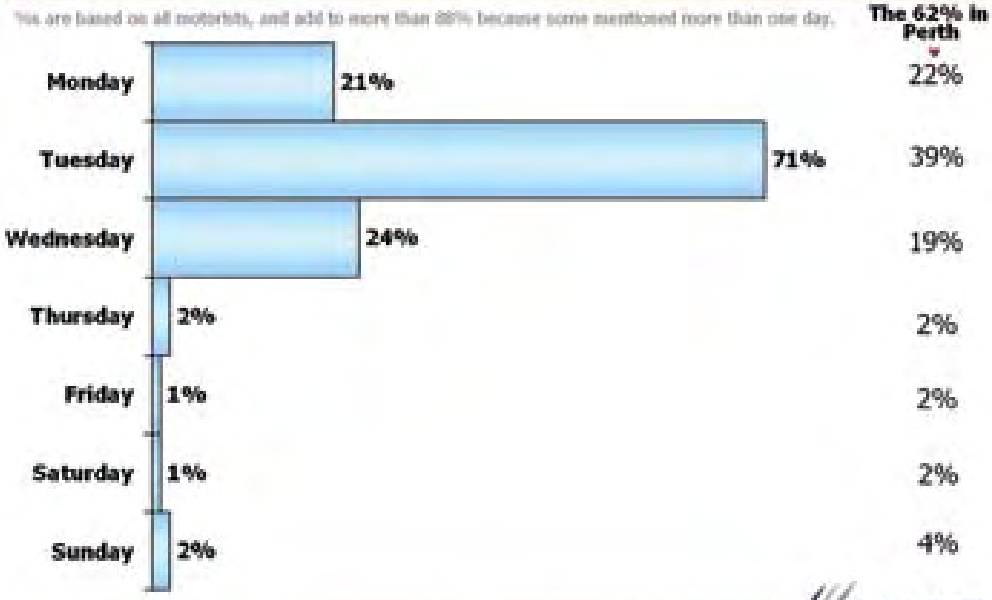
3.4 Cont'd When Is Petrol Cheaper – the 88%

%s are based on all motorists, and add to more than 88% because some mentioned more than one day.



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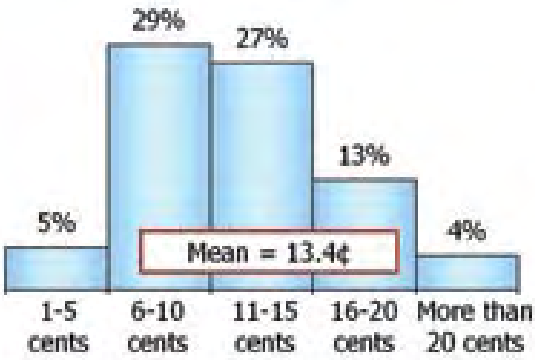
3.5 Variation in Price between Most Expensive and Cheapest Day?

8 in 10 could nominate how much the price per litre values between the most expensive and cheapest day. %s are based on all drivers.



- Only just over 5 in 10 in Perth could nominate how much the price varies – and their mean variation was 12.3¢.

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3.6 Awareness of Regular Price Cycles

Perceive regular cycle	**81%**
Weekly cycle	72%
Fortnightly	6%
Other	3%

- Fewer in Perth perceive price cycles (61%), although slightly more than average perceive fortnightly cycles (15%).

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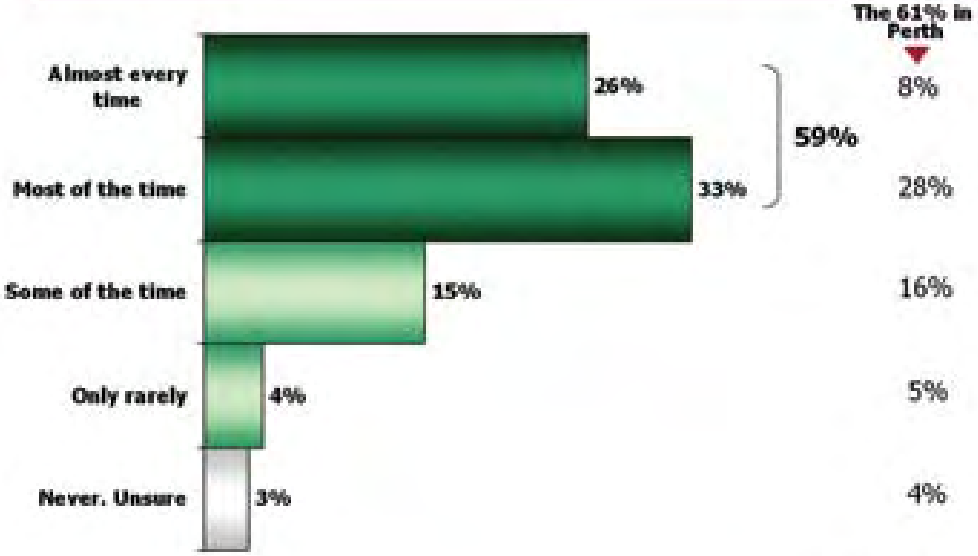
3.7 How Often Buy Petrol When Cheapest in Cycle – the 81%



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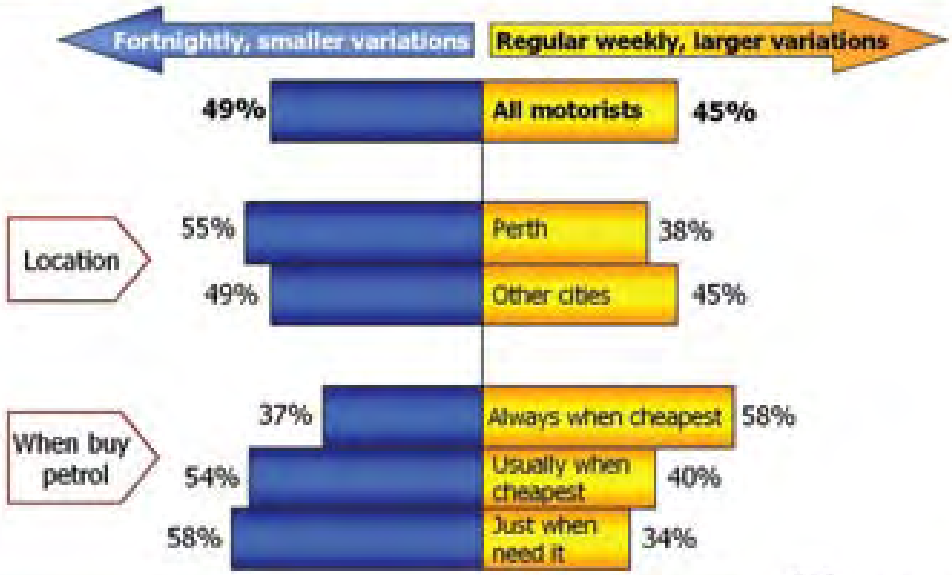
3.8 Price Cycle Preferences: Regular Weekly Price Cycles with Larger Variations vs Fortnightly Price Cycles with Smaller Variations?



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3.9 Preference for Same Price Throughout Day?

- In principle support is fairly uniform across different locations and price conscious segments.

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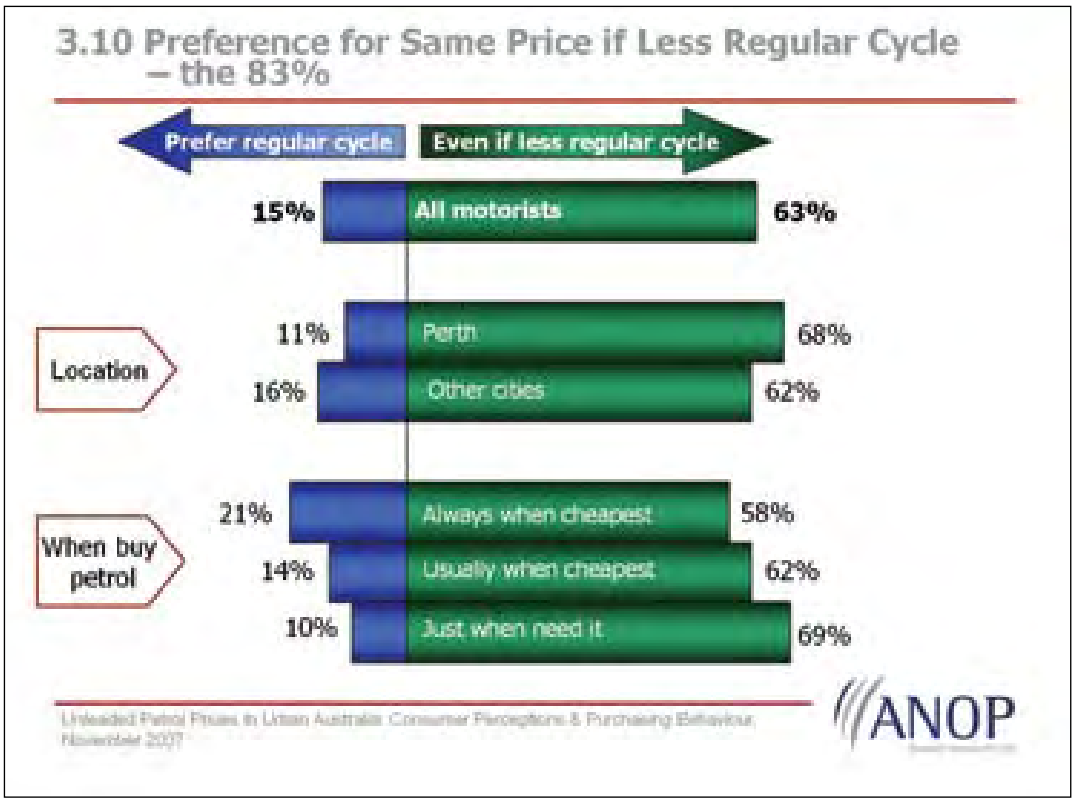
3.10 Preference for Same Price if Less Regular Cycle – the 83%
Prefer regular cycle
Even if less regular cycle
15%
All motorists
63%
Location
11%
Perth
68%
16%
Other cities
62%
When buy petrol
21%
Always when cheapest
58%
14%
Usually when cheapest
62%
10%
Just when need it
69%
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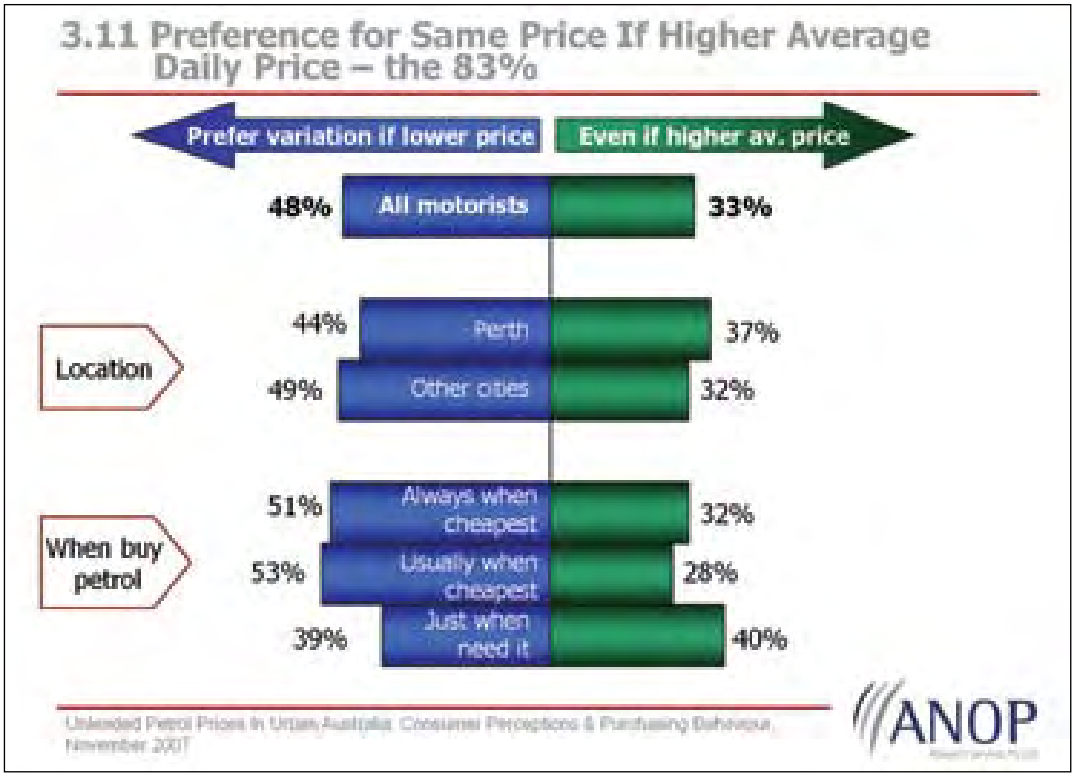
3.11 Preference for Same Price If Higher Average Daily Price – the 83%
Prefer variation if lower price
Even if higher av. price
48%
All motorists
33%
Location
44%
Perth
37%
49%
Other cities
32%
When buy petrol
51%
Always when cheapest
32%
53%
Usually when cheapest
28%
39%
Just when need it
40%
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4. Supermarket Shopper Dockets

4.1 Usage of Shopper Dockets for Petrol

4.2 Price Sensitivity When Using Dockets

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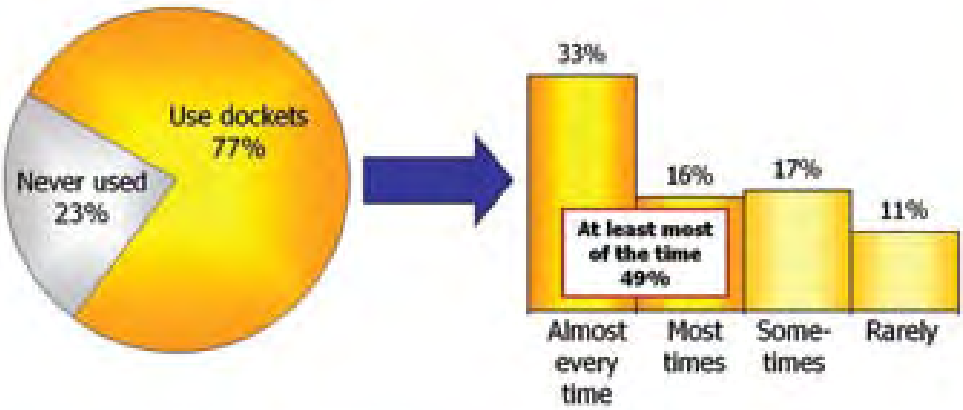
4.1 Usage of Shopper Dockets for Petrol



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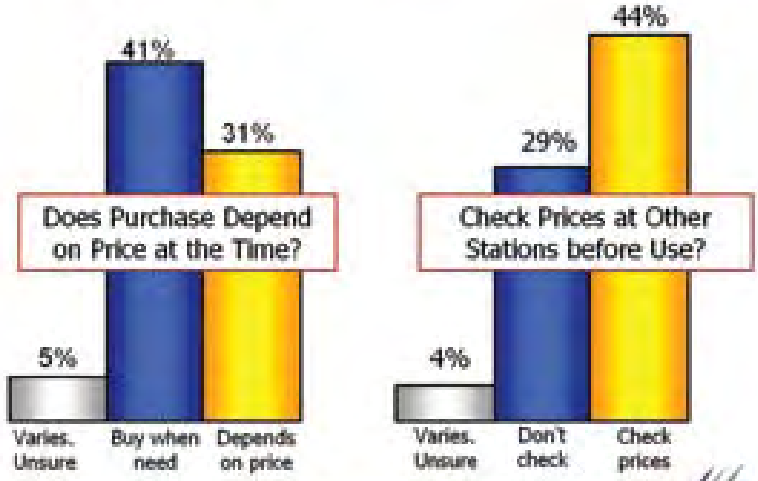
4.2 Price Sensitivity When Using Dockets – the 77%

The 77% using shopper dockets were asked whether their purchase of 'discounted' petrol depends on the price, and whether they check the prices at other service stations.



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5. Sources of Information about Petrol Prices

5.1 Main Sources of Information about Petrol Prices

5.2 Other Sources of Information

5.3 Likelihood of Using Information Sources

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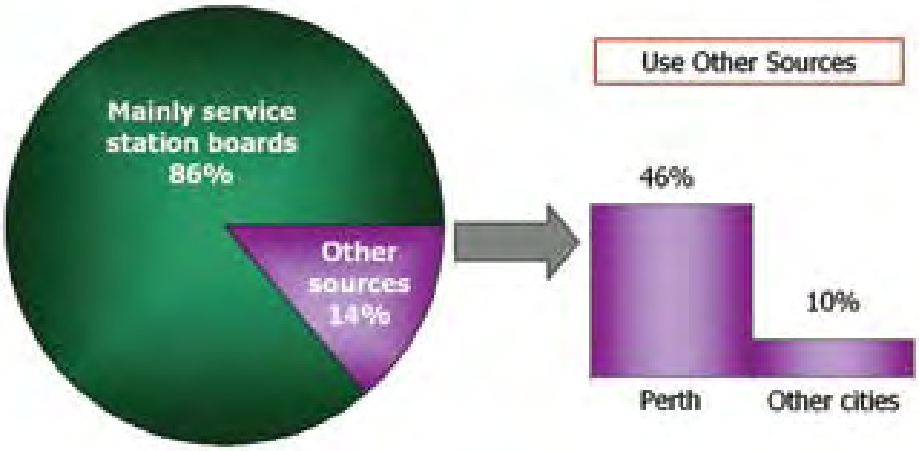
5.1 Main Sources of Information about Petrol Prices



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5.2 Other Sources of Information

	Perth	Other cities
Use other sources of information	46%	10%
• **Television.** TV news.	27%	2%
• **FuelWatch Website**	9%	-
• **Internet.** Online	5%	1%
• **Radio**	4%	3%
• **Email Alert**	3%	-
• **Newspapers**	2%	1%
• **Word of mouth**	-	2%
All FuelWatch mentions	17%	1%

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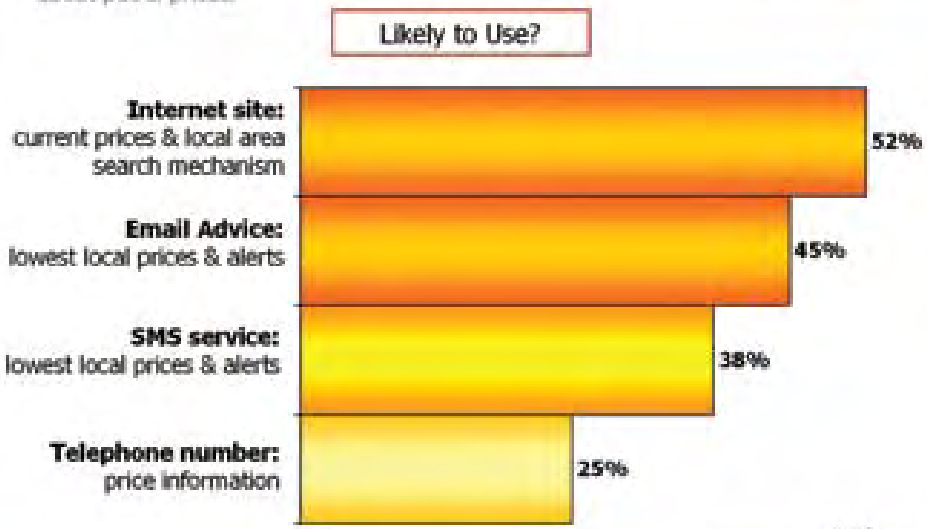
5.3 Likelihood of Using Information Sources

Motorists were asked whether they would be likely to use the following information sources about petrol prices.



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APPENDIX I:

Movements in retail prices compared with movements in international benchmark prices: individual city charts

Chart 2.6 in chapter 2 showed, for the period 1 January 2007 to 30 June 2007, seven-day rolling average retail unleaded petrol prices across the five major capital cities and seven-day rolling average prices of Singapore Mogas 95 Unleaded lagged one week in Australian cents per litre.

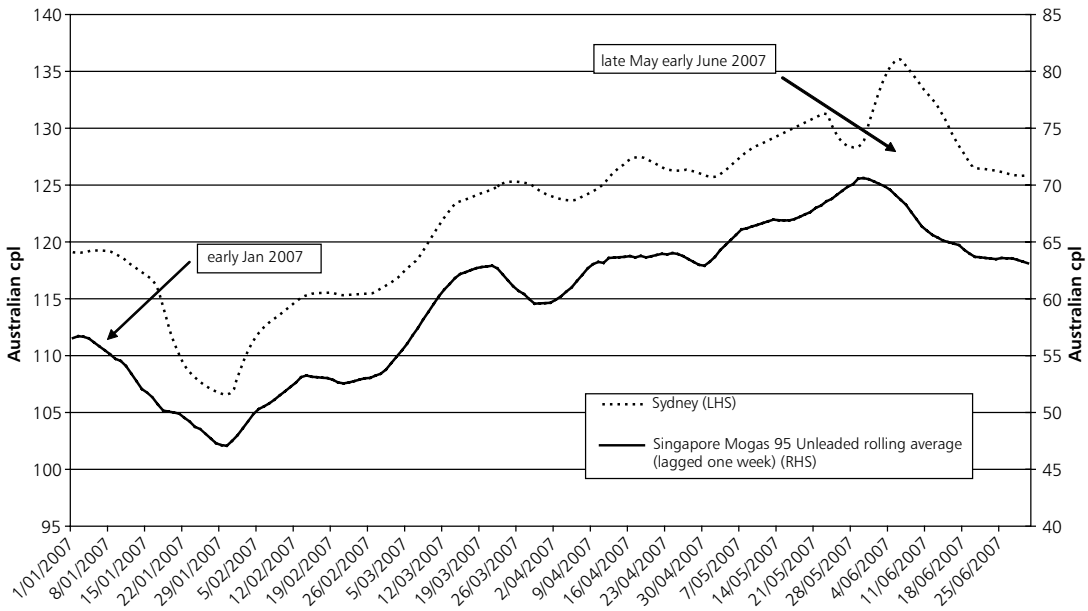
The charts in this attachment show the same data as in chart 2.6 for each of the five major metropolitan cities.

Two charts have been prepared for Perth: one with a seven-day rolling average of retail prices and one with a 14-day rolling average of retail prices. Retail average prices in Perth based on a 14-day rolling average more closely correlate with movements in Singapore Mogas 95 Unleaded than a seven-day rolling average. This is because price cycles in Perth generally now have a 14-day duration whereas the price cycles in the other capitals have a seven-day duration.

Note that domestic average prices are indicated on the left-hand side of the chart and Singapore Mogas 95 Unleaded prices are indicated on the right-hand side.

Sydney

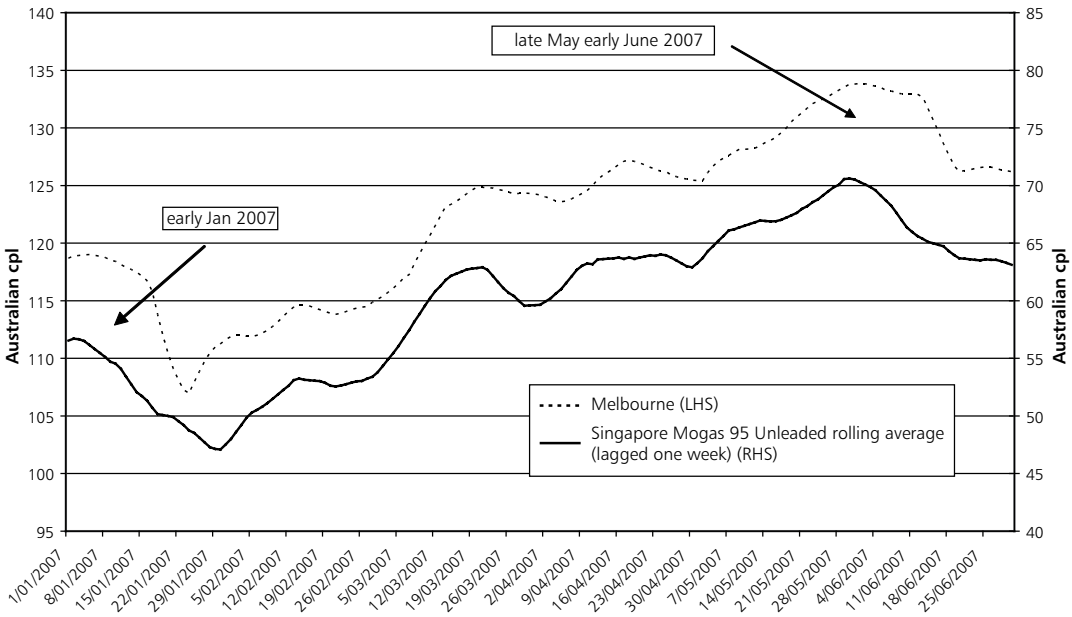
Chart I.1 Seven-day rolling average retail unleaded petrol prices in Sydney, and seven-day rolling average Singapore Mogas 95 Unleaded (lagged one week) prices: 1 January 2007 to 30 June 2007



Source: ACCC, Informed Sources and Platts.

Melbourne

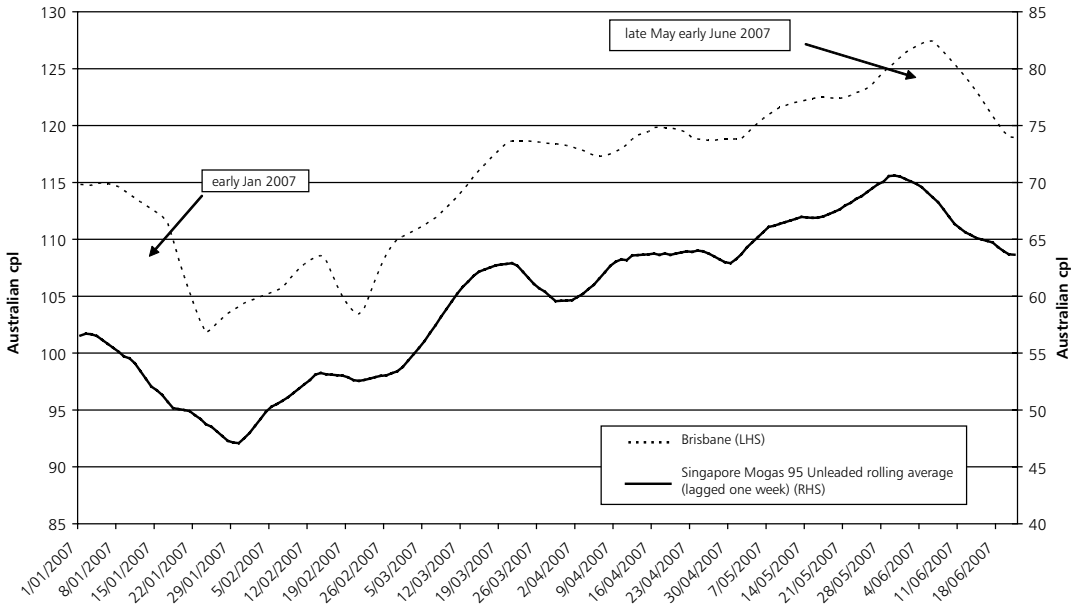
Chart I.2 Seven-day rolling average retail unleaded petrol prices in Melbourne and seven-day rolling average Singapore Mogas 95 Unleaded (lagged one week) prices: 1 January 2007 to 30 June 2007



Source: ACCC, Informed Sources and Platts.

Brisbane

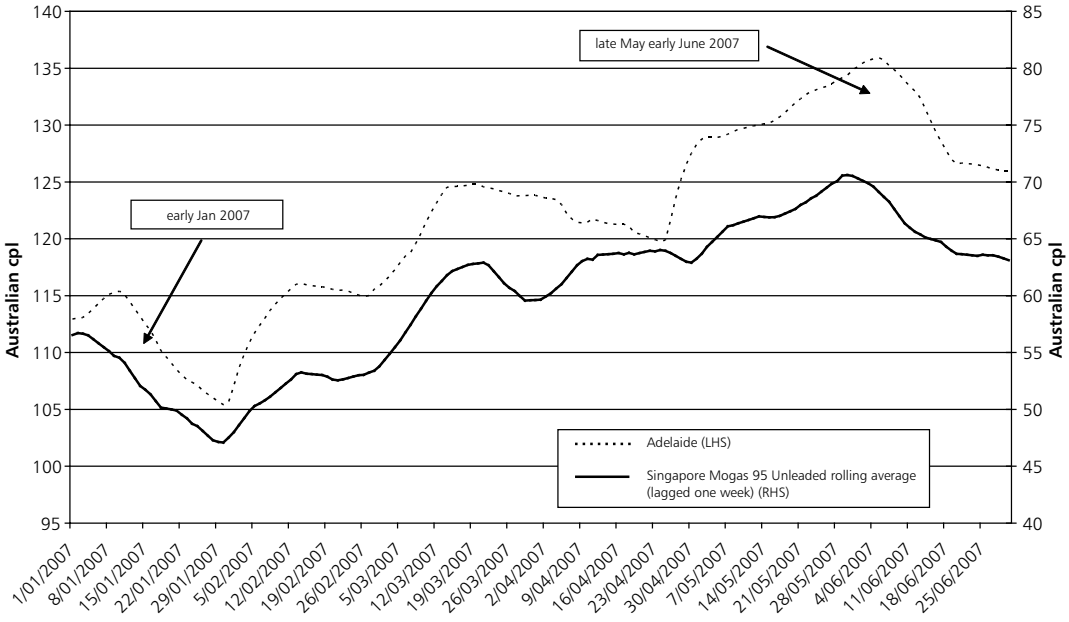
Chart I.3 Seven-day rolling average retail unleaded petrol prices in Brisbane and seven-day rolling average Singapore Mogas 95 Unleaded (lagged one week prices: 1 January 2007 to 30 June 2007



Source: ACCC, Informed Sources and Platts.

Adelaide

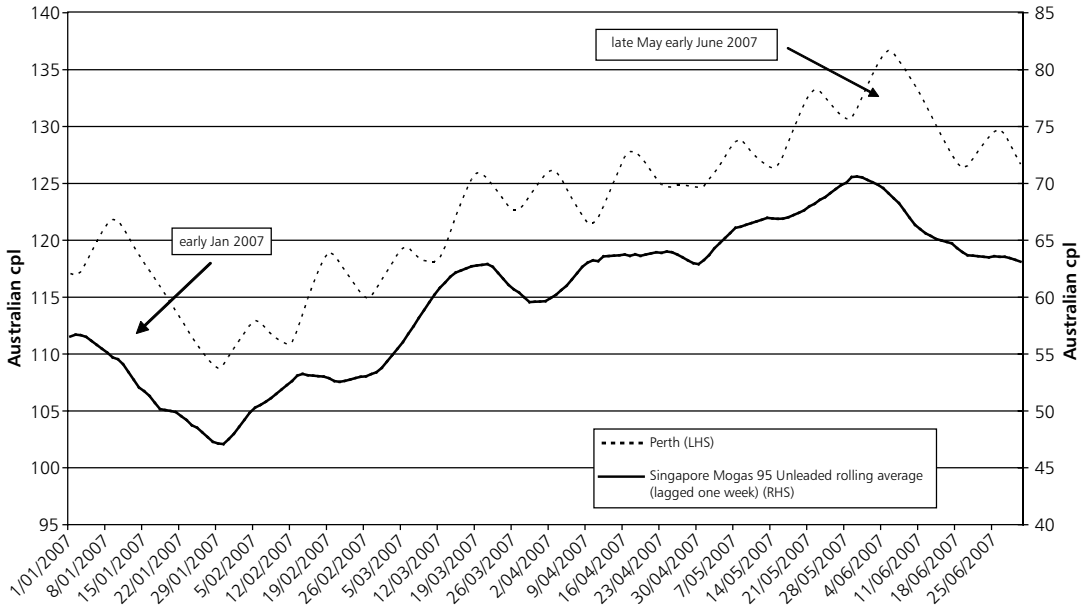
Chart I.4 Seven-day rolling average retail unleaded petrol prices in Adelaide and seven-day rolling average Singapore Mogas 95 Unleaded (lagged one week) prices: 1 January 2007 to 30 June 2007



Source: ACCC, Informed Sources and Platts.

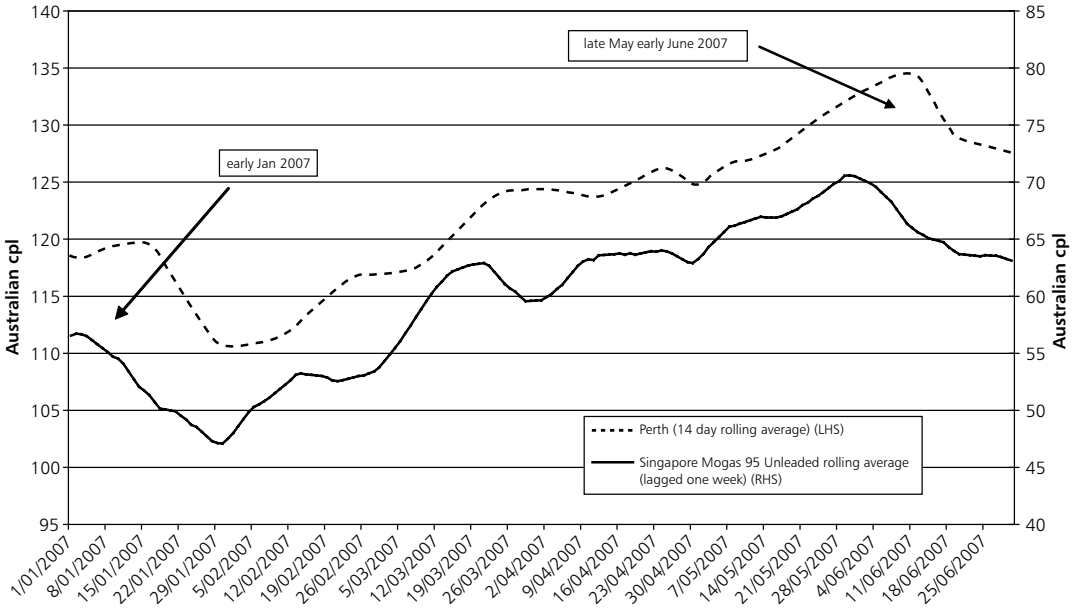
Perth

Chart I.5 Seven-day rolling average retail unleaded petrol prices in Perth and seven-day rolling average Singapore Mogas 95 Unleaded (lagged one week) prices: 1 January 2007 to 30 June 2007



Source: ACCC, Informed Sources and Platts.

Chart I.6 Fourteen-day rolling average retail unleaded petrol prices in Perth and seven-day rolling average Singapore Mogas 95 Unleaded (lagged one week) prices: 1 January 2007 to 30 June 2007



Source: ACCC, Informed Sources and Platts.

Appendix J:

Gross indicative retail margins

Retail margins are discussed in section 9.5 of chapter 9. In that section, aggregate results of the ACCC's analysis of gross indicative margins are presented, focusing on averages for the five largest cities. The methodology underlying the analysis is set out there. The results of the ACCC's analysis of gross retail margins in individual cities are presented in this appendix.[1]

Sydney

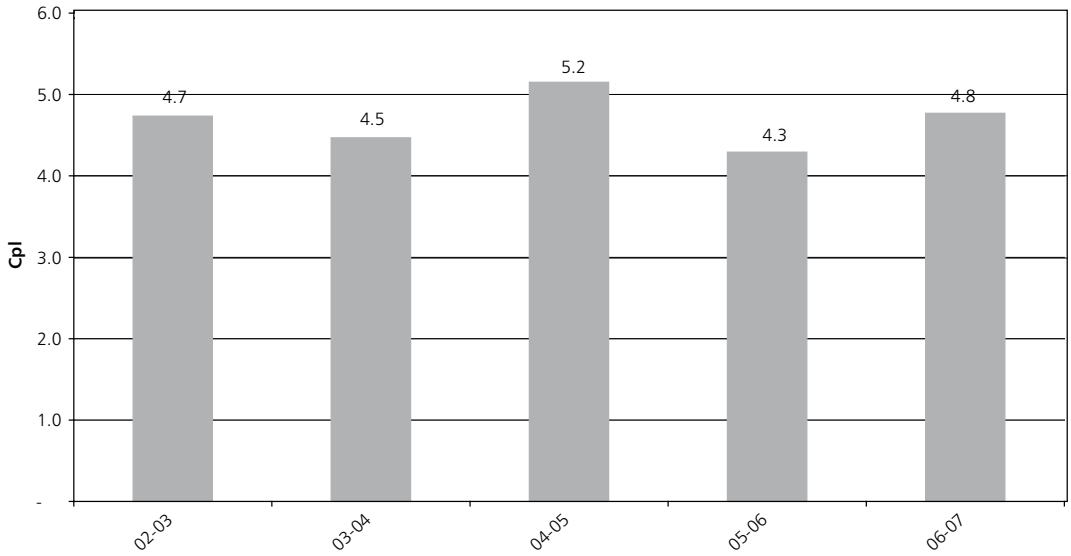
Average annual retail prices and TGPs in Sydney, and the difference between these prices (i.e. the retail margin), for 2002–03 to 2006–07 are presented in table J1. The information is also presented on a six-monthly basis in table J2, and on a monthly basis for 2006–07 in table J3. The differences for each of these periods are also presented in chart form.

Table J1 Average annual retail, terminal gate prices and margins, Sydney: 2002–03 to 2006-07

Period	Average retail prices cpl	Average TGPs cpl	Difference (margin) cpl
2002–03	89.7	85.0	4.7
2003–04	91.6	87.1	4.5
2004–05	103.3	98.2	5.2
2005–06	122.6	118.3	4.3
2006–07	123.3	118.5	4.8

The average annual margin was 4.7 cpl. It ranged from a low of 4.3 cpl in 2005–06 to a high of 5.2 cpl in 2004–05.

Chart J1 Sydney, annual differentials between retail unleaded petrol and average terminal gate prices: 2002–03 to 2006–07



1 All analysis in this appendix is based on data from Informed Sources, BP, Caltex, Mobile, Shell, Trafigura and Gull.

Table J2 Average six-monthly retail, terminal gate prices and margins, Sydney: H2 2002 to H1 2007

Period	Average retail	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2nd half 2002	88.0	83.8	4.2
1st half 2003	91.4	86.2	5.2
2nd half 2003	89.1	83.8	5.3
1st half 2004	94.1	90.5	3.6
2nd half 2004	102.1	96.5	5.6
1st half 2005	104.6	99.8	4.7
2nd half 2005	119.1	114.5	4.5
1st half 2006	126.2	122.2	4.0
2nd half 2006	123.8	118.2	5.6
1st half 2007	122.7	118.8	3.9

The margin for the six-monthly periods ranged from a low of 3.6 cpl in the first half of 2004 to a high of 5.6 cpl in the second half of both 2004 and 2006.

Chart J2 Sydney, six-monthly price differentials between average retail unleaded petrol and terminal gate prices: 2nd to 1st half of 2007

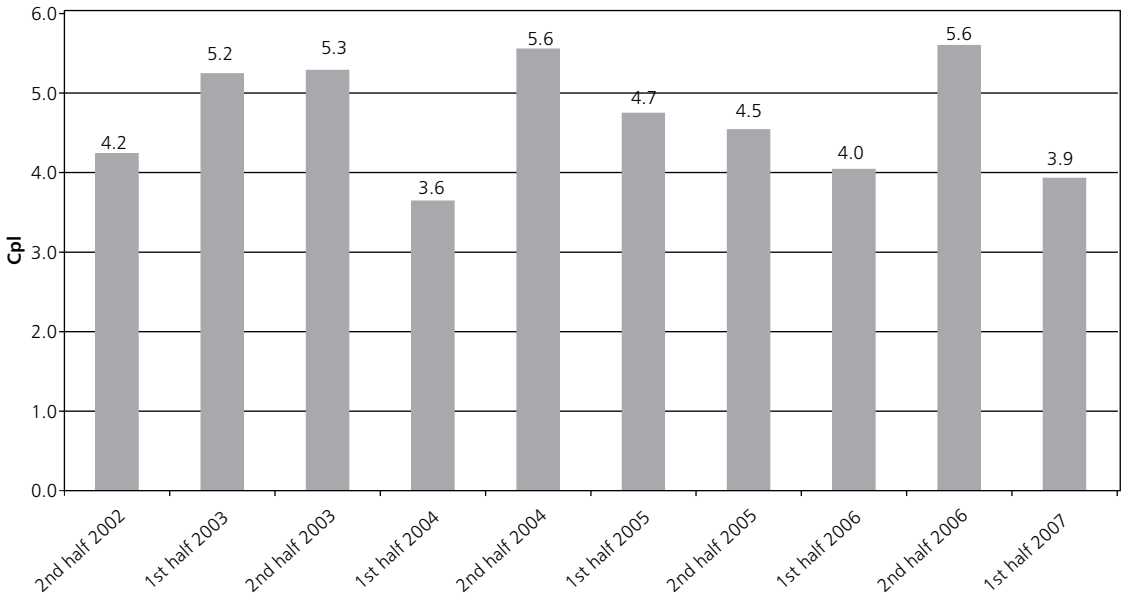
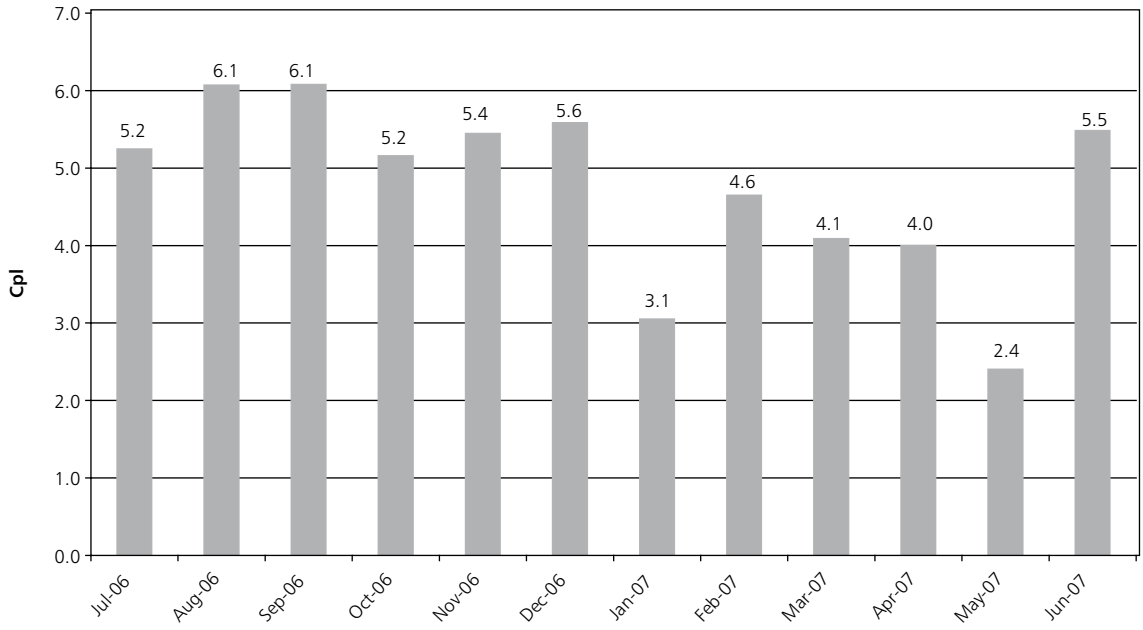


Table J3 Average monthly retail, terminal gate prices and margins, Sydney: July 2006 to June 2007

Period	Average retail	Average TGPs	Difference (margin)
	cpl	cpl	cpl
Jul 2006	137.1	131.9	5.2
Aug 2006	135.9	129.8	6.1
Sep 2006	122.9	116.8	6.1
Oct 2006	116.0	110.8	5.2
Nov 2006	113.0	107.6	5.4
Dec 2006	117.6	112.0	5.6
Jan 2007	112.8	109.8	3.1
Feb 2007	114.8	110.2	4.6
Mar 2007	123.2	119.1	4.1
Apr 2007	125.7	121.7	4.0
May 2007	129.5	127.1	2.4
Jun 2007	129.6	124.1	5.5

The monthly margin ranged from a low of 2.4 in May 2007 to a high of 6.1 cpl in August and September 2006.

Chart J3 Sydney, monthly differential between average retail prices and average terminal gate prices: July 2006 to June 2007



Melbourne

Average annual retail prices and TGPs in Melbourne, and the difference between these prices (i.e. the retail margin), for 2002–03 to 2006–07 are presented in table J4. The information is also presented on a six-monthly basis in table J5 and on a monthly basis for 2006–07 in table J6. The differences for each of these periods are also presented in chart form.

Table J4 Average annual retail, terminal gate prices and margins, Melbourne: 2002–03 to 2006–07

Period	Average retail prices	Average TGPs	Difference (margin)
	Cpl	Cpl	Cpl
2002-03	89.3	84.1	5.2
2003-04	90.6	86.1	4.5
2004-05	101.0	97.3	3.7
2005-06	122.3	117.4	4.8
2006-07	123.5	117.4	6.1

The average annual margin was 4.9 cpl. It ranged from a low of 3.7 cpl in 2004–05 to a high of 6.1 cpl in 2006–07.

Chart J4 Melbourne, annual differentials between retail unleaded petrol and average terminal gate prices: 2002–03 to 2006–07

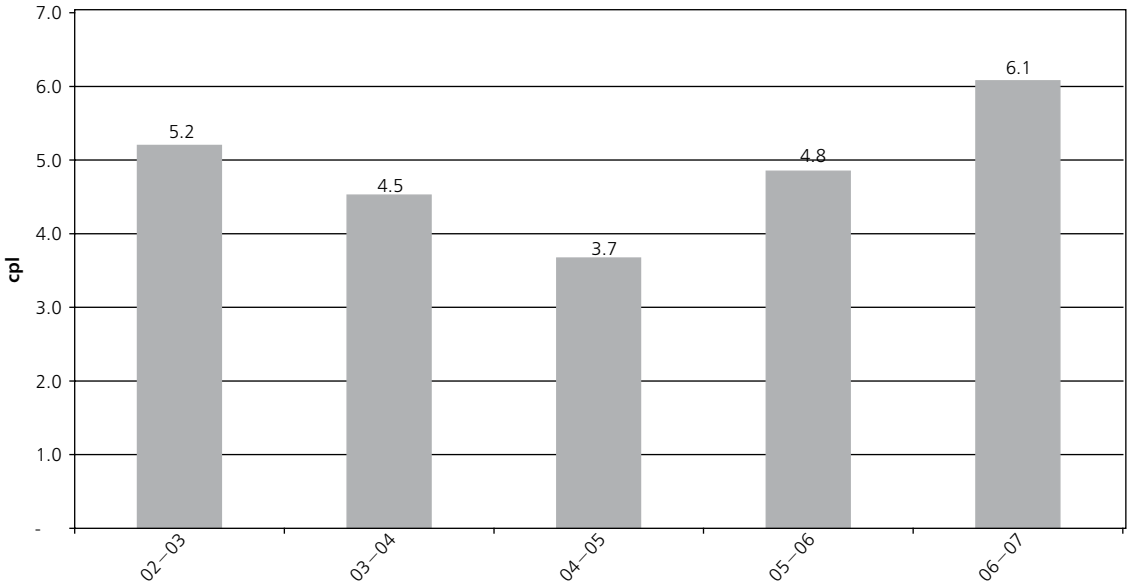


Table J5 Average six-monthly retail, terminal gate prices and margins, Melbourne: H2 2002 to H1 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2nd half 2002	88.0	82.8	5.2
1st half 2003	90.7	85.5	5.2
2nd half 2003	87.0	82.8	4.3
1st half 2004	94.3	89.5	4.8
2nd half 2004	99.6	95.5	4.1
1st half 2005	102.4	99.1	3.2
2nd half 2005	118.4	113.4	5.1
1st half 2006	126.2	121.5	4.6
2nd half 2006	124.3	117.2	7.2
1st half 2007	122.7	117.7	5.0

The margin in the six-monthly periods ranged from a low of 3.2 cpl in the first half of 2005 to a high of 7.2 cpl in the second half of 2006.

Chart J5 Melbourne, six-monthly price differentials between average retail unleaded petrol prices and terminal gate prices: 2nd half 2002 to 1st half 2007

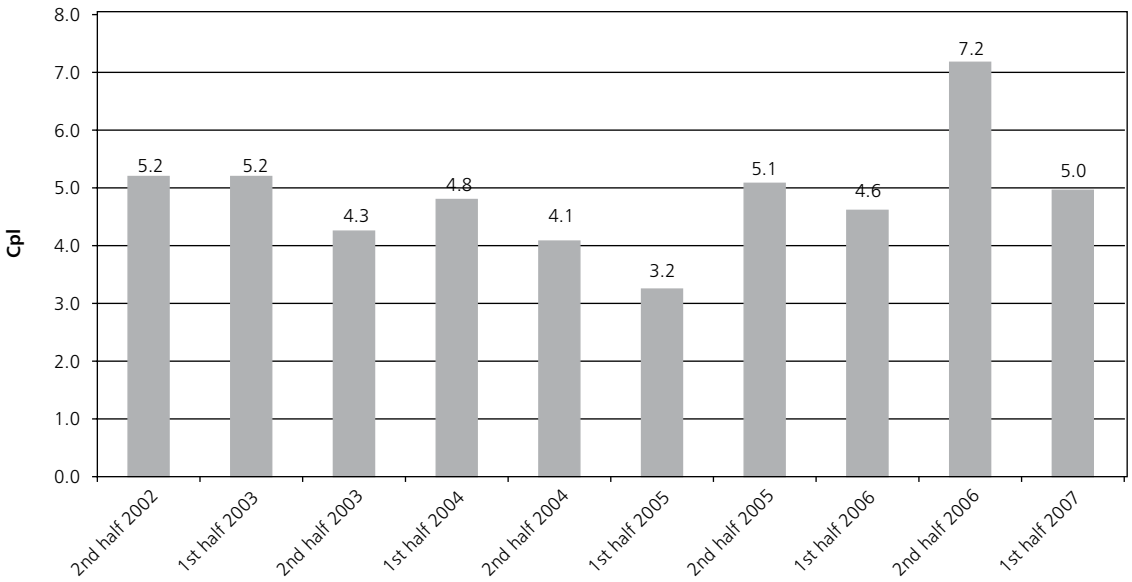
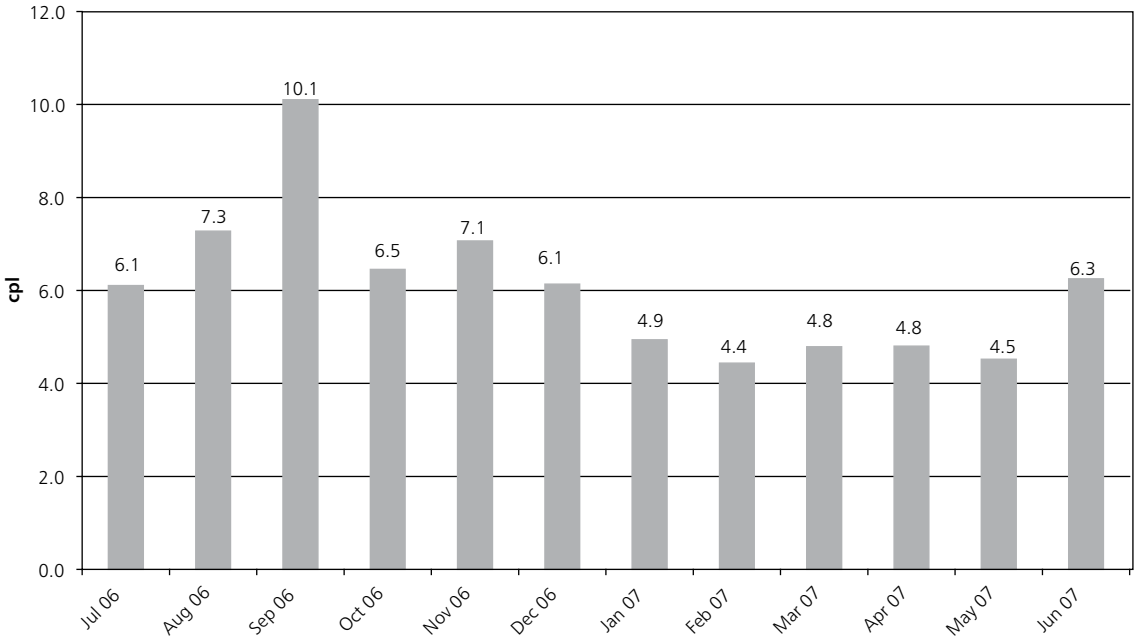


Table J6 Average monthly retail, terminal gate prices and margins, Melbourne: July 2006 to June 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
Jul 2006	137.0	130.8	6.1
Aug 2006	136.1	128.9	7.3
Sept 2006	124.8	114.7	10.1
Oct 2006	116.5	110.0	6.5
Nov 2006	114.0	107.0	7.1
Dec 2006	117.3	111.2	6.1
Jan 2007	113.4	108.5	4.9
Feb 2007	113.9	109.4	4.4
Mar 2007	122.8	118.1	4.8
Apr 2007	125.5	120.7	4.8
May 2007	130.6	126.0	4.5
Jun 2007	129.3	123.0	6.3

The margin in the monthly periods ranged from a low of 4.4 cpl in February 2007 to a high of 10.1 cpl in September 2006.

Chart J6 Melbourne, monthly differential between average retail prices and average terminal gate prices: July 2006 to June 2007



Brisbane

Average annual retail prices and TGPs in Brisbane, and the difference between these prices (i.e. the retail margin), for 2002–03 to 2006–07 are presented in table J7. The information is also presented on a six-monthly basis in table J8 and on a monthly basis for 2006–07 in table J9. The differences for each of these periods are also presented in chart form.

Table J7 Average annual retail, terminal gate prices and margins, Brisbane: 2002–03 to 2006–07

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2002–03	81.8	76.5	5.3
2003–04	83.9	78.6	5.3
2004–05	94.1	89.9	4.3
2005–06	114.5	109.9	4.6
2006–07	116.0	109.8	6.2

The average annual margin was 5.1 cpl. It ranged from a low of 4.3 cpl in 2004–05 to a high of 6.2 cpl in 2006–07.

Chart J7 Brisbane annual differentials between retail unleaded petrol and average terminal gate prices: 2002–03 to 2006–07

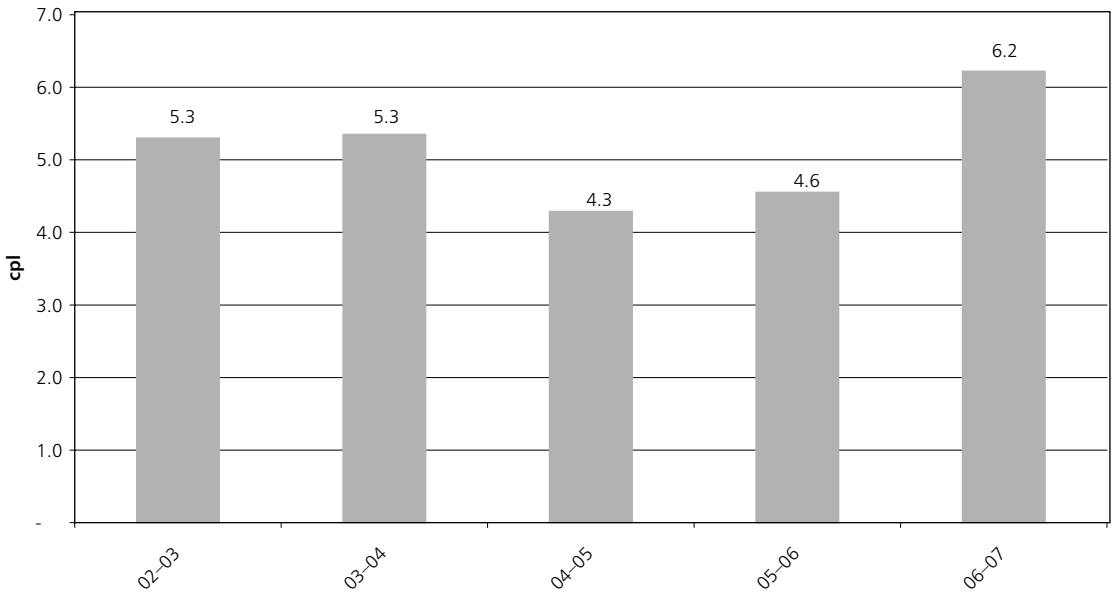


Table J8 Average six-monthly retail, terminal gate prices and margins, Brisbane: H2 2002 to H1 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2nd half 2002	81.0	75.2	5.9
1st half 2003	82.5	77.8	4.7
2nd half 2003	81.0	75.5	5.5
1st half 2004	86.9	81.7	5.2
2nd half 2004	93.3	88.4	5.0
1st half 2005	95.0	91.4	3.6
2nd half 2005	110.1	105.6	4.4
1st half 2006	119.0	114.3	4.7
2nd half 2006	116.0	109.8	6.2
1st half 2007	116.0	109.7	6.3

The margin in the six-monthly periods ranged from a low of 3.6 cpl in the first half of 2005 to a high of 6.3 cpl in the second half of 2007.

Chart J8 Brisbane six-monthly price differentials between average retail unleaded petrol and terminal gate prices: 2nd half 2002 to 1st half 2007

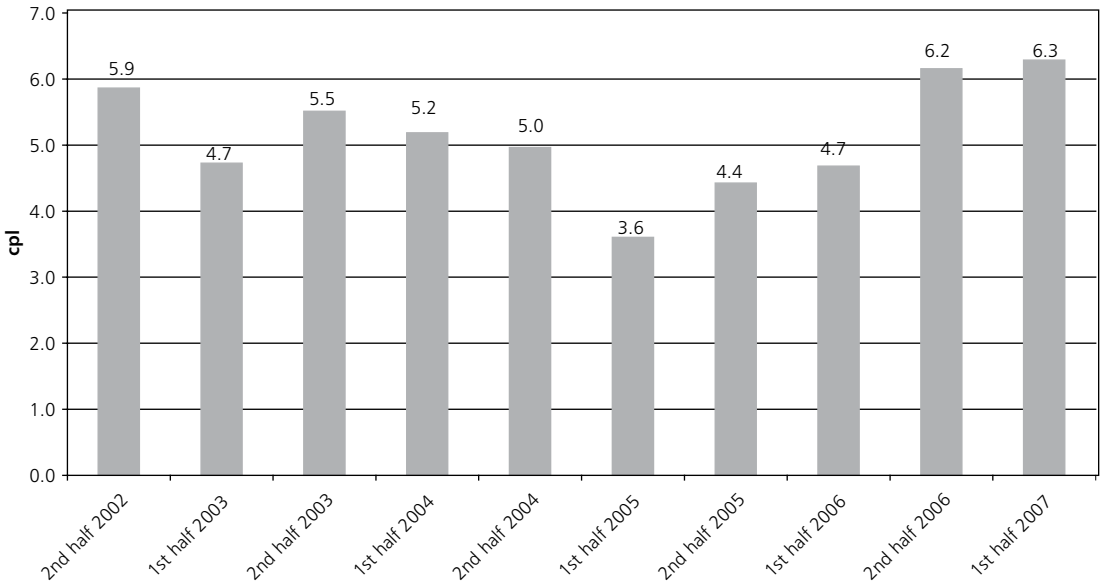
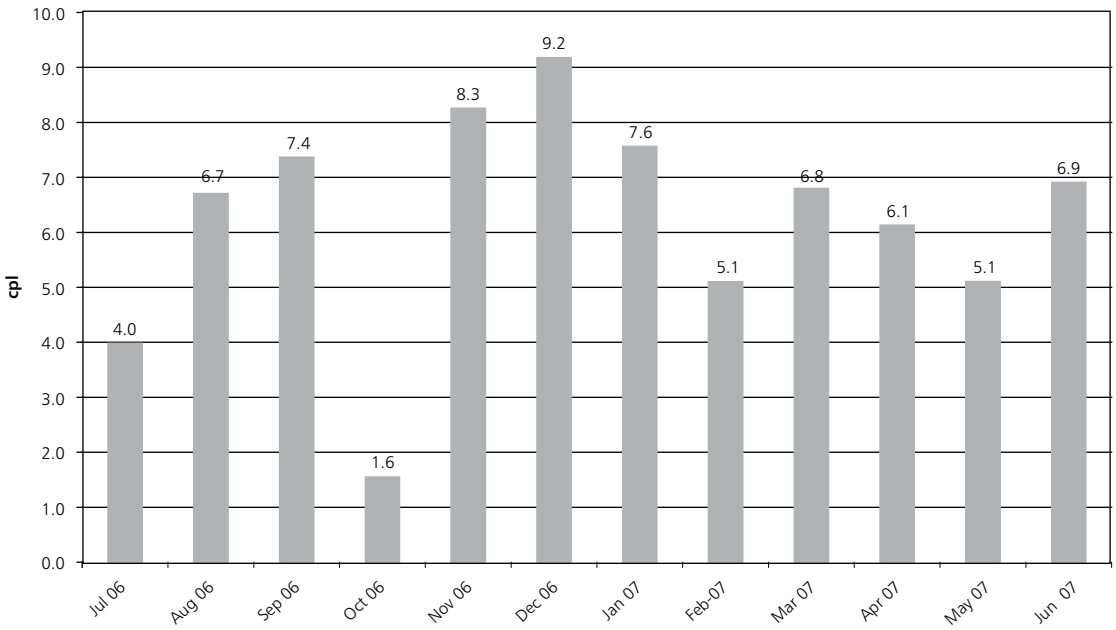


Table J9 Average monthly retail, terminal gate prices and margins, Brisbane: July 2006 to June 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
Jul 2006	127.5	123.5	4.0
Aug 2006	128.0	121.3	6.7
Sep 2006	115.3	108.0	7.4
Oct 2006	104.0	102.4	1.6
Nov 2006	107.7	99.4	8.3
Dec 2006	113.1	103.9	9.2
Jan 2007	108.4	100.8	7.6
Feb 2007	106.9	101.8	5.1
Mar 2007	116.6	109.8	6.8
Apr 2007	118.6	112.5	6.1
May 2007	122.9	117.8	5.1
Jun 2007	121.7	114.8	6.9

The margin in the monthly periods ranged from a low of 1.6 cpl in October 2006 to a high of 9.2 cpl in December 2006.

Chart J9 Brisbane, monthly differential between average retail prices and average terminal gate prices: July 2006 to June 2007



Adelaide

Average annual retail prices and TGPs in Adelaide, and the difference between these prices (i.e. the retail margin), for 2002–03 to 2006–07 are presented in table J10. The information is also presented on a six-monthly basis in table J11 and on a monthly basis for 2006–07 in table J12. The differences for each of these periods are also presented in chart form.

Table J10 Average annual retail, terminal gate prices and margins, Adelaide: 2002–03 to 2006–07

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2002–03	90.4	86.8	3.6
2003–04	93.0	89.1	3.9
2004–05	103.3	99.6	3.7
2005–06	123.7	119.7	4.0
2006–07	122.4	119.1	3.3

The average annual margin was 3.7 cpl. It ranged from a low of 3.3 cpl in 2006–07 to a high of 4.0 cpl in 2005–6.

Chart J10 Adelaide annual differentials between retail unleaded petrol and average terminal gate prices: 2002–03 to 2006–07

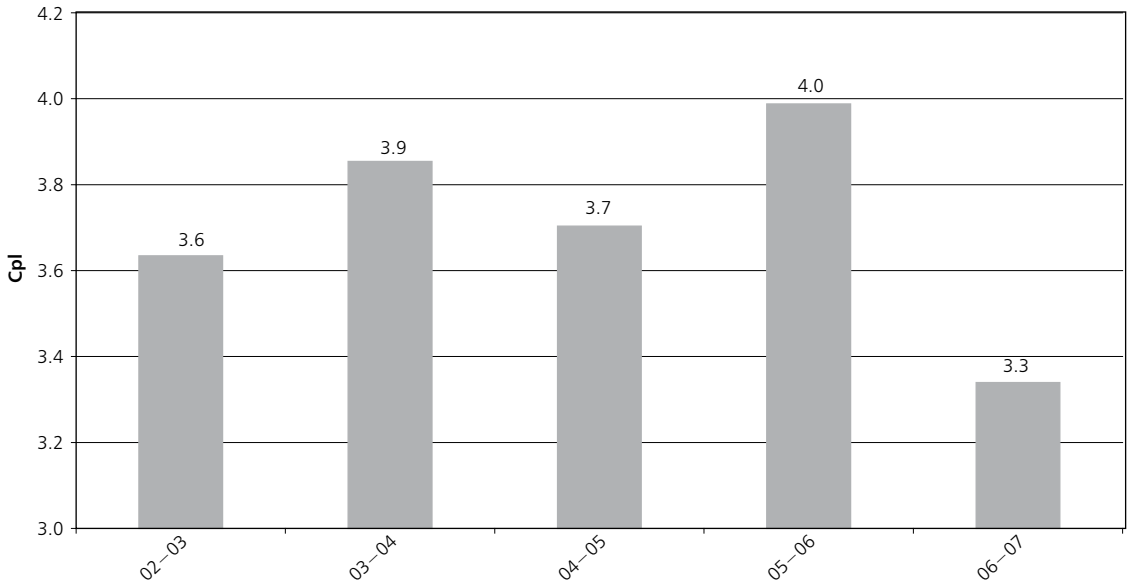


Table J11 Average six-monthly retail, terminal gate prices and margins, Adelaide: H2 2002 to H1 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2nd half 2002	88.9	85.4	3.5
1st half 2003	92.1	88.3	3.8
2nd half 2003	90.0	86.0	4.0
1st half 2004	95.9	92.2	3.7
2nd half 2004	101.5	98.0	3.6
1st half 2005	105.1	101.3	3.9
2nd half 2005	120.2	115.8	4.4
1st half 2006	127.3	123.7	3.6
2nd half 2006	122.7	119.1	3.6
1st half 2007	122.1	119.1	3.0

The margin in the six-monthly periods ranged from a low of 3.0 cpl in the firstt half of 2007 to a high of 4.4 cpl in the second half of 2005.

Chart J11 Adelaide six-monthly price differentials between average retail unleaded petrol prices and terminal gate prices: 2nd half 2002 to 1st half 2007

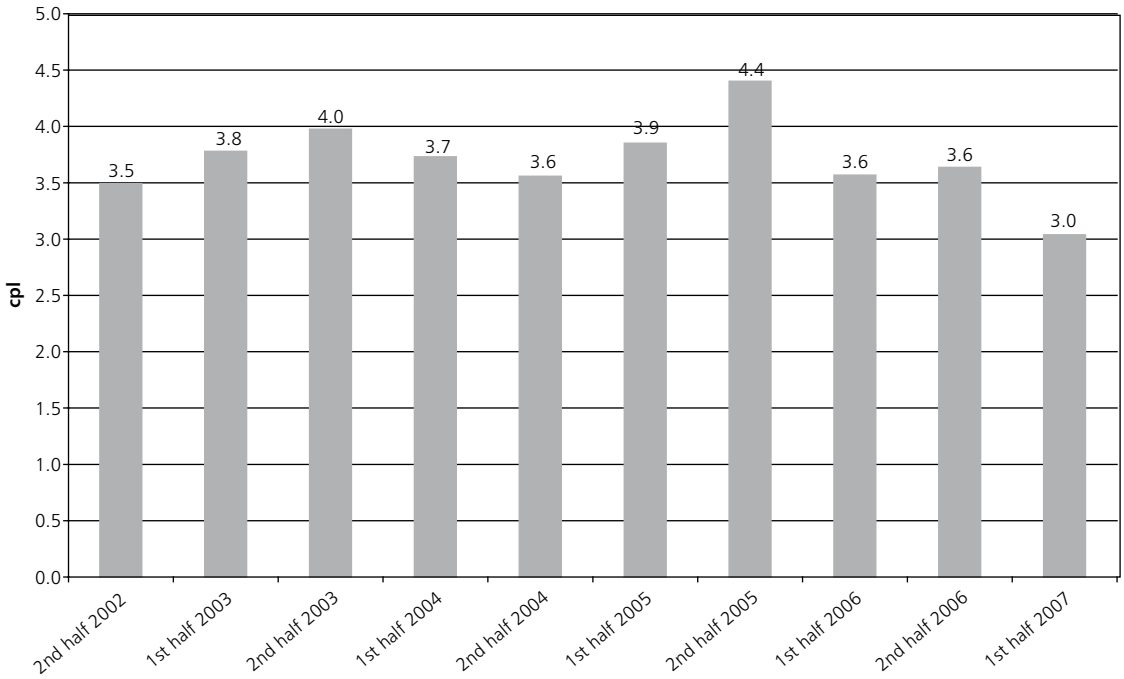
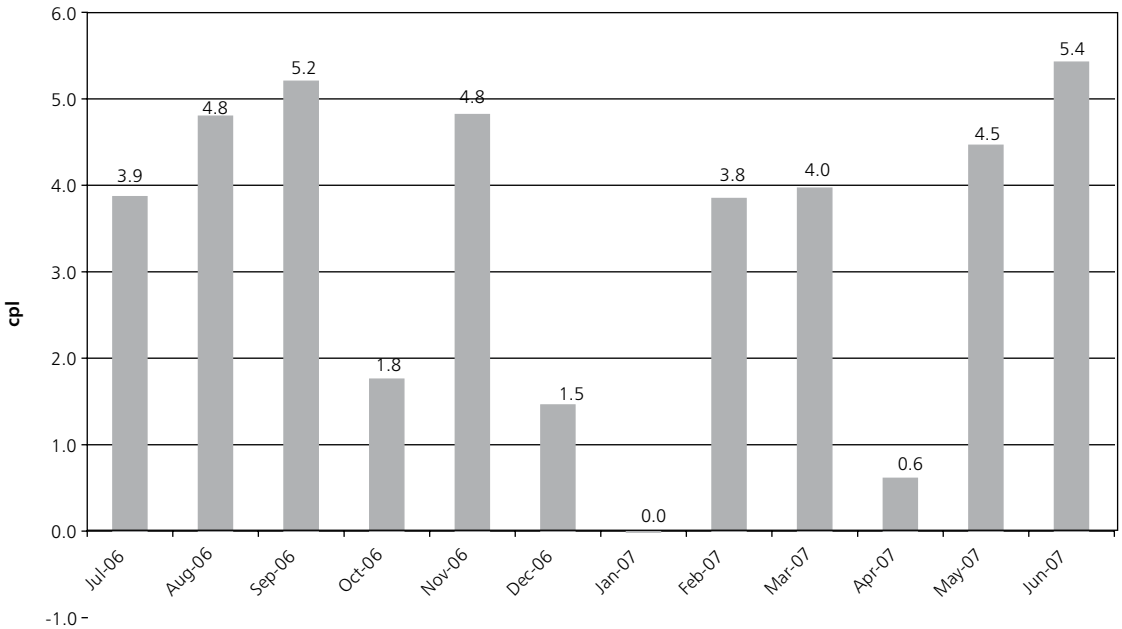


Table J12 Average monthly retail, terminal gate prices and margins, Adelaide: July 2006 to June 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
Jul 2006	136.6	132.7	3.9
Aug 2006	135.4	130.6	4.8
Sep 2006	122.5	117.3	5.2
Oct 2006	113.5	111.7	1.8
Nov 2006	113.6	108.8	4.8
Dec 2006	114.6	113.1	1.5
Jan 2007	110.2	110.2	0.0
Feb 2007	115.0	111.2	3.8
Mar 2007	123.3	119.3	4.0
Apr 2007	122.4	121.8	0.6
May 2007	131.8	127.3	4.5
Jun 2007	129.7	124.3	5.4

The margin in the six-monthly periods ranged from a low of 0.0 cpl in January 2007 to a high of 5.4 cpl in June 2007.

Chart J12 Adelaide, monthly differential between average retail prices and average terminal gate prices, July 2006 to June 2007



Perth

Average annual retail prices and TGPs in Perth, and the difference between these prices (i.e. the retail margin), for 2003–04 to 2006–07 are presented in table J13. The information is also presented on a six-monthly basis in table J14 and on a monthly basis for 2006–07 in Table J15. The differences for each of these periods are also presented in chart form.

Table J13 Average annual retail, terminal gate prices and margins, Perth: 2003–04 to 2006–07

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
2003–04	92.3	89.2	3.0
2004–05	101.4	99.6	1.9
2005–06	122.3	119.3	2.9
2006–07	122.9	118.9	4.0

The average annual margin was 3.0 cpl. It ranged from a low of 1.9 cpl in 2004–05 to a high of 4.0 cpl in 2006–07.

Chart J13 Perth annual differentials between retail unleaded petrol prices and average terminal gate prices: 2003–04 to 2006–07

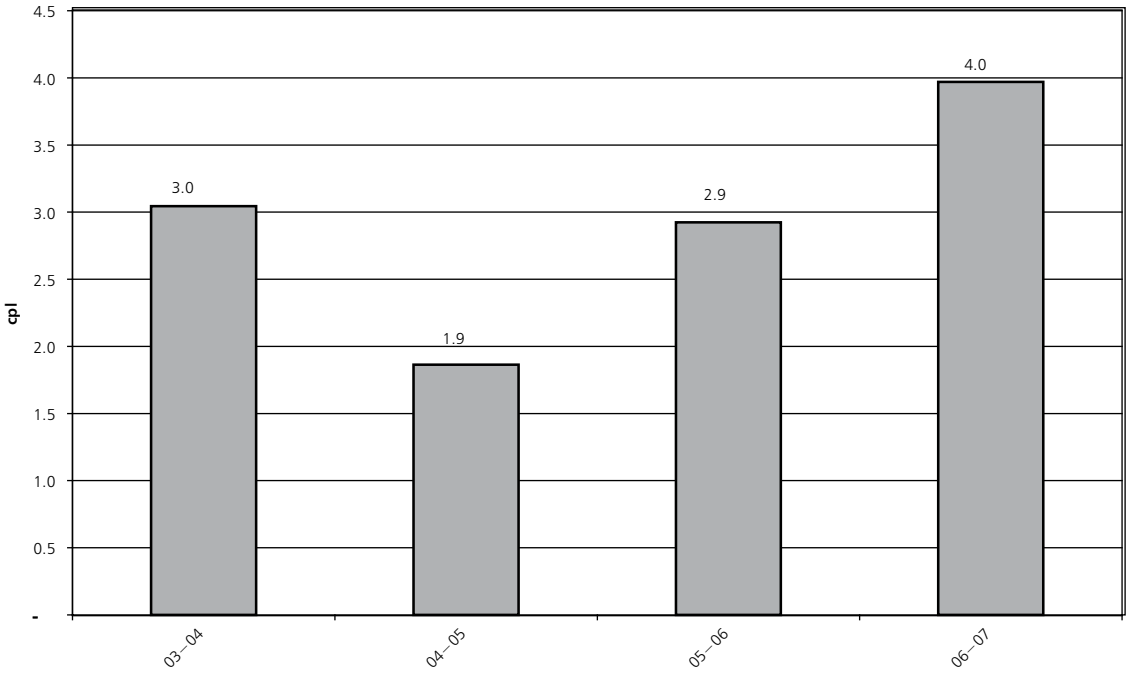


Table J14 Average six-monthly retail, terminal gate prices and margins, Perth: H1 2003 to H1 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
1st half 2003	92.7	88.6	4.1
2nd half 2003	90.3	86.3	4.0
1st half 2004	94.3	92.3	2.1
2nd half 2004	100.6	98.0	2.6
1st half 2005	102.3	101.2	1.1
2nd half 2005	118.5	115.8	2.6
1st half 2006	126.1	122.9	3.2
2nd half 2006	122.8	118.5	4.2
1st half 2007	123.0	119.3	3.7

The margin in the six-monthly periods ranged from a low of 1.1 cpl in the first half of 2005 to a high of 4.2 cpl in the second half of 2006.

Chart J14 Perth six-monthly price differentials between average retail unleaded petrol and terminal gate prices: 1st half 2003 to 1st half 2007

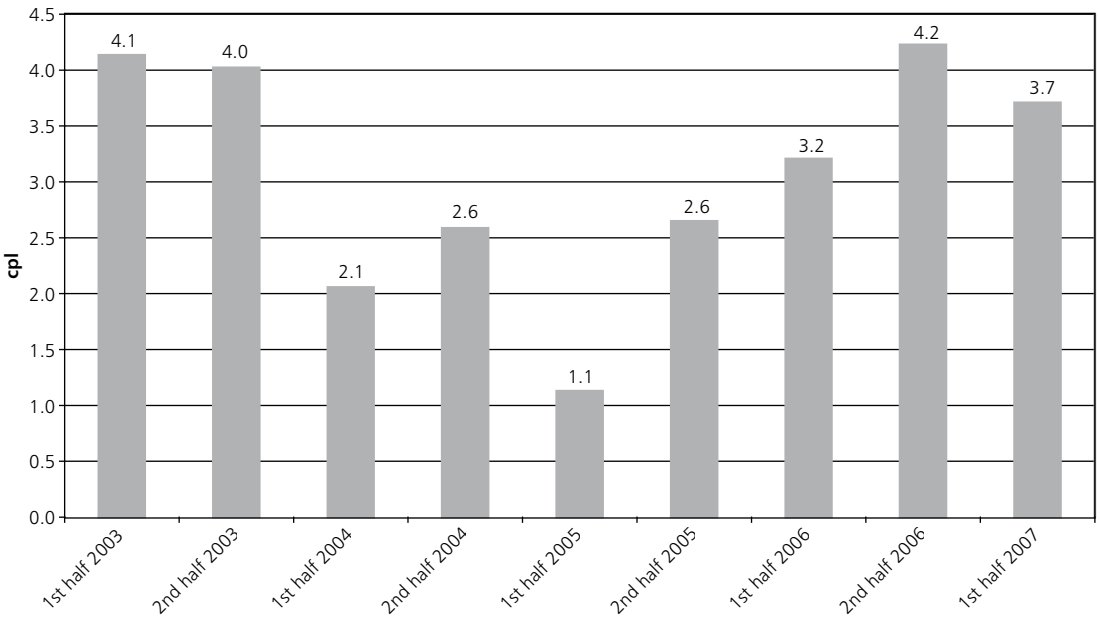
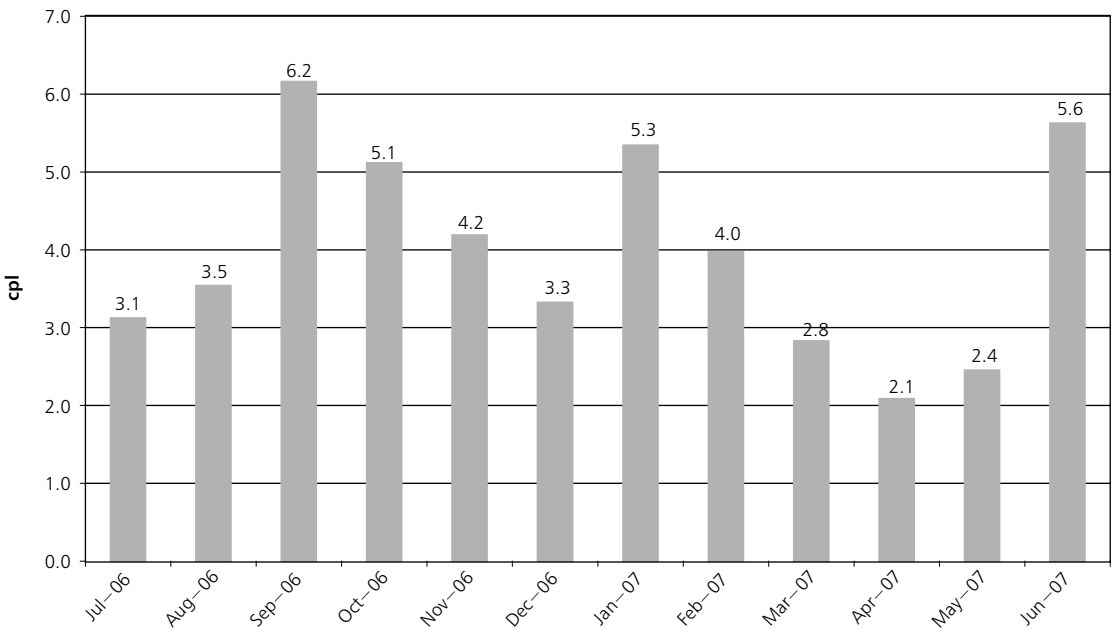


Table J15 Average monthly retail, terminal gate prices and margins, Perth: July 2006 to June 2007

Period	Average retail prices	Average TGPs	Difference (margin)
	cpl	cpl	cpl
Jul 2006	135.1	132.0	3.1
Aug 2006	133.5	130.0	3.5
Sep 2006	122.6	116.5	6.2
Oct 2006	116.4	111.3	5.1
Nov 2006	112.8	108.6	4.2
Dec 2006	115.8	112.4	3.3
Jan 2007	115.2	109.9	5.3
Feb 2007	114.9	110.9	4.0
Mar 2007	122.5	119.7	2.8
Apr 2007	124.6	122.6	2.1
May 2007	130.2	127.8	2.4
Jun 2007	130.0	124.3	5.6

The margin in the six-monthly periods ranged from a low of 2.1 cpl in April 2007 to a high of 6.2 cpl in September 2006.

Chart J15 Perth, monthly differential between average retail prices and average terminal gate prices: July 2006 to June 2007



Appendix K:

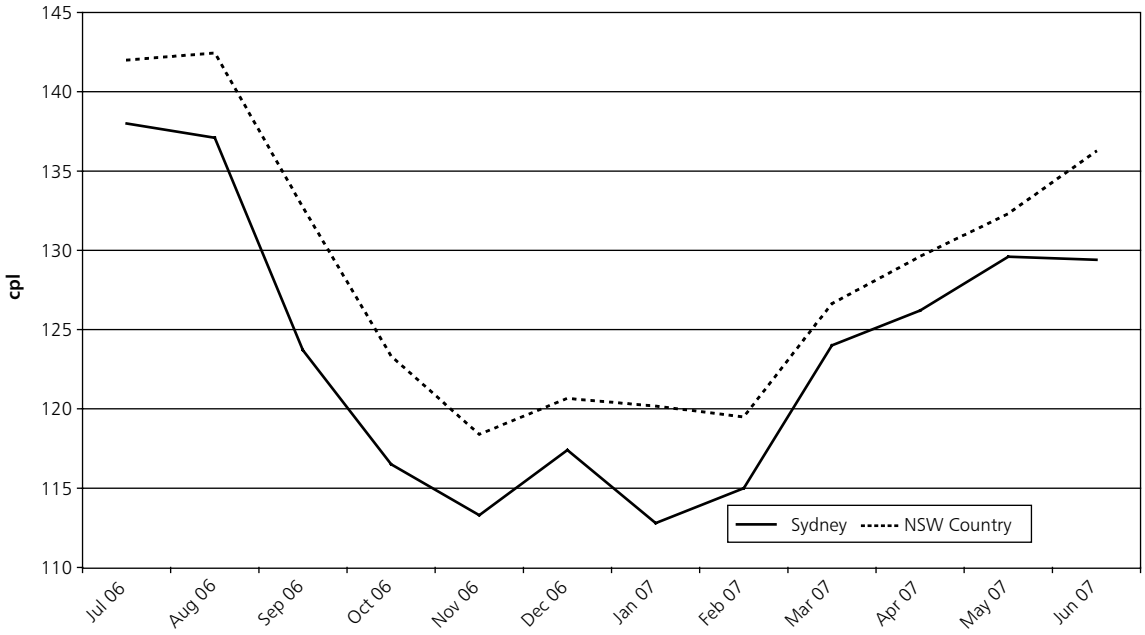
City and country prices

Prices in regional areas are discussed in chapter 10. In that chapter, the price differential between city and country areas, as well as the differentials between individual country towns, is examined. Aggregate results of the ACCC's analysis of the city–country differential are discussed in chapter 10. This appendix provides results on an individual state level.

Movements in city and country prices in 2006–07

Charts K.1 to K.7 below show for each state and the Northern Territory average monthly capital city and average country prices over the period July 2006 to June 2007.[1]

Chart K.1 Sydney and New South Wales country, average monthly retail prices: July 2006 to June 2007



1 The average country price is the average of monthly prices in all towns in the state or the Northern Territory for which prices are available. The charts in this appendix are based on FUELtrac data.

Chart K.2 Melbourne and Victorian country, average monthly retail prices: July 2006 to June 2007

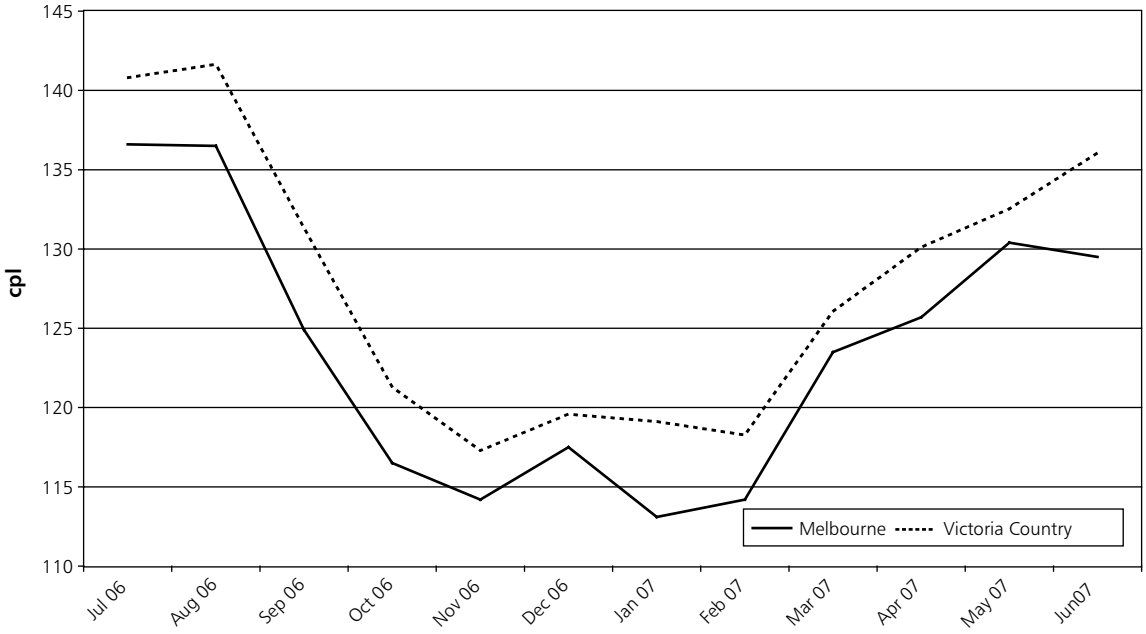


Chart K.3 Brisbane and Queensland country, average monthly retail prices: July 2006 to June 2007

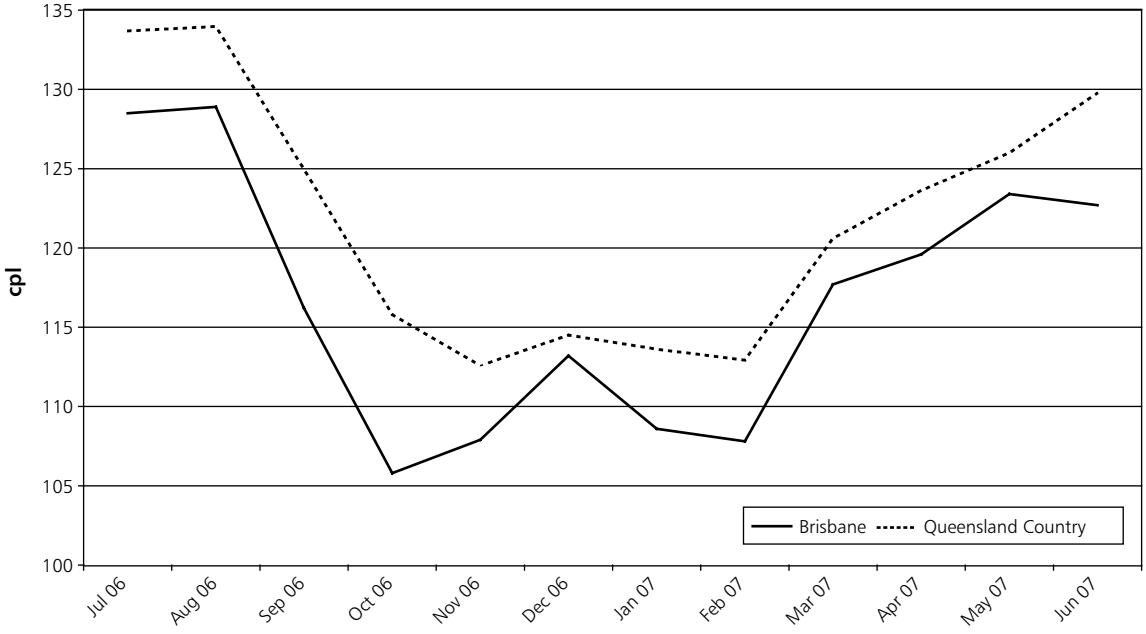


Chart K.4 Adelaide and South Australian country, average monthly retail prices: July 2006 to June 2007

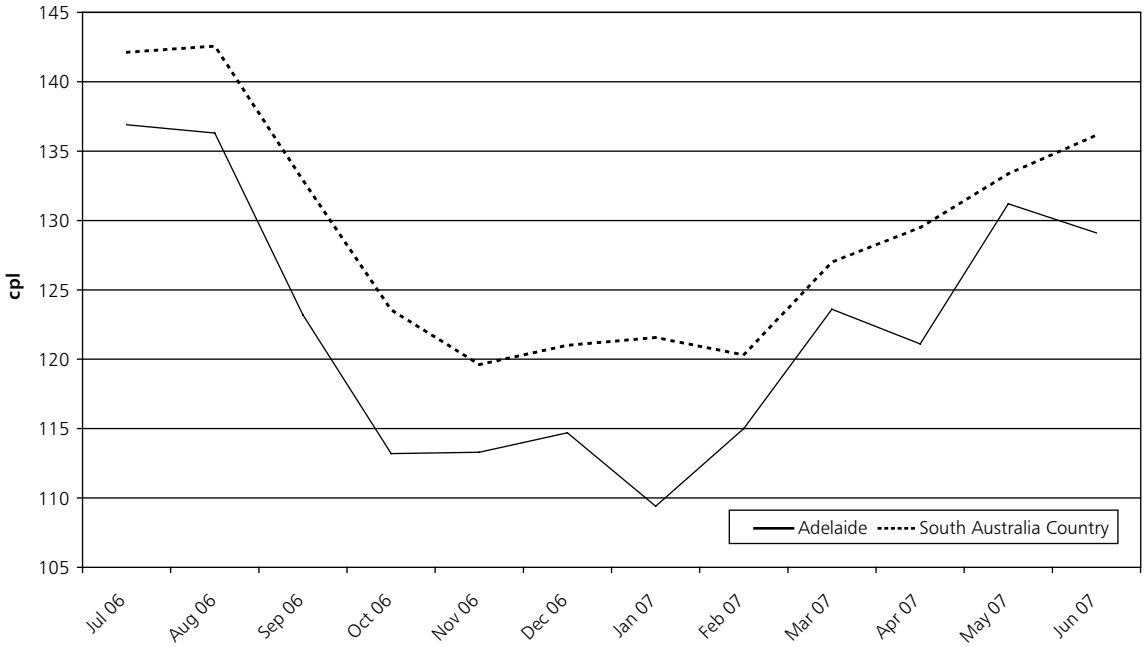


Chart K.5 Perth and Western Australian country, average monthly retail prices: July 2006 to June 2007

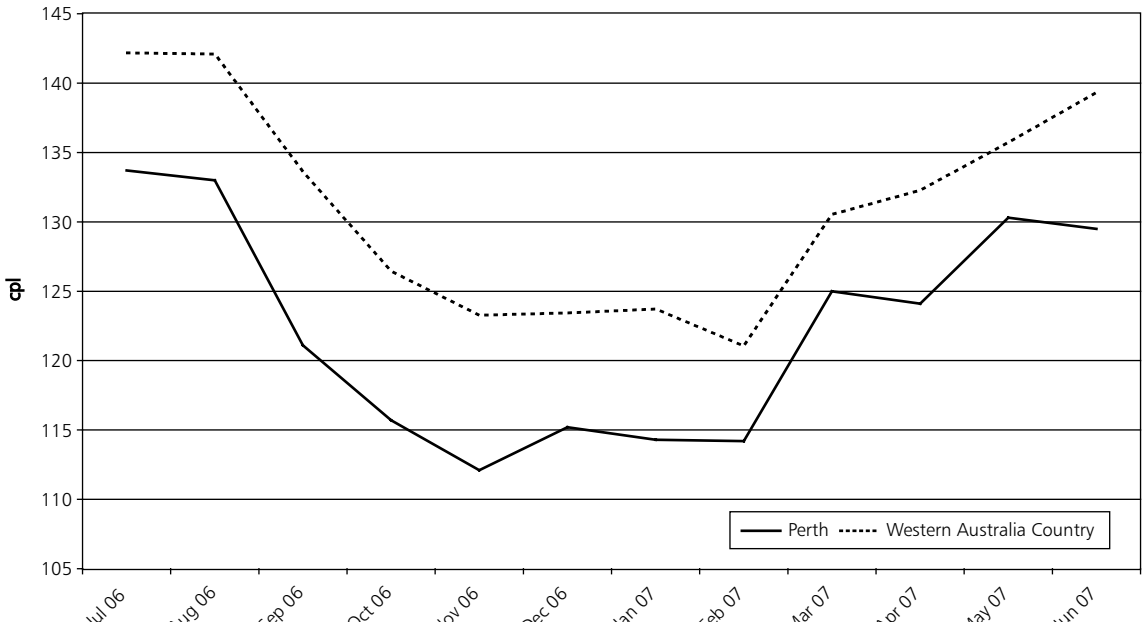


Chart K.6 Hobart and Tasmanian country, average monthly retail prices : July 2006 to June 2007

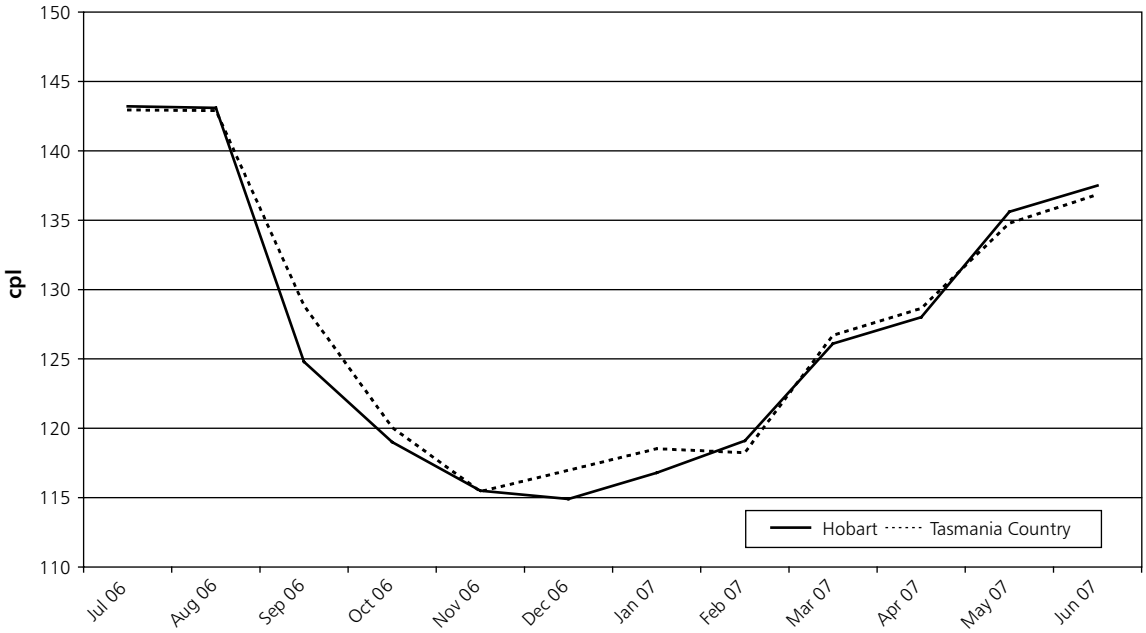
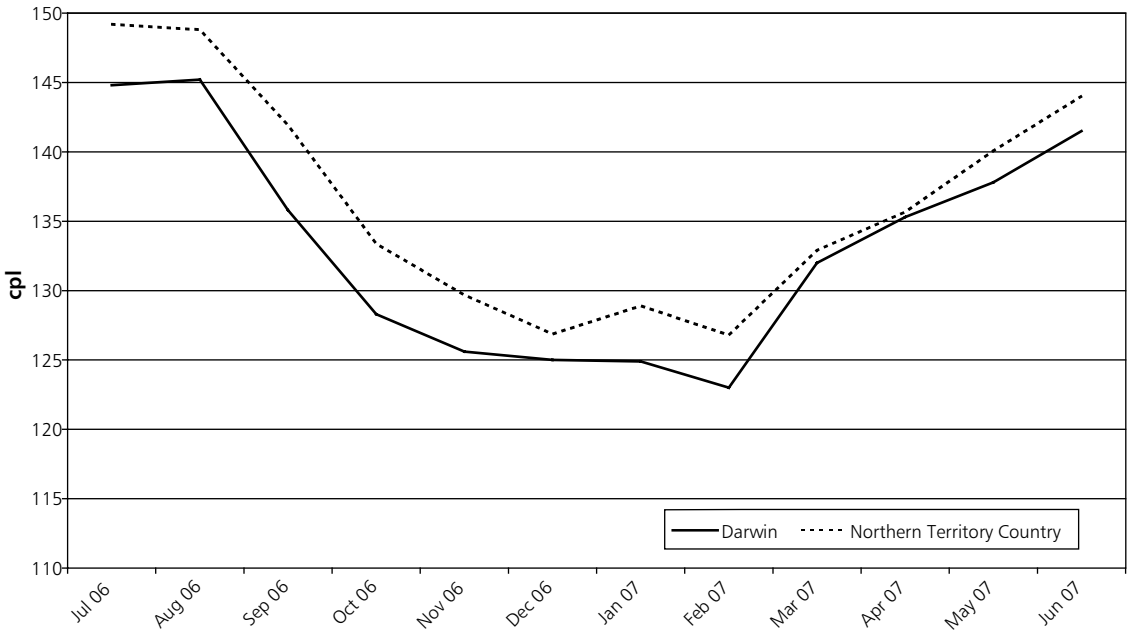


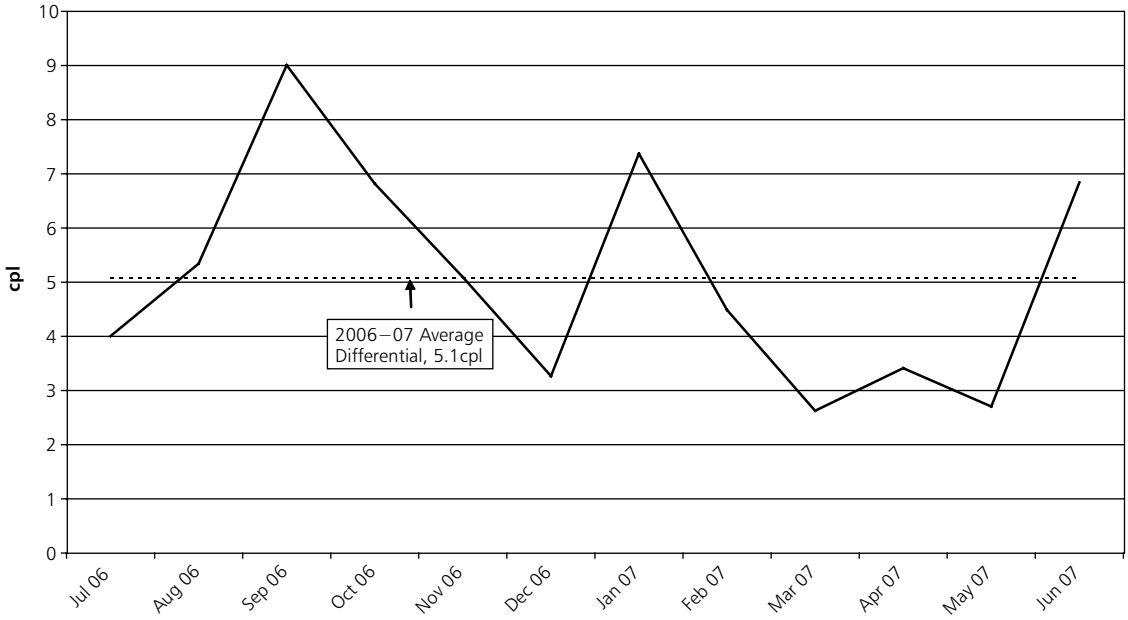
Chart K.7 Darwin and Northern Territory country, average monthly retail prices: July 2006 to June 2007



Monthly variations in the city-country differential

The variation in the city–country differential is illustrated in chart K.8, which shows the city–country differential in New South Wales on a monthly basis from July 2006 to June 2007.

Chart K.8 New South Wales, monthly average city–country differential: July 2006 to June 2007



For New South Wales the increase in the city–country differential in July to December 2006 reflects the fact that in those months Sydney prices decreased while New South Wales country prices increased in July before decreasing (more slowly than Sydney prices) in August and September.

The increase in January 2007 was the result of Sydney prices decreasing by more than New South Wales country prices, while the June 2007 increase occurred when Sydney prices started to decrease and New South Wales country prices were still increasing.

The decrease in the city–country differential from October 2006 to December 2006 occurred when Sydney prices were decreasing more slowly than New South Wales country prices in November 2006. In December Sydney prices increased while New South Wales country prices continued to decrease.

The general decrease between February 2007 and May 2007 occurred when Sydney prices were increasing by more than New South Wales country prices.

Appendix L:

Nature of price movements over the period 1 July to 30 September 2007

Movements in average daily retail prices for petrol in the five major metropolitan cities in the three-month period 1 July to 30 September 2007 are shown in charts L.1 to L.5 to illustrate the nature of recent retail price movements.

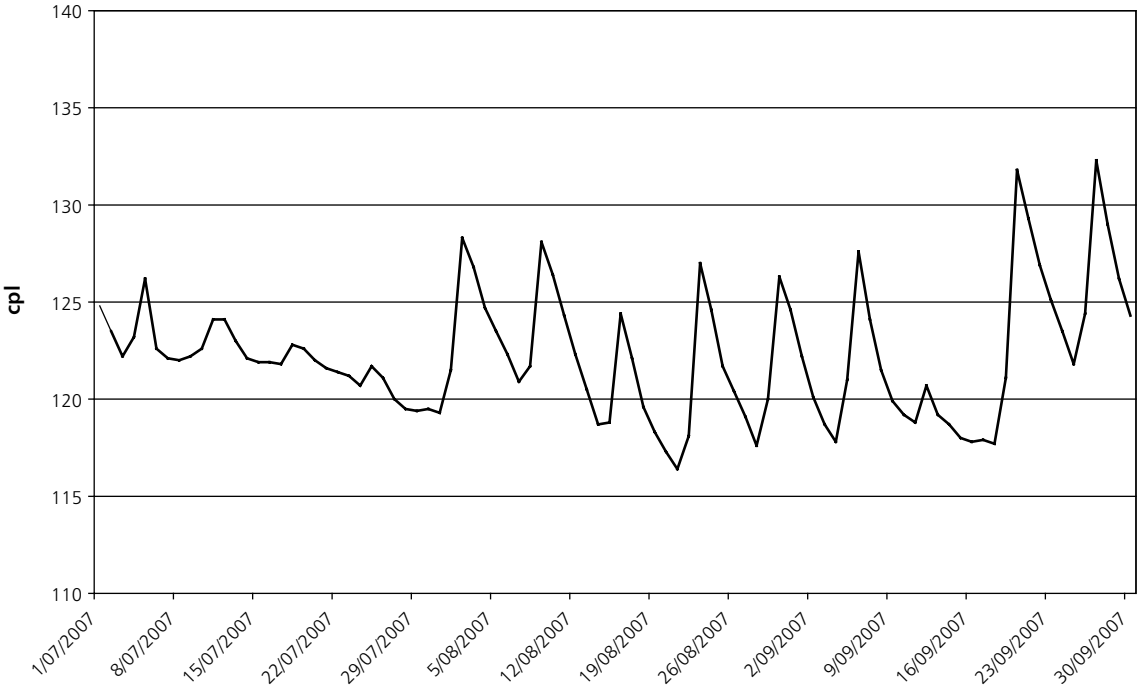
Movements in average daily retail prices for petrol in the smaller capital cities—Canberra, Darwin and Hobart—in the same period are shown in charts L.6 to L.8.

Movements in average daily retail prices for petrol in a couple of country towns—Tamworth in New South Wales and Broome in Western Australia—in the same period are shown in charts L.9 and L.10. These towns have been chosen as examples of general price movements in country towns.

It is clear from the charts that:

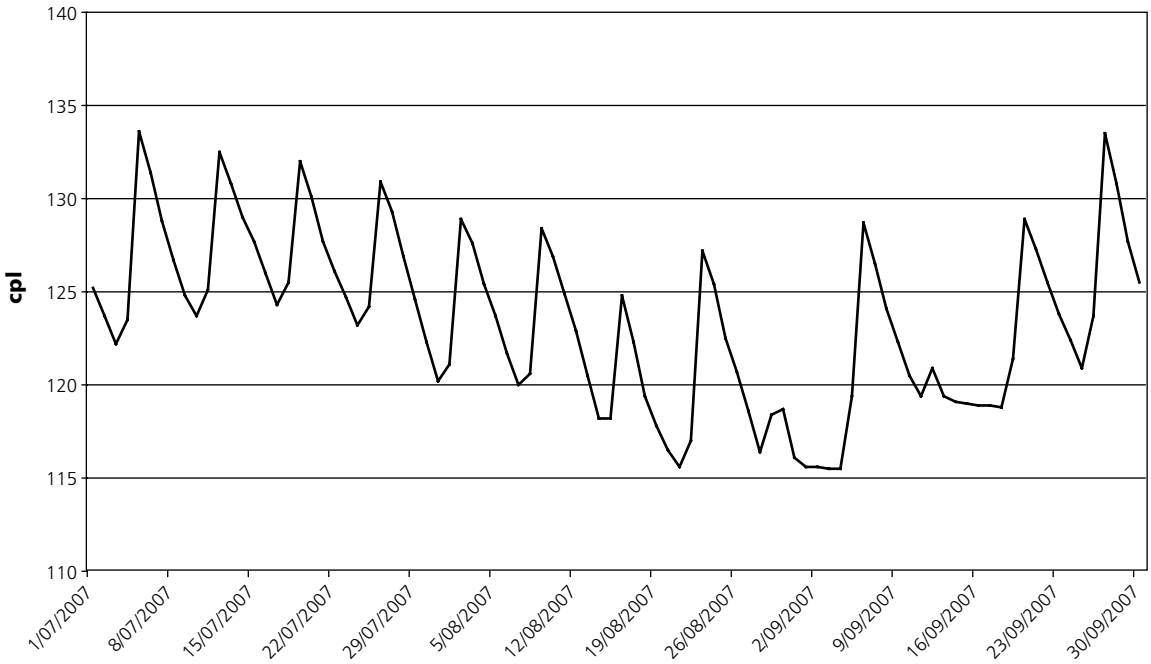
- regular price cycles predominantly occur in the five major metropolitan cities
  - over the three-month period, there were 12 price cycles in Sydney, Melbourne and Adelaide, 11 price cycles in Brisbane and six price cycles in Perth
- there were seven price cycles in Canberra, most of which occurred in the second half of the period
- there were no regular price cycles in Darwin, Hobart, Tamworth or Broome.

Chart L.1 Sydney, average daily retail prices: 1 July to 30 September 2007



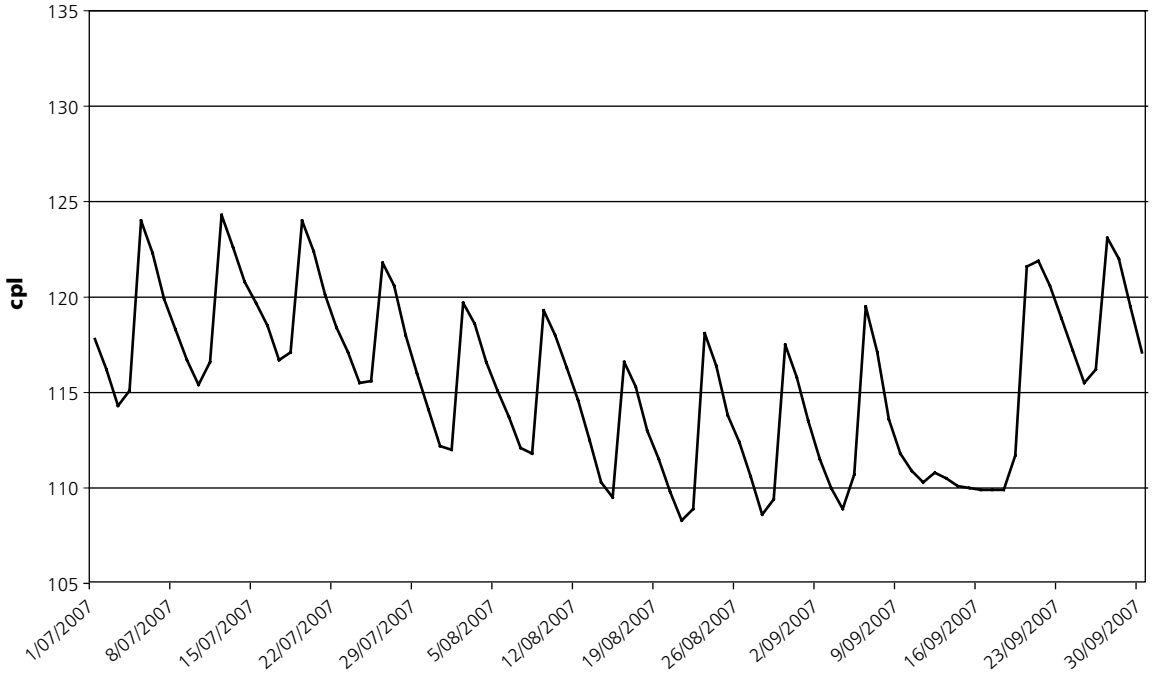
Source: ACCC and Informed Sources

Chart L.2 Melbourne, average daily retail prices: 1 July to 30 September 2007



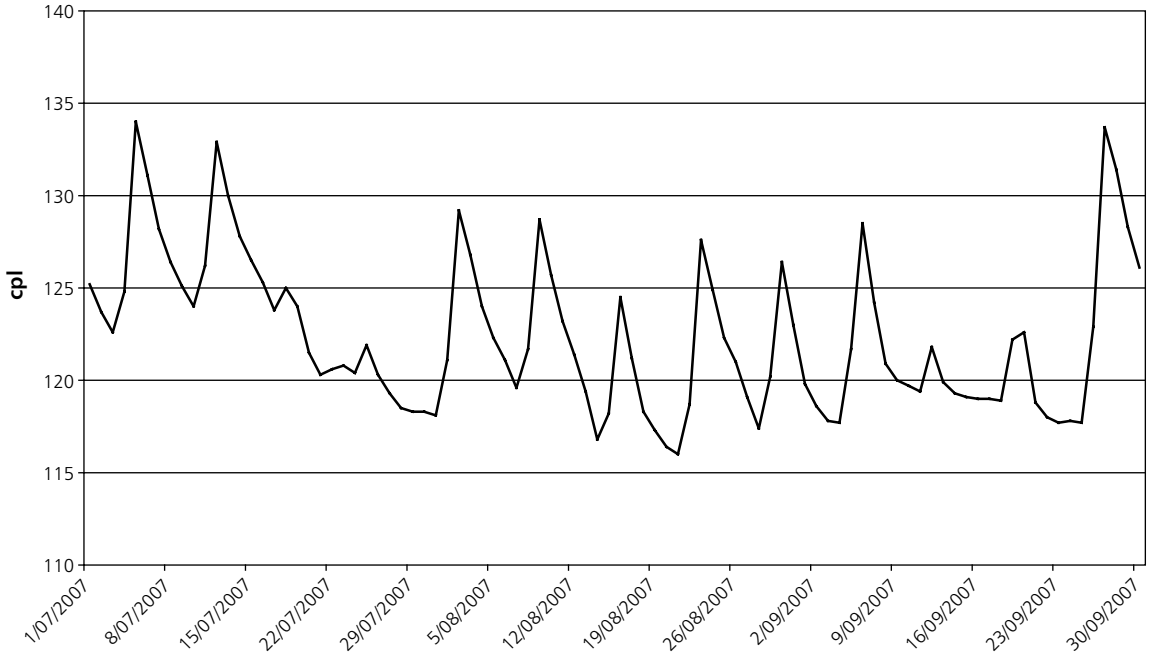
Source: ACCC and Informed Sources

Chart L.3 Brisbane, average daily retail prices: 1 July to 30 September 2007



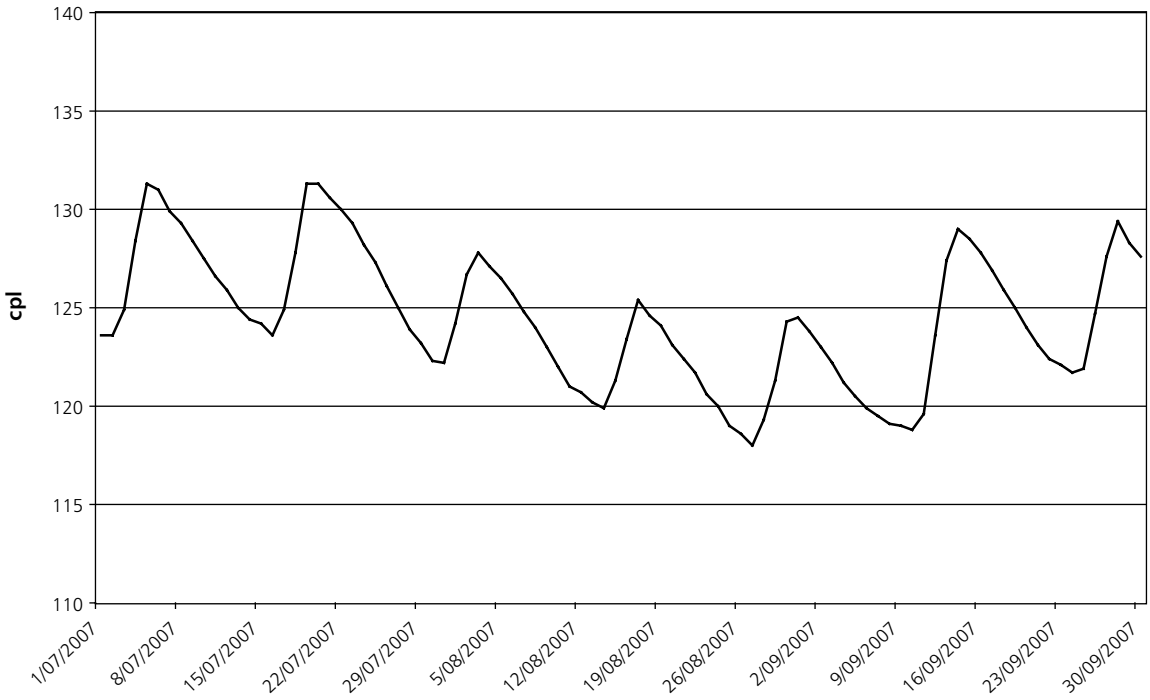
Source: ACCC and Informed Sources

Chart L.4 Adelaide, average daily retail prices:1 July to 30 September 2007



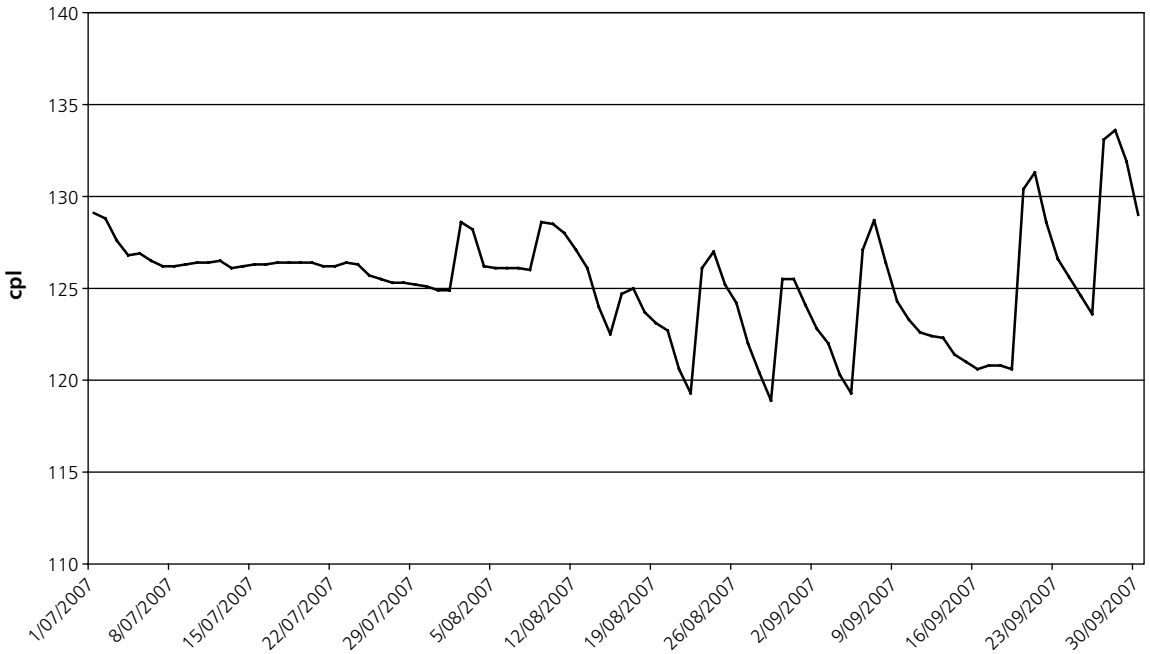
Source: ACCC and Informed Sources

Chart L.5 Perth, average daily retail prices: 1 July to 30 September 2007



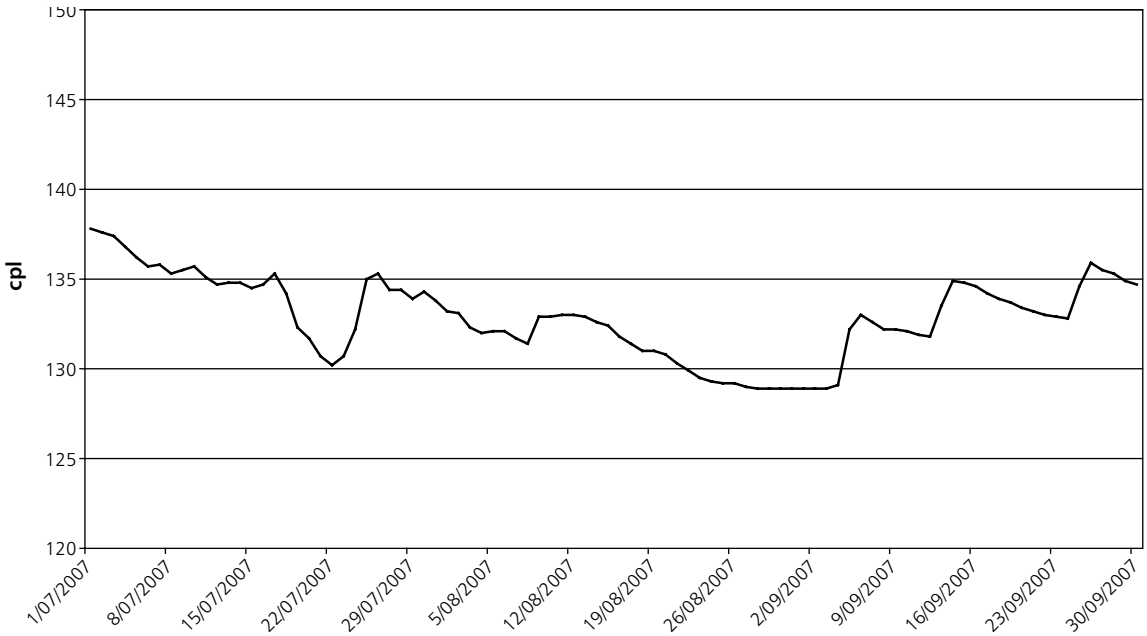
Source: ACCC and Informed Sources

Chart L.6 Canberra, average daily retail prices: 1 July to 30 September 2007



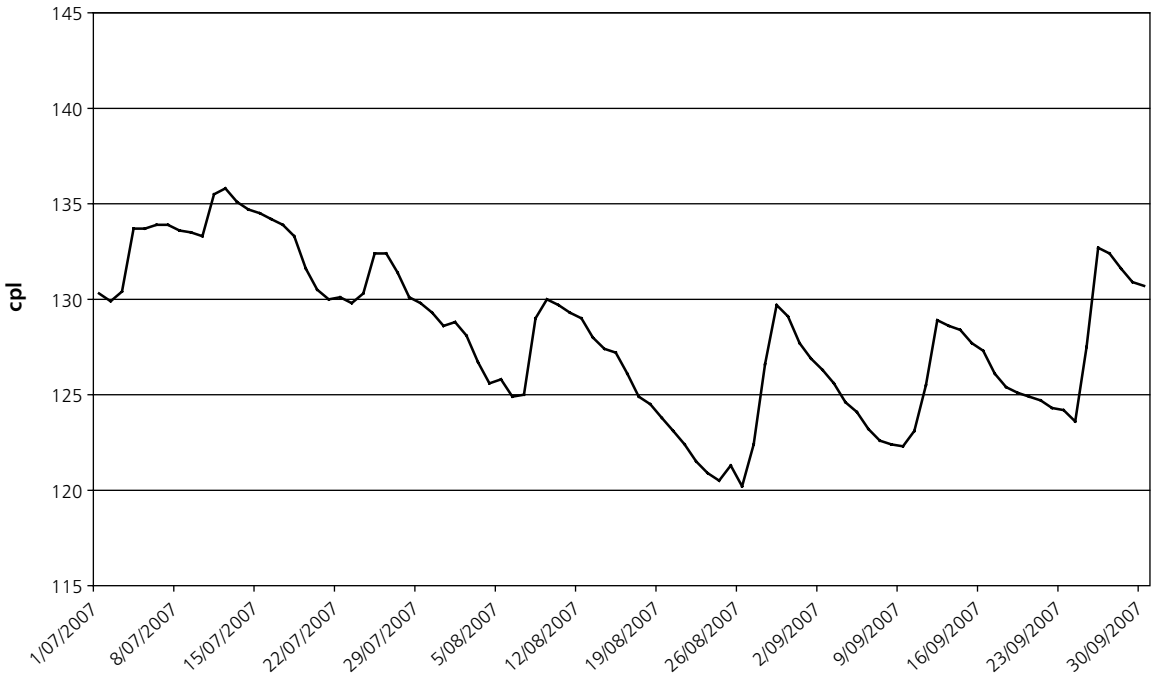
Source: ACCC and Informed Sources

Chart L.7 Darwin, average daily retail prices: 1 July to 30 September 2007



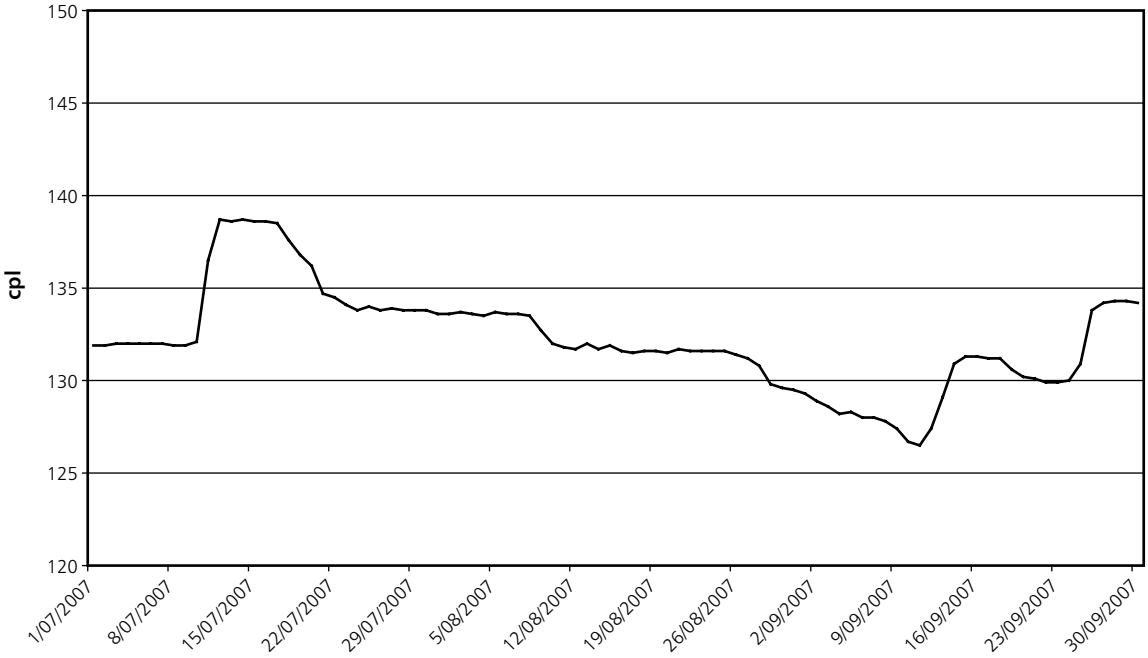
Source: ACCC and Informed Sources

Chart L.8 Hobart, average daily retail prices: 1 July to 30 September 2007



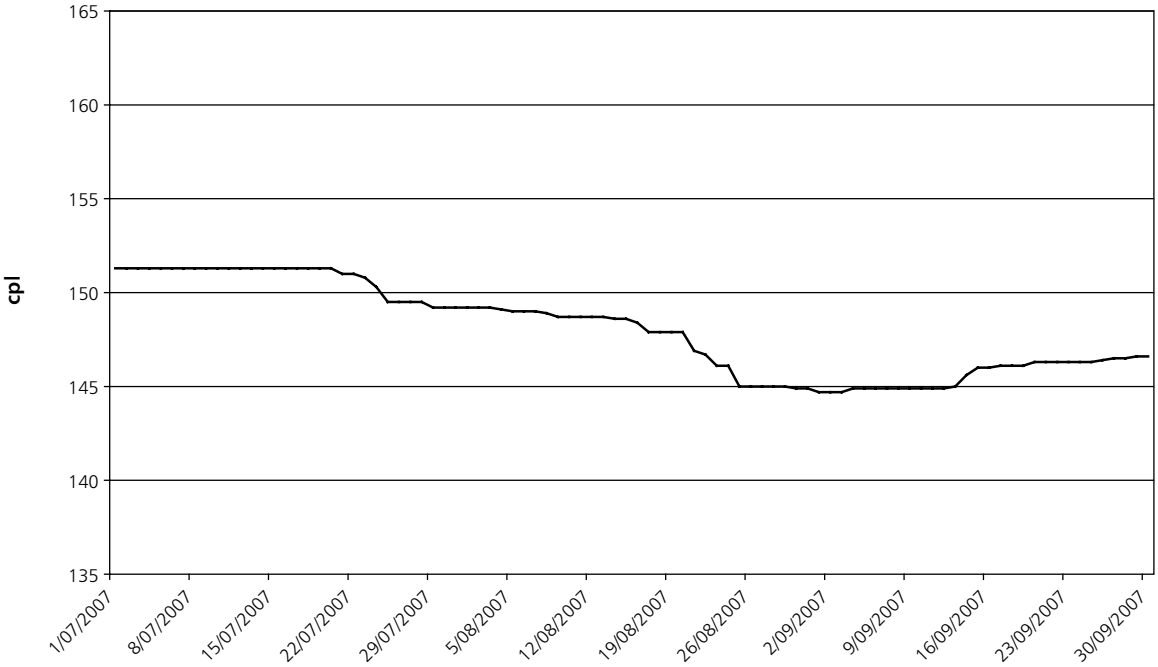
Source: ACCC and Informed Sources

Chart L.9 Tamworth, average daily retail prices: 1 July to 30 September 2007



Source: ACCC and Informed Sources

Chart L.10 Broome, average daily retail prices: 1 July to 30 September 2007



Source: ACCC and Informed Sources

Appendix M:

Analysis of price cycle data by Informed Sources

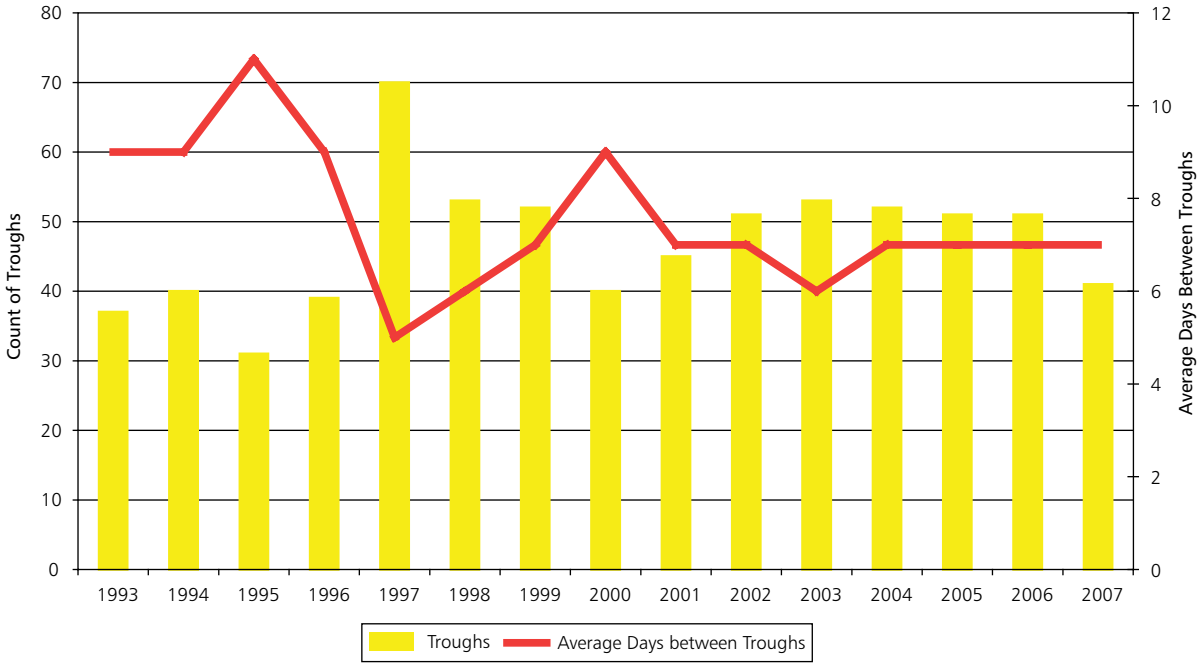
This appendix provides the time-series analysis of price cycles in Sydney, Melbourne, Brisbane, Adelaide and Perth from 1 January 1993 to 21 October 2007. Section 11.2.3 contains a summary of the results of this analysis.

Charts M.1, M.3, M.5, M.7 and M.9 show yearly average durations of price cycles (the number of troughs and average number of days between troughs) in the respective city from 1993 to 2007. The number of troughs is measured on the left axis and the average number of days between troughs is measured on the right axis.

Charts M.2, M.4, M.6, M.8 and M.10 show yearly average amplitudes of price cycles (in terms of absolute value and percentage) in the respective city from 1993 to 2007. The average price rise (in cpl) is measured on the left axis and the average percentage price rise is measured on the right axis.

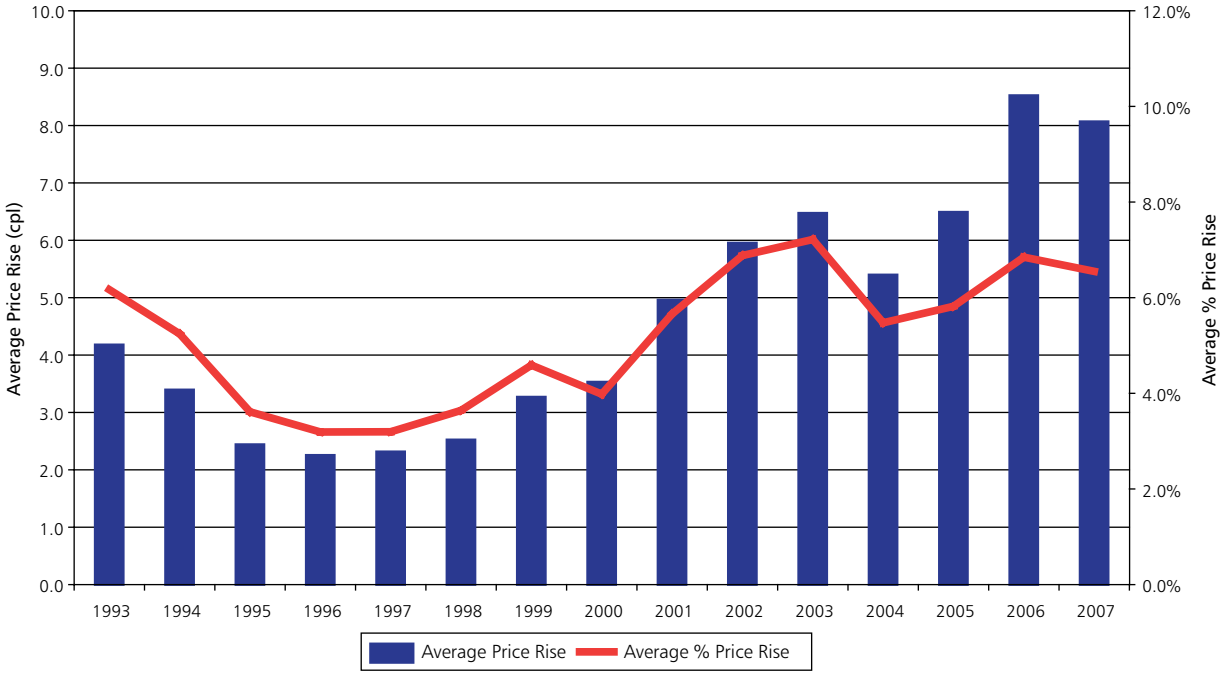
Sydney

Chart M.1 Average durations of price cycles in Sydney: 1993 to 2007



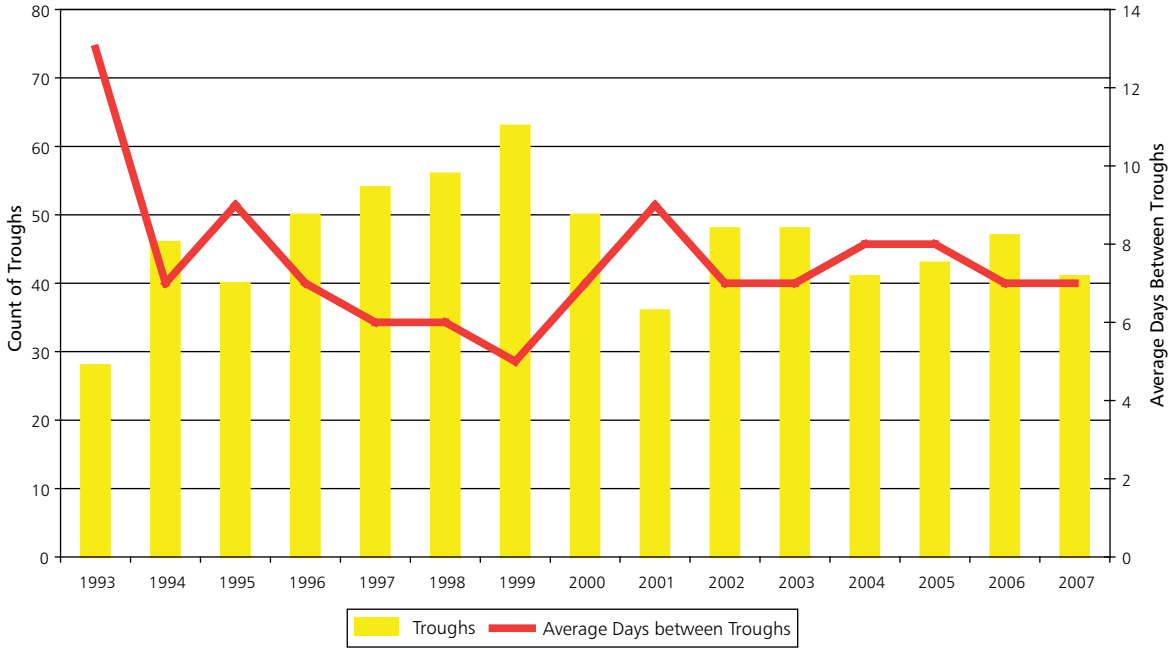
Source: Informed Sources

Chart M.2 Average amplitudes of price cycles in Sydney: 1993 to 2007



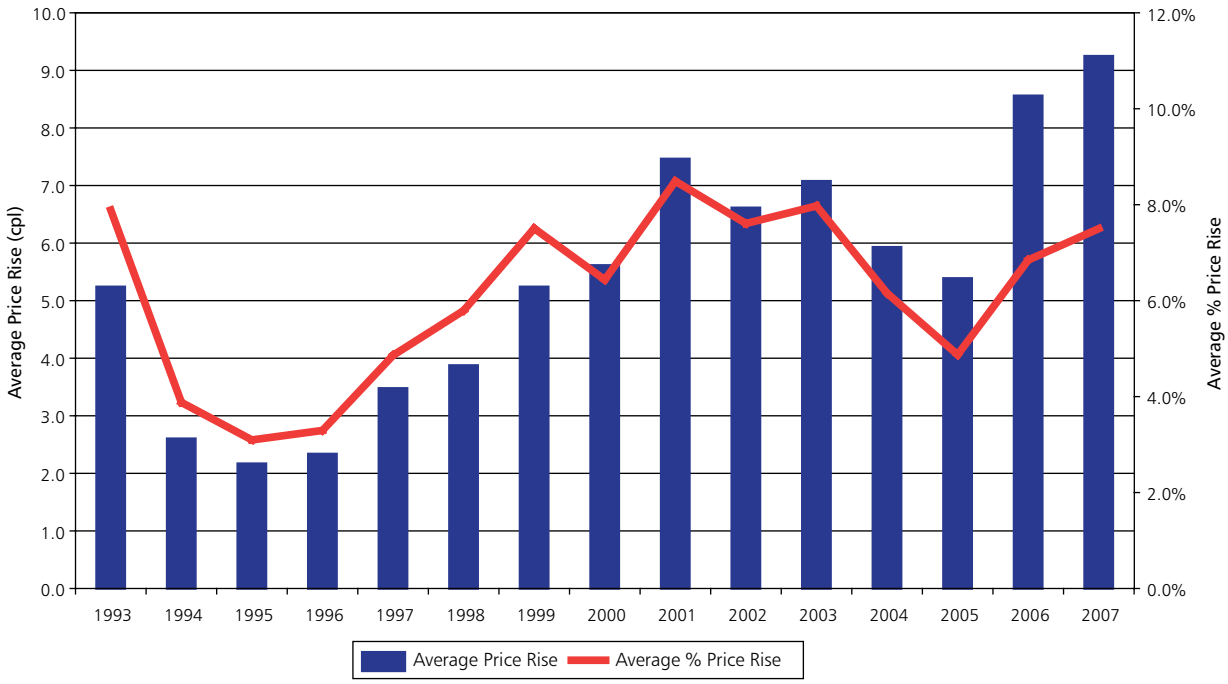
Source: Informed Sources

Chart M.3 Average durations of price cycles in Melbourne: 1993 to 2007



Source: Informed Sources

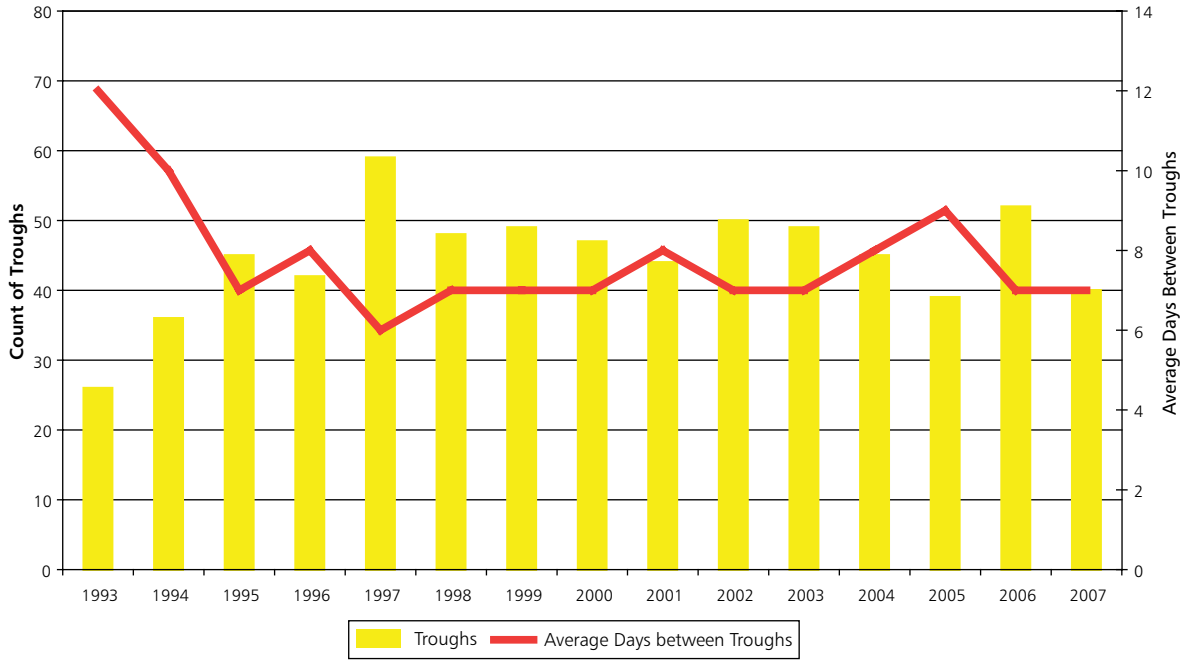
Chart M.4 Average amplitudes of price cycles in Melbourne: 1993 to 2007



Source: Informed Sources

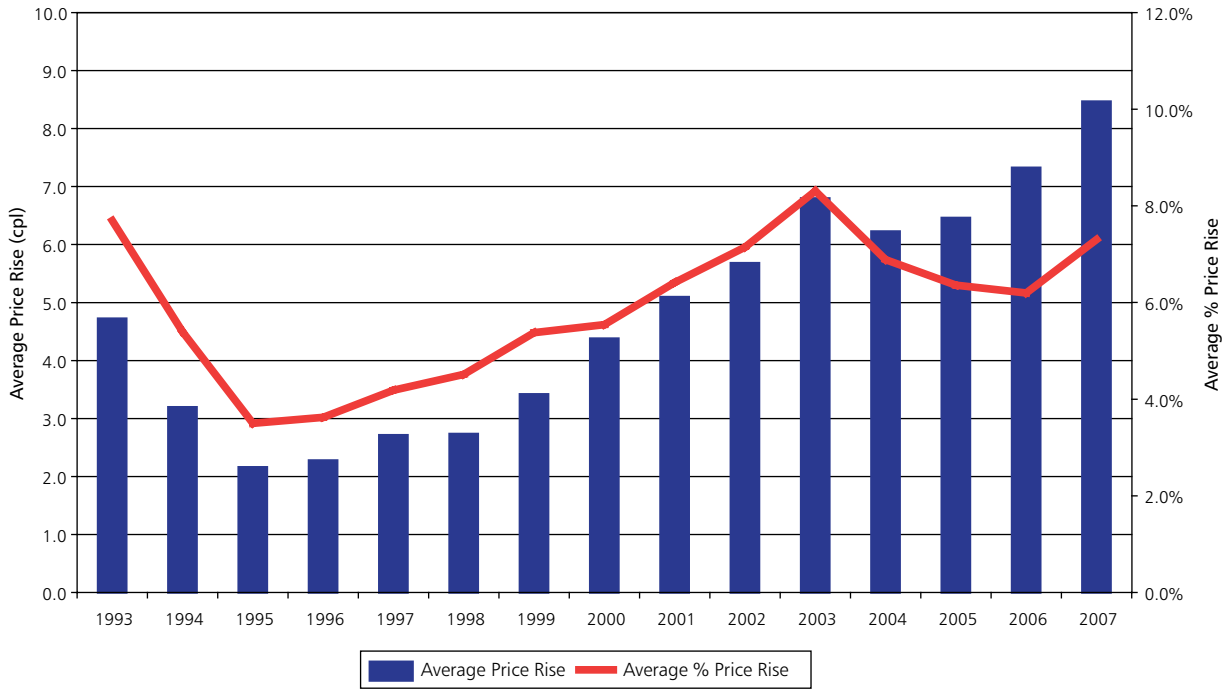
Brisbane

Chart M.5 Average durations of price cycles in Brisbane: 1993 to 2007



Source: Informed Sources

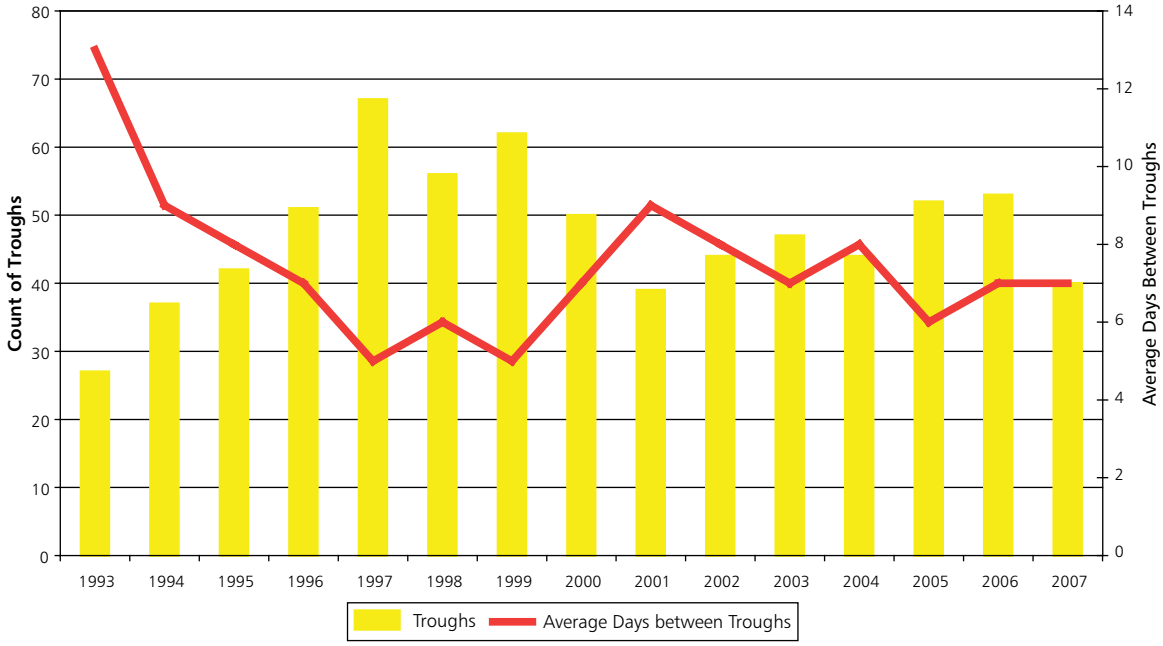
Chart M.6 Average amplitudes of price cycles in Brisbane: 1993 to 2007



Source: Informed Sources

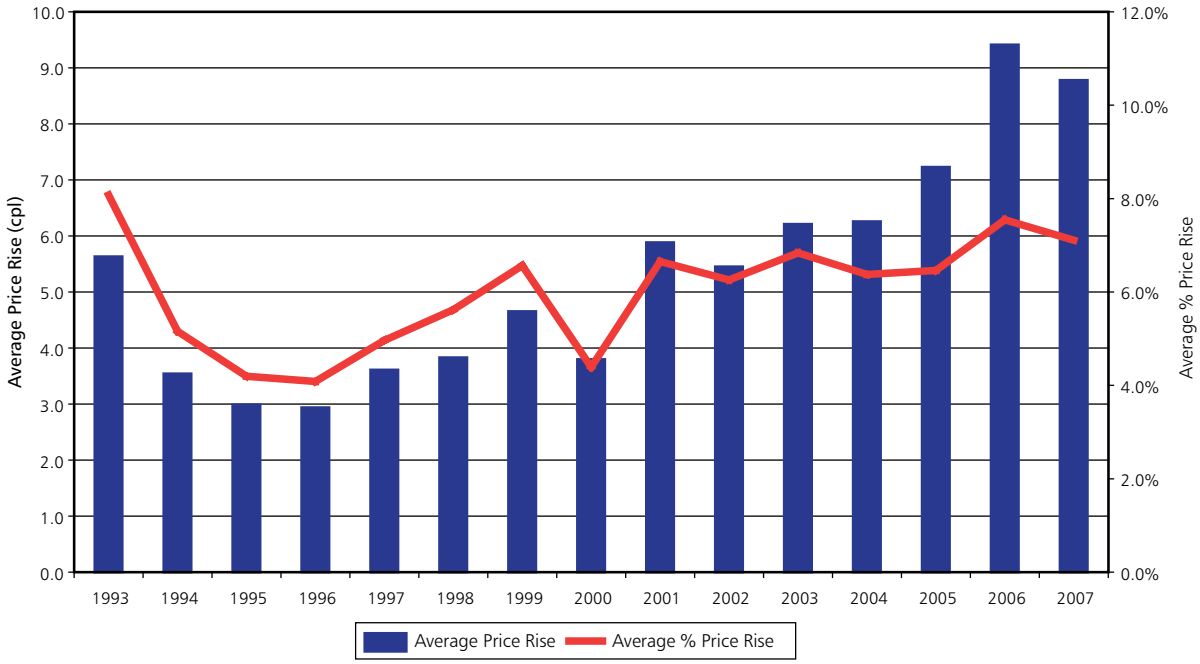
Adelaide

Chart M.7 Average durations of price cycles in Adelaide: 1993 to 2007



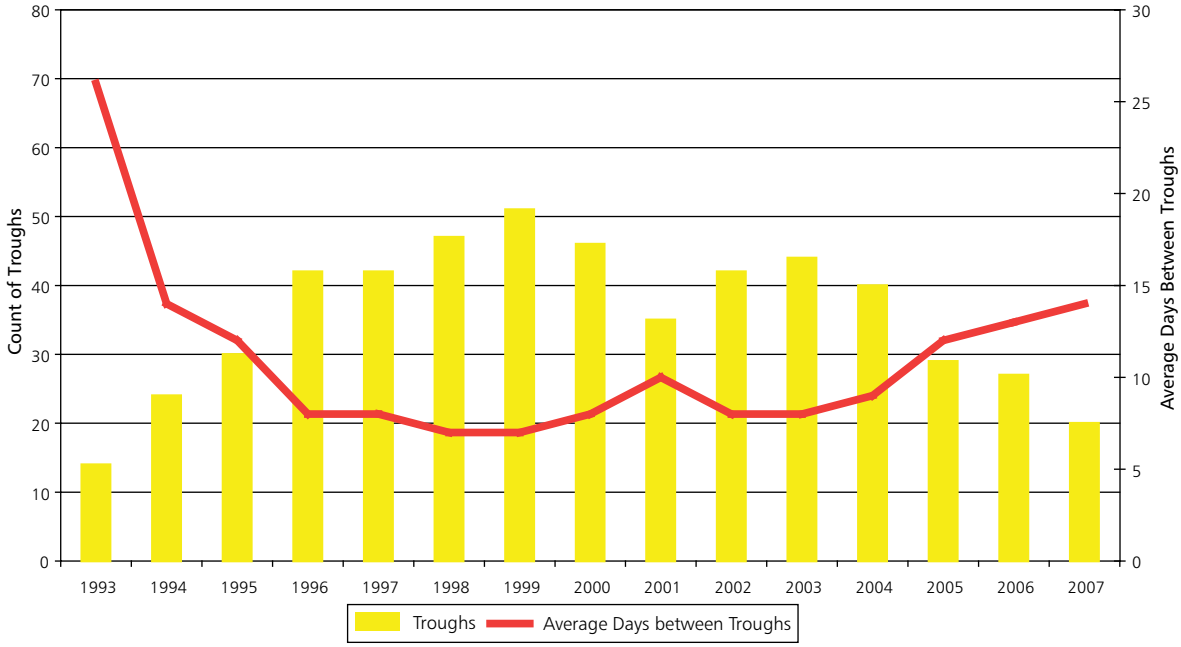
Source: Informed Sources

Chart M.8 Average amplitudes of price cycles in Adelaide: 1993 to 2007



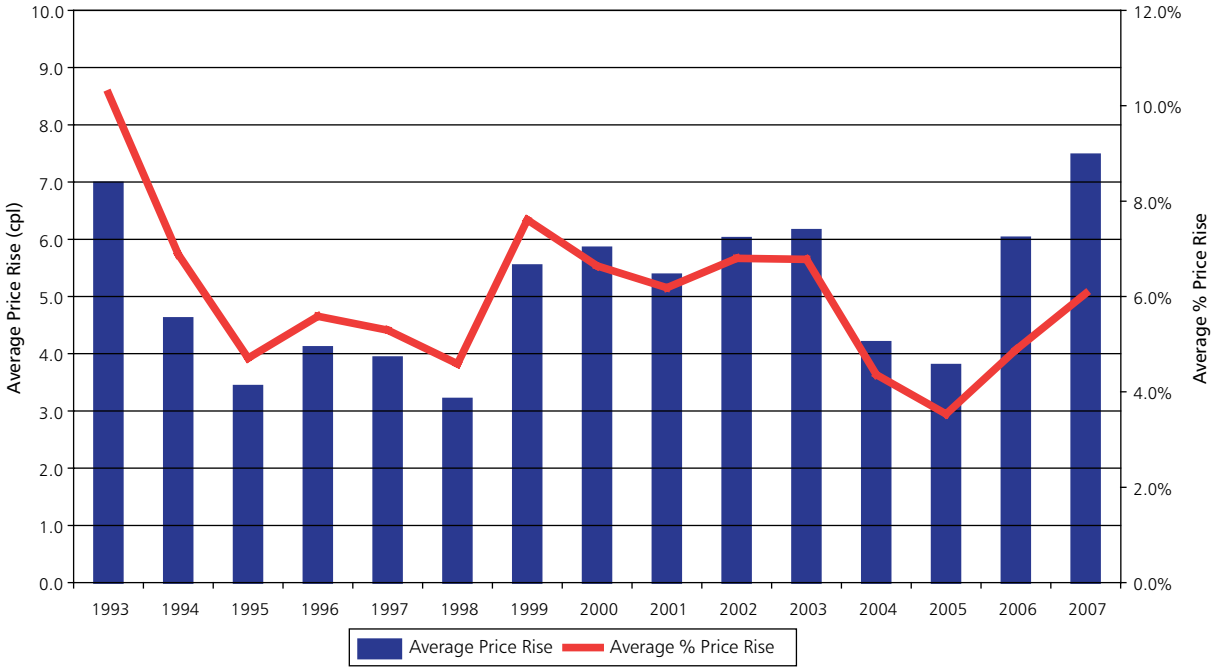
Source: Informed Sources

Chart M.9 Average durations of price cycles in Perth: 1993 to 2007



Source: Informed Sources

Chart M.10 Average amplitudes of price cycles in Perth: 1993 to 2007



Source: Informed Sources

Appendix N:

Public holidays and price cycles

This appendix provides the public holiday analysis for Sydney, Melbourne, Brisbane, Adelaide and Perth from 1 January to 30 June 2007.

Sydney

The following chart shows average daily retail prices for petrol in Sydney from 1 January to 30 June 2007. It identifies the amplitude of each price cycle during the period and the public holidays.[1] It also includes information on the average, minimum and maximum amplitude of price cycles over the six-month period.

The chart shows that the Australia Day amplitude was 1.6 cpl, the Good Friday amplitude was 8.0 cpl, and the Queen's Birthday amplitude was 6.1 cpl. All of these amplitudes were lower than the average amplitude of 8.6 cpl.

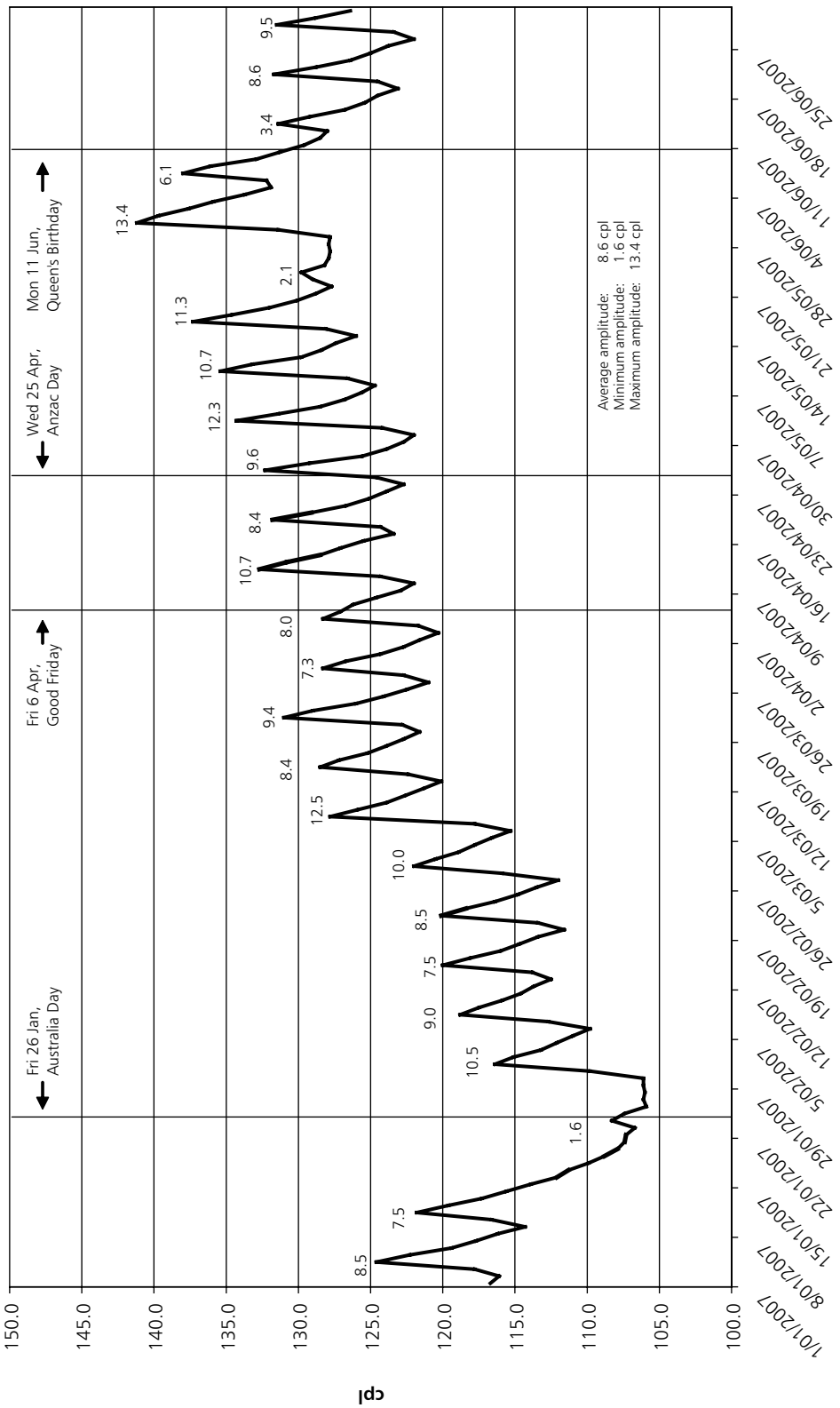
Anzac Day occurred between the trough and peak of a price cycle in Sydney in 2007, and as a result the amplitude of the preceding price cycle is less relevant to retail prices at the time of the holiday. The amplitude of the price cycle within which Anzac Day fell in 2007 was 9.6 cpl, which was greater than the average amplitude over the six-month period.

All amplitudes relevant to the four public holidays were lower than the highest amplitude of 13.4 cpl over the six-month period. The Australia Day amplitude was the lowest amplitude at 1.6 cpl.

For all price cycles relevant to public holidays, with the exception of Australia Day, the trough occurred on a Tuesday and the peak occurred on a Thursday. This is consistent with the pattern of price cycles in Sydney, where 88 per cent of troughs over the period occurred on a Tuesday and 96 per cent of peaks over the period occurred on a Thursday. The peak in the Australia Day cycle occurred one day earlier, on a Wednesday.

1 The price cycle amplitudes that occurred before school holidays over the period were also examined. For Sydney, the first term holidays began on Friday, 6 April and the second term holidays began on Saturday, 30 June 2007. The price cycle amplitude before the firsts term holidays is examined in the context of the Good Friday public holiday. The price cycle amplitude before the second term holidays was 9.5 cpl, which was higher than the average amplitude for the period, but lower than the highest amplitude.

Chart N.1 Sydney, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2007



Source: ACCC

Melbourne

The following chart shows average daily retail prices for petrol in Melbourne from 1 January to 30 June 2007. It identifies the amplitude of each price cycle during the period and the public holidays.[2] It also includes information on the average, minimum, and maximum amplitude of price cycles.

The chart shows that the amplitudes that occurred before the Australia Day, Labour Day and Queen's Birthday public holidays were 9.6, 14, and 9.8 cpl respectively, which were higher than the average amplitude over the six-month period of 9.5 cpl.

The amplitude that occurred before Good Friday was 9.2 cpl, which was lower than the average amplitude over the six-month period.

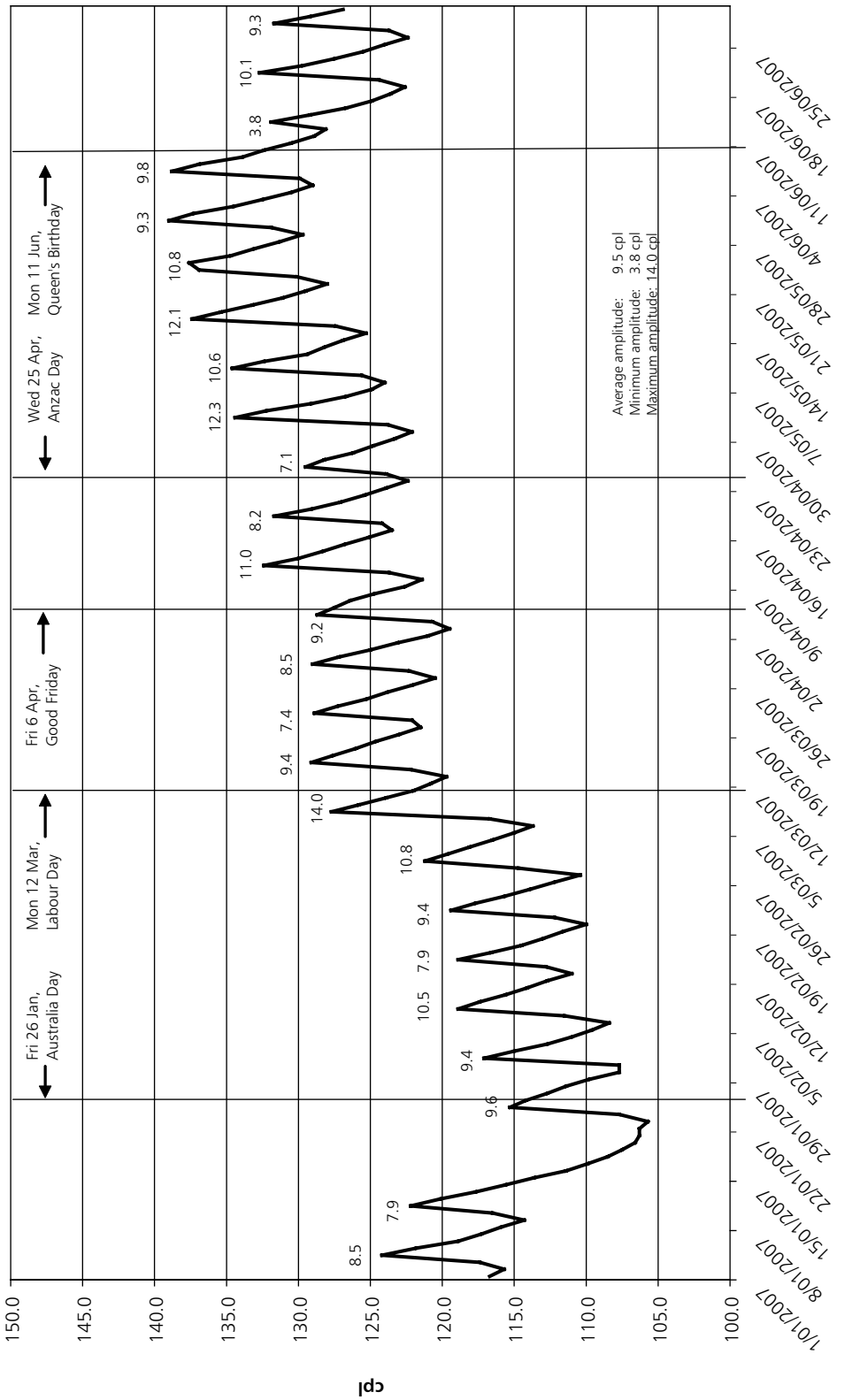
Anzac Day occurred between the trough and peak of a price cycle in Melbourne in 2007, and as a result the amplitude of the preceding price cycle is less relevant to retail prices at the time of the holiday. The amplitude of the price cycle within which Anzac Day fell in 2007 was 7.1 cpl, which was lower than the average amplitude over the period.

The amplitude that occurred before the Labour Day public holiday was 14 cpl, which was the highest amplitude over the six-month period.

For all price cycles relevant to public holidays in Melbourne the trough occurred on a Tuesday and the peak occurred on a Thursday. This is consistent with the pattern of price cycles in Melbourne, where 96 per cent of the troughs over the period occurred on a Tuesday and 100 per cent of the peaks over the period occurred on a Thursday.

2 The price cycle amplitudes that occurred before school holidays were also examined. For Melbourne the first term holidays began on Saturday, 31 March 2007, and the second term holidays began on Saturday, 30 June 2007. The price cycle amplitude that occurred before the first term and during the second term holidays was 8.5 and 9.3 respectively. Both of these price cycle amplitudes were lower than the average price cycle amplitude for the period.

Chart N.2 Melbourne, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2007



Source: ACCC

Brisbane

The following chart shows average daily retail prices for petrol in Brisbane from 1 January to 30 June 2007. It identifies the amplitude of each price cycle during the period and the public holidays.[3] It also includes information on the average, minimum and maximum amplitude of price cycles.

The chart shows the amplitudes that occurred before the Australia Day, Good Friday and Queen's Birthday public holidays were 8.3, 7.0, and 5.1 cpl respectively, which were lower than the average amplitude over the six-month period of 8.4 cpl.

The amplitude before the Labour Day public holiday of 11.5 cpl was higher than the average amplitude over the six-month period.

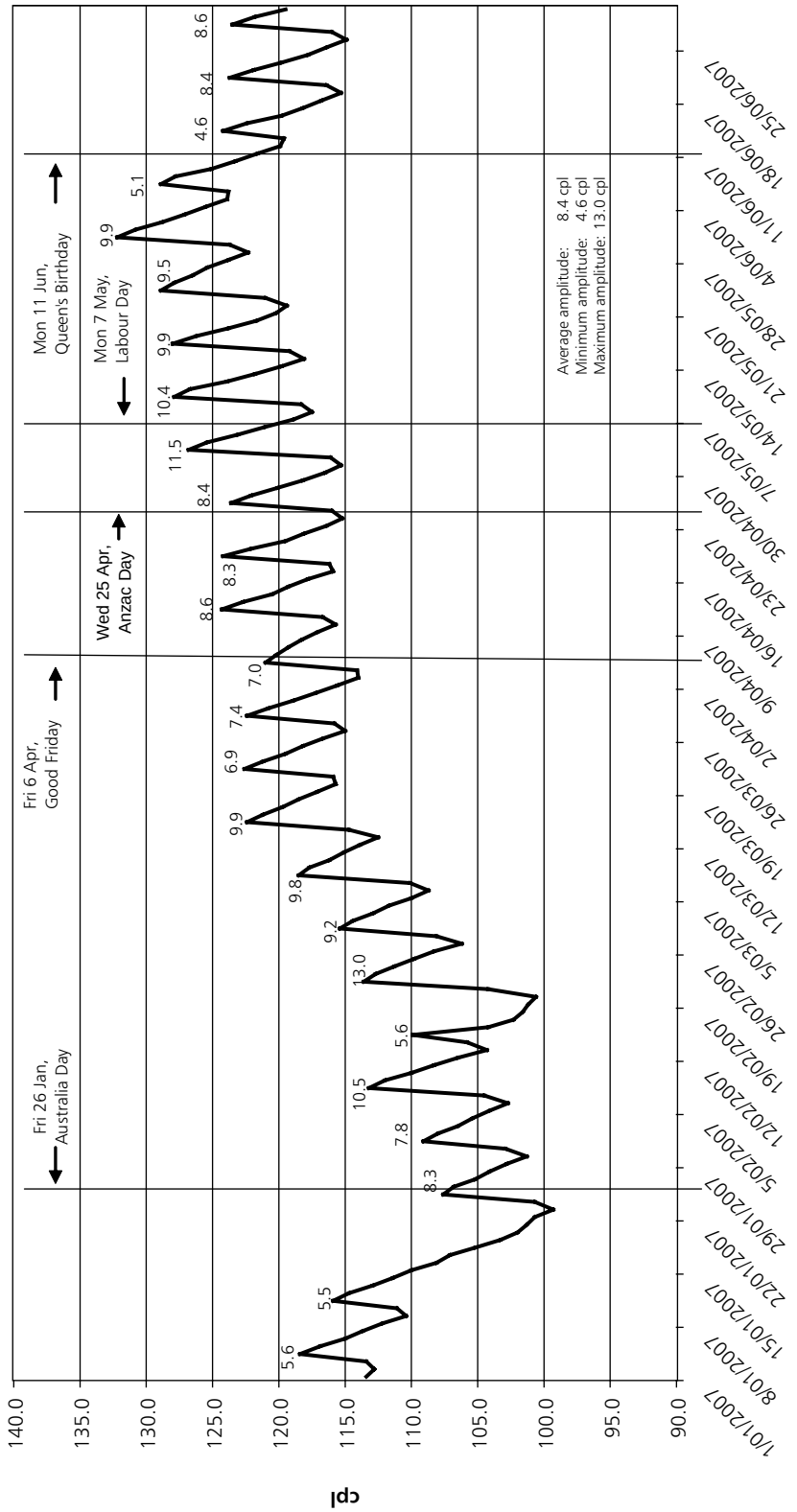
Anzac Day occurred between the trough and peak of a price cycle in Brisbane in 2007, and as a result the amplitude of the preceding price cycle is less relevant to retail prices at the time of the holiday. The amplitude of the price cycle within which Anzac Day fell in 2007 was 8.4 cpl, which was equal to the average amplitude over the six-month period.

All of the amplitudes relevant to public holidays were lower than the highest amplitude of 13 cpl over the six-month period.

For most price cycles relevant to public holidays in Brisbane the trough occurred on a Tuesday and the peak occurred on a Thursday. The exception was the Queen's Birthday public holiday where the trough occurred one day later on a Wednesday. This is consistent with the pattern of price cycles in Brisbane, where 92 per cent of the troughs over the period occurred on a Tuesday and 100 per cent of the peaks over the period occurred on a Thursday.

3 The price cycle amplitudes that occurred before school holidays were also examined. For Brisbane the first term holidays began on Friday, 6 April 2007, and the second term holidays began on Saturday, 23 June 2007. The price cycle amplitude that occurred before the first term holidays is examined in the context of the Good Friday public holiday. The price cycle that occurred before the second term holidays had an amplitude of 8.4 cpl, which was equal to the average amplitude over the six-month period.

Chart N.3 Brisbane, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2007



Source: ACCC

Adelaide

The following chart shows average daily retail prices for petrol in Adelaide from 1 January to 30 June 2007. It identifies the amplitude of each price cycle of the period and the public holidays.[4] It also includes information on the average, minimum and maximum amplitude of price cycles.

The chart shows that the amplitudes that occurred before the Australia Day, Good Friday and Queen's Birthday public holidays were 1.4, 6.6 and 8.1 cpl respectively, which were lower than the average amplitude of 8.8 cpl.

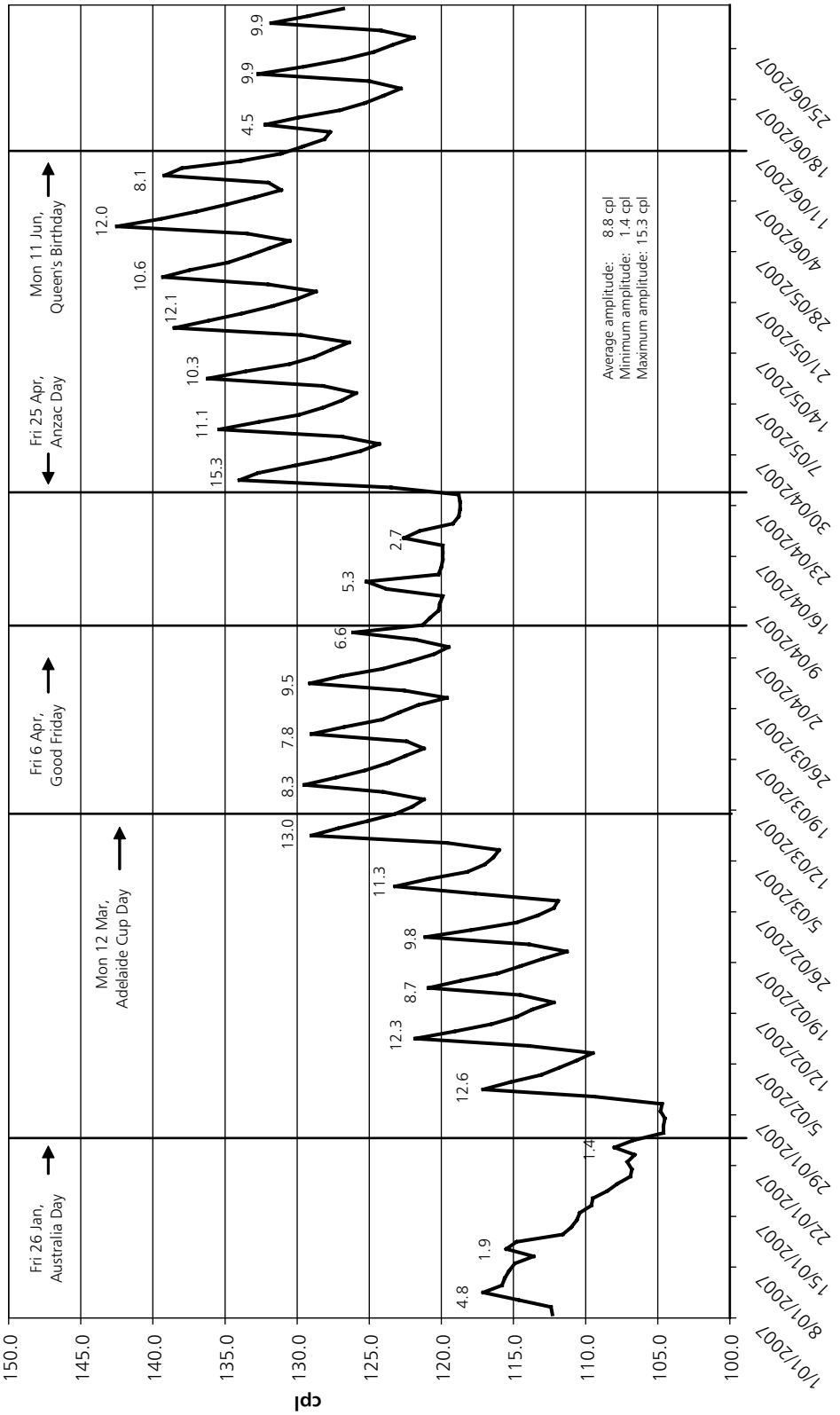
The amplitude that occurred before Adelaide Cup Day was 13.0 cpl, which was greater than the average amplitude over the period of 8.8 cpl.

Anzac Day occurred between the trough and peak of a price cycle in Adelaide in 2007, and as a result the amplitude of the preceding price cycle is less relevant to retail prices at the time of the holiday. The amplitude of the price cycle within which Anzac Day fell in 2007 was 15.3 cpl, which was the highest amplitude over the period.

For all price cycles relevant to public holidays in Adelaide the trough occurred on a Tuesday and the peak occurred on a Thursday. This is consistent with the pattern of price cycles in Adelaide, where 80 per cent of the troughs over the period occurred on a Tuesday and 88 per cent of the peaks over the period occurred on a Thursday.

4 The price cycle amplitudes that occurred before school holidays were also examined. For Adelaide the first term holidays began on Friday, 6 April 2007 and the second term holidays began after the end of the period (on Saturday, 7 July 2007). The price cycle amplitude for the first term holidays is examined in the context of the Good Friday public holiday.

Chart N.4 Adelaide, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2007



Source: ACCC

Perth

The following chart shows average daily retail prices for petrol in Perth from 1 January to 30 June 2007. It identifies the amplitude of each price cycle during the period and the public holidays.[5] It also includes information on the average, minimum and maximum amplitude of price cycles.

The chart shows that the amplitude that occurred before the Labour Day public holiday was 7.7 cpl, which was equal to the average amplitude over the six-month period.

The amplitude that occurred before the Foundation Day public holiday was 8.6 cpl, which was greater than the average amplitude for the six-month period.

Anzac Day occurred between the trough and peak of a price cycle in Perth in 2007, and as a result the amplitude of the preceding price cycle is less relevant to retail prices at the time of the holiday. The amplitude of the price cycle within which Anzac Day fell in 2007 was 3.1 cpl, which was the lowest amplitude over the six-month period.

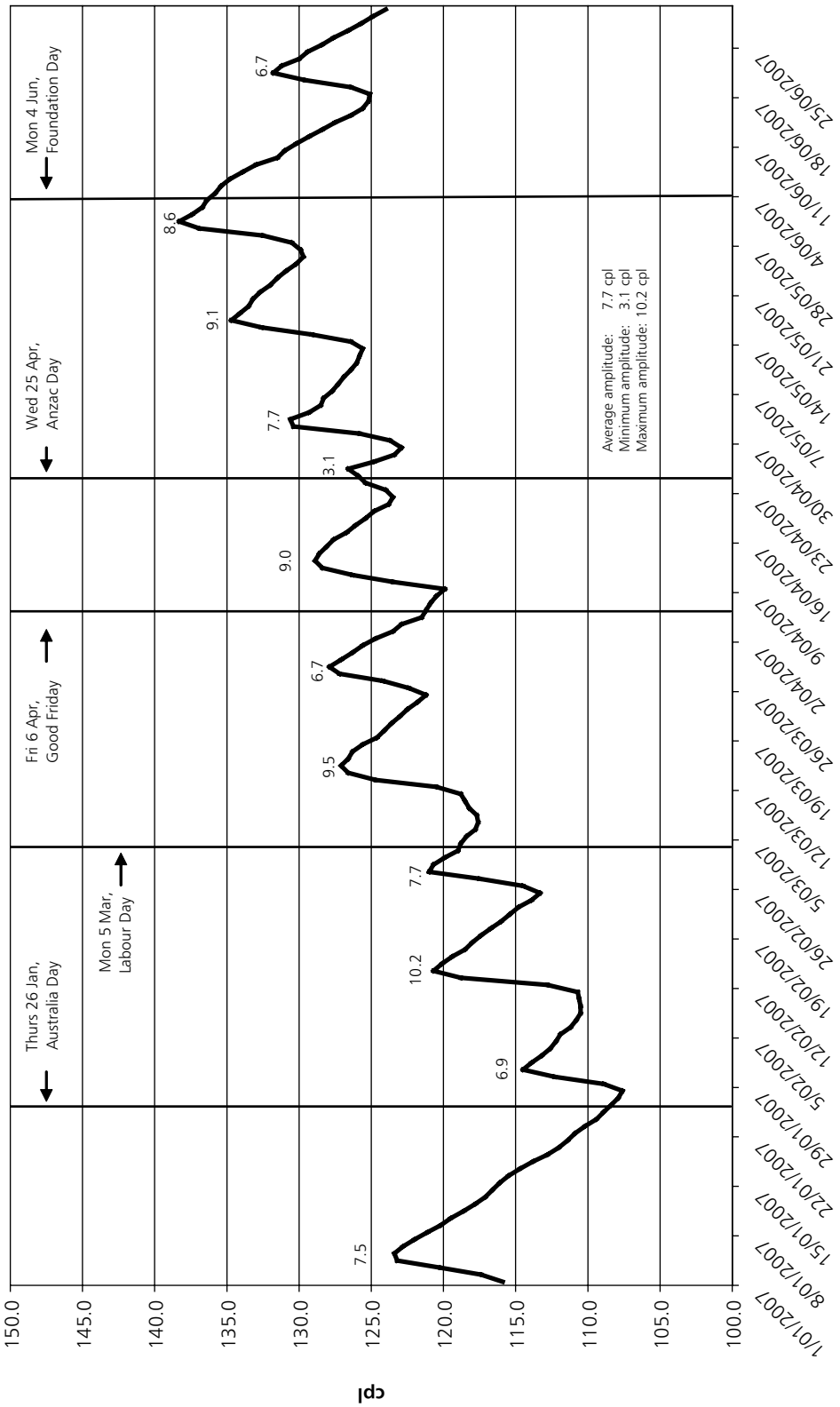
No price cycle amplitude occurred in the week before the Australia Day and Good Friday public holidays.

All amplitudes relevant to public holidays were lower than the highest amplitude of 10.2 cpl.

The pattern of price cycles is Perth is less consistent than in other cities. In particular, the troughs for the Labour Day and the Anzac Day public holidays were on Sunday while the trough for the Foundation Day public holiday was on Saturday. The peak for the Labour Day public holiday was on a Wednesday, while the peaks for the Anzac Day and Foundation Day public holidays were on a Thursday. This is broadly consistent with the patterns of price cycles in Perth, where 50 per cent of troughs occurred on a Sunday and 67 per cent of peaks occurred on a Thursday.

5 The price cycle amplitudes that occurred before school holidays were also examined. For Perth the first term holidays commenced on 5 April 2007 and the second term holidays began after the end of the period (on Saturday, 7 July 2007). The price cycle amplitude for the first term holidays is examined in the context of the Good Friday public holiday.

Chart N.5 Perth, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2007



Source: ACCC

Appendix O:

Edgeworth cycles theory

This appendix provides a review of the economic literature on Edgeworth cycle theory.

Edgeworth examines the Bertrand price competition in a duopoly industry under decreasing returns to scale technology—that is, firms are capacity constrained.[6] In such an industry, a firm will lose some, but not all, of its sales from charging a higher price than its competitor. On the one hand, knowing the competitor is capacity constrained, each firm has an incentive to raise price above marginal cost to earn revenue in excess of variable costs from remaining sales. In doing so, the profits earned are higher than those from selling at marginal cost for a larger market share. On the other hand, when market price is above marginal cost, each firm has an incentive to marginally undercut its competitor's price to earn higher profits from a larger market share. As a consequence, there is no unique equilibrium. Instead, the price will cycle between trough and peak.

Maskin and Tirole analyse a dynamic oligopolistic model in which two symmetric firms move sequentially in response to their competitor's price.[7] The pricing strategy chosen by each firm to maximise its present value of future profits depends on the price charged by the other firm last period. The authors prove the existence of two equilibrium, kinked demand curve equilibrium and Edgeworth price cycles. The equilibrium payoffs are found to be generally above the perfectly competitive level.

In the kinked demand curve equilibrium, firms would match a price reduction, but not follow suit when competitors raise prices, resulting in a gap in the marginal revenue curve. Price rigidity is present when costs change within the range of the marginal revenue gap. Similarly, demand fluctuation may not materially affect price stability.

In the Edgeworth cycles equilibrium, a firm chooses to marginally undercut its competitor because of its desire to increase market share, as well as its belief that the other firm will not cooperate at higher prices. The prices will be driven down to marginal cost, at which level the business is unsustainable without a price rise. Eventually a firm will raise its price to the monopoly price level. The cycle is repeated over time. Note that in this model the occurrence of price cycles is not dependent on a capacity constraint, as originally suggested by Edgeworth.

Specifically, Maskin and Tirole prove that when firms can react quickly to the price changes of competitors, both monopoly pricing and price cycles can be supported while the former would be supported wherever possible.

The model of Maskin and Tirole does not provide any explanation on the necessary conditions for a market to develop sticky pricing at monopoly level or to develop price cycles. In subsequent work, Eckert shows that there is a positive correlation between price rigidity and market concentration.[8]

Eckert extends the Maskin and Tirole model to allow for firm size differentials.[9] He assumes that, at equal price, firms will share the market according to the number of service stations they operate while each firm is not capacity-constrained from supplying the whole market. Eckert demonstrates that

6 F Edgeworth, 'The pure theory of monopoly', *Papers Relating to Political Economy*, Vol. 1, London: MacMillan, 1925, pp. 111–42.
7 E Maskin and J Tirole, pp. 571–99.
8 A Eckert, *A Study of Canadian Retail Gasoline Prices*, (PhD dissertation), University of British Columbia, 1999.
9 A Eckert, 'Retail price cycles and the presence of small firms', *International Journal of Industrial Organization*, Vol. 21, 2003, pp. 151–70.

this implies that large firms can get a smaller percentage increase in market share from undercutting than small firms. By price undercutting, the large firms will serve the entire market. By matching a price undercutting, the large firms will serve most of the market at a higher margin. Price matching is therefore a more profitable strategy than price undercutting for large firms, compared with small firms. Similarly, it is also more valuable for large firms to maintain high market prices than small firms. Therefore, when a market is served by firms of uneven size, the large firms may prefer to match their competitors' price undercutting or stick to high prices, rather than engaging in price undercutting.

Eckert proves that Edgeworth cycles are in existence for a wide range of relative firm sizes, which determine the exact form of price cycles. The undercut–undercut cycle model in Maskin and Tirole is a special case for symmetric firms in a market. With greater asymmetry in firm size, price cycles are more likely to take the form of large firms constantly matching price discounting initiated by small firms. Eckert also finds that the sticky price equilibrium will not occur in a market with sufficiently small firms due to their strong incentives to undercutting others.

In reality, very small independent retailers with one or a few retail outlets may often be unable to completely meet substantial rises in demand resulting from price undercutting, given their limited capacity per station. In examining this case, Noel argues that incentives for large retailers to match or undercut their capacity-constrained competitors' prices are limited because of the inability of their competitors to capture the entire market by undercutting.[10] Only when there is a large presence of small independent retailers, that can jointly supply the entire market, will large retailers respond to price undercutting by their smaller opponents, resulting in the occurrence of price cycles.

Without formal theoretical modelling, Eckert and West further point out that the presence or absence of price cycles depends on the degree of spatial product differentiation.[11] The incentives for petrol stations to undercut each other are stronger in a more competitive market, which are featured by high station density, low degree of market concentration and the presence of independent retailers with their own brand name.

Atkinson summarises a number of distinctive structural and behavioural characteristics of Edgeworth cycles.[12] Structural features of a cycle include that:

- price cycles are asymmetric: prices fall for longer periods and by smaller increments per period than prices rise
- price cycles are not caused by changes in marginal cost
- the sizes of price changes are not affected by changes in marginal cost
- the trough of a cycle is determined by marginal cost at price close to marginal cost
- the peak of a cycle depends on demand rather than marginal cost.

Firm behaviours over the course of a cycle include that:

- large firms are most likely to initiate price increases and small firms are most likely to initiate price discounting
- price movements across firms are highly uniform; however, firms still move sequentially.

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10 MD Noel, 'Edgeworth price cycles, cost-based pricing and sticky pricing in retail gasoline markets', *Review of Economics and Statistics*, Vol. 89, 2007, pp. 324–34.

11 A Eckert and DS West, 'Retail gasoline price cycles across spatially dispersed gasoline stations', *Journal of Law and Economics*, Vol. 47, No. 1, 2004, p. 248.

12 B Atkinson, 'Retail gasoline price cycles: evidence from Guelph, Ontario using bi-hourly, station-specific retail price data', *Competition Bureau Working Paper*, 2007, p. 3.

However, the Edgeworth cycles theory provides little information on the duration and amplitude of price cycles, except for the finding by Noel that when a market becomes larger and less concentrated, cycles will be shorter and higher in amplitude.[13] The length of the price discounting stage shortens with increasing penetration by small firms.

All the empirical studies in the economic literature relating to the Edgeworth cycles theory have found that the pattern of regular price cycles in the retail petrol market appears to be consistent with the predictions of this theory. In addition, they lend some support for the argument that persistent cyclical movements in petrol price, in the form of Edgeworth cycles, are the outcome of more competitive markets than those markets with constant prices that would more sensibly be explained by sticky pricing theory.

13 MD Noel, Edgeworth price cycles, cost-based pricing and sticky pricing in retail gasoline markets, loc. cit.

Appendix P:

Day of the week analysis

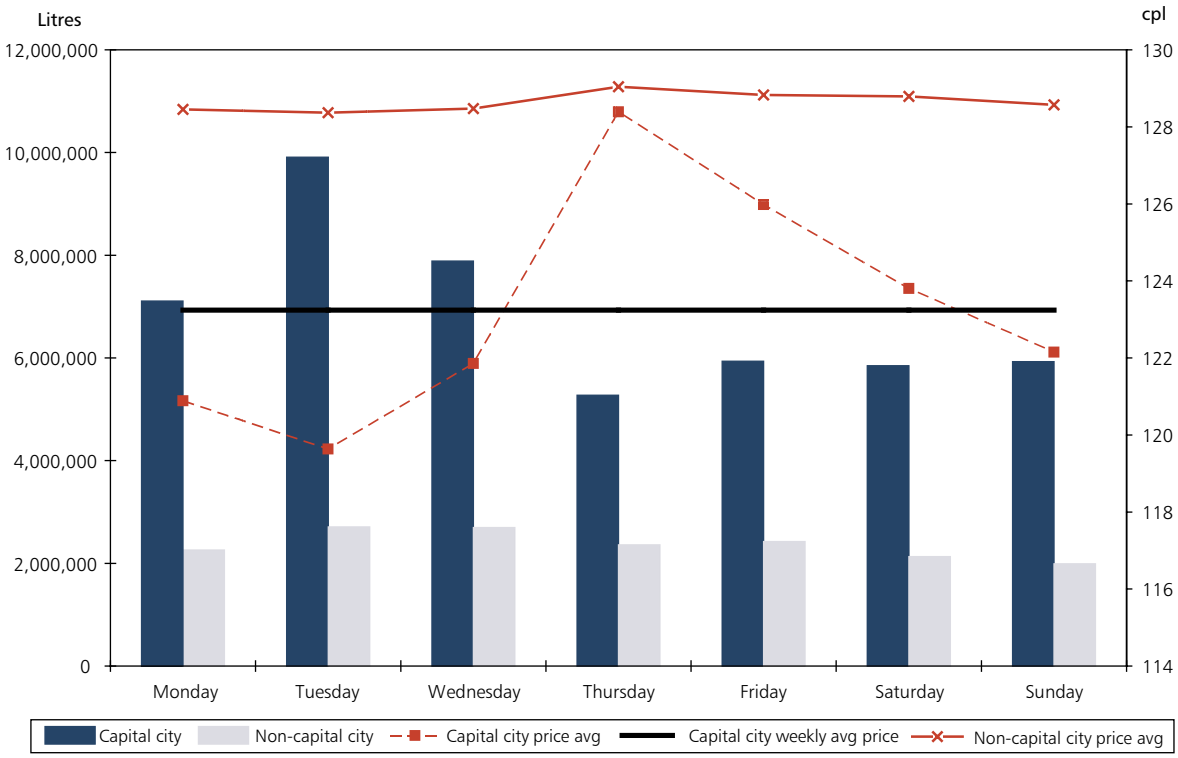
This appendix provides detailed analysis of day of the week petrol sales in capital city and non-capital city areas of each state and territory for 2006–07. Section 11.5.2 contains a summary of the results of this analysis.

Charts P.1 to P.8 show average retail prices and volumes sold on each day of the week in capital city and non-capital city areas of the respective state or territory. Chart P.8 on the Australian Capital Territory does not contain information on non-capital city areas since for the purpose of this analysis the region is classified as 'capital city areas only' owing to its prevailing demographics.[14] Charts P.1 to P.5 also present the average weekly price for the respective major capital city.

In each of the following charts, average sales volumes (in litre) are measured on the left axis and average prices (in cpl) are measured on the right axis.

14 One petrol retailer, in its submission, classified this region as non-capital city.

Chart P.1 Average retail prices and volumes in New South Wales: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

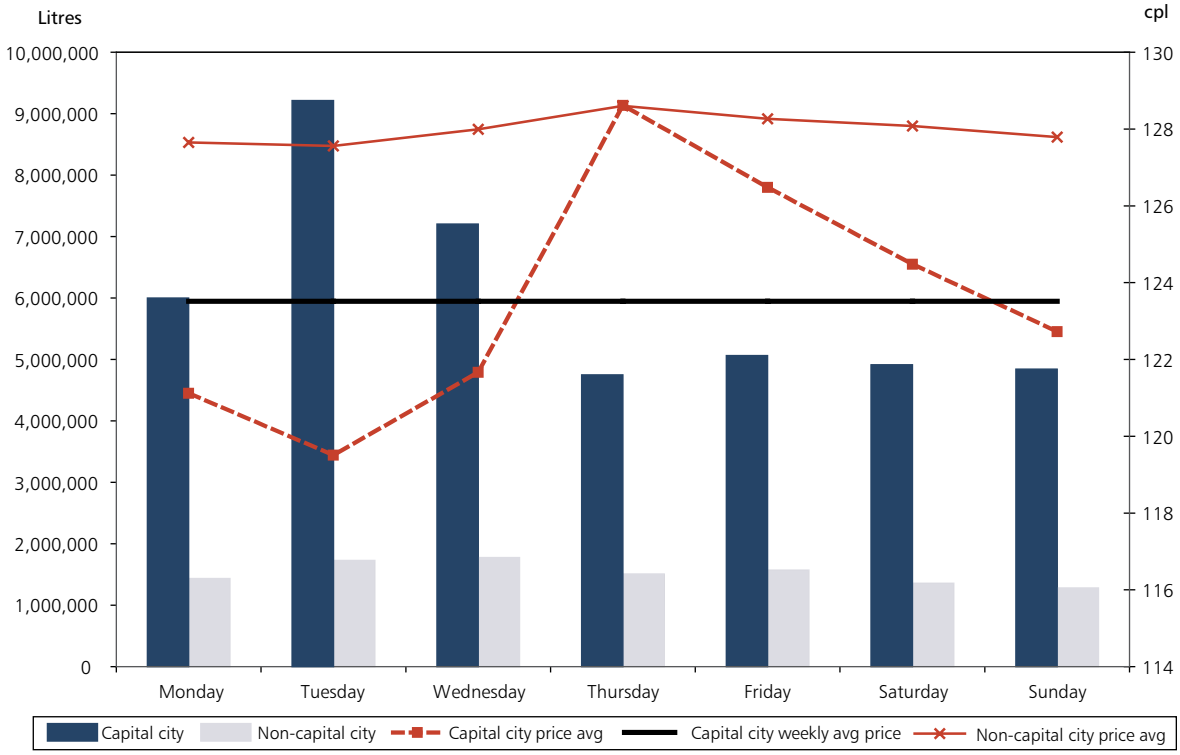
In Sydney:

- average volumes were highest on Tuesday (at the trough of the price cycle), and lowest on Thursday (at the peak of the price cycle)
- 21 per cent of petrol was bought on Tuesday and 11 per cent was bought on Thursday
- average volumes on Thursday were 53 per cent of average volumes on Tuesday
- 64 per cent of petrol was sold on four days where average prices were below the weekly average price, and 36 per cent of petrol was sold on three days where prices were above the weekly average price.

In non-capital city areas of New South Wales:

- relative to sales in Sydney, average volumes in non-capital city areas were stable
- relative to prices in Sydney, retail prices in non-capital city areas were fairly constant over the course of a week.
- average volumes were highest on Tuesday (16 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales).

Chart P.2 Average retail prices and volumes in Victoria: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

In Melbourne:

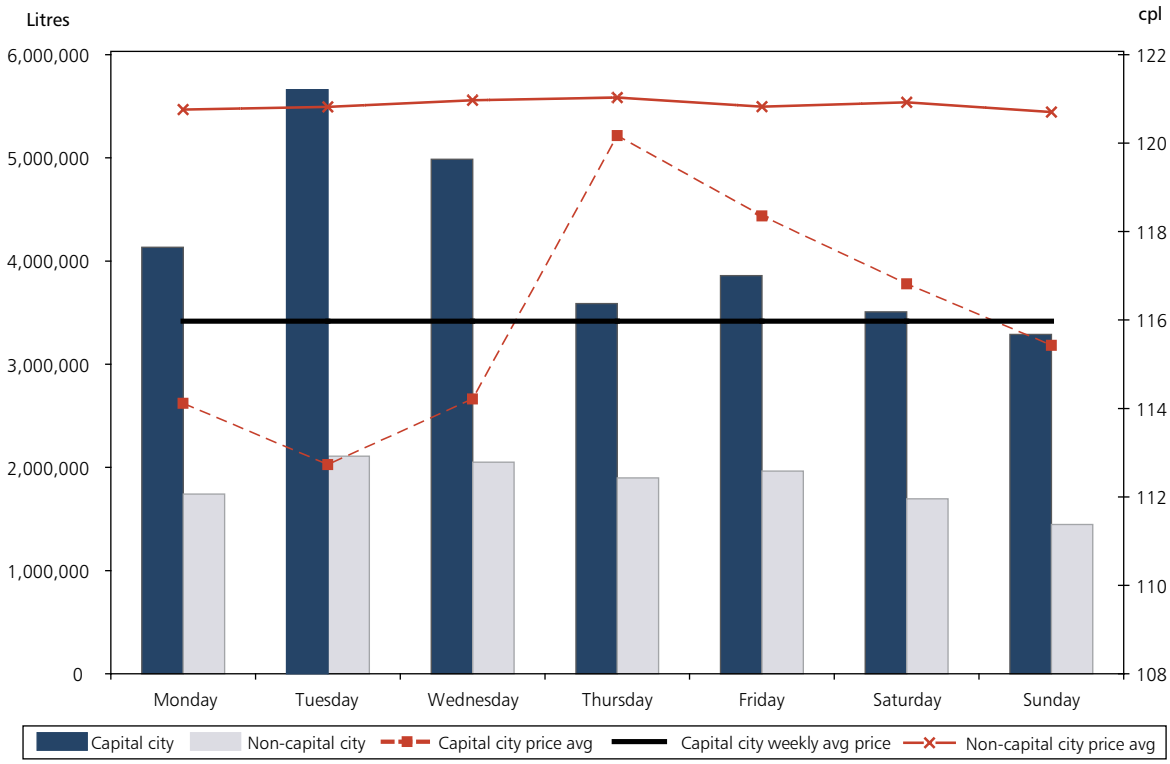
- average volumes were highest on Tuesday (at the trough of the price cycle), and lowest on Thursday (at the peak of the price cycle)
- 22 per cent of petrol was bought on Tuesday and 11 per cent was bought on Thursday
- average volumes on Thursday were 52 per cent of average volumes on Tuesday
- 65 per cent of petrol was sold on four days where average prices were below the weekly average price, and 35 per cent of petrol was sold on three days where prices were above the weekly average price.

In non-capital city areas of Victoria:

- relative to sales in Melbourne, average volumes in non-capital city areas were stable
- relative to prices in Melbourne, retail prices in non-capital city areas were fairly constant over the course of a week
- average volumes were highest on Wednesday (17 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales).

Queensland

Chart P.3 Average retail prices and volumes in Queensland: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

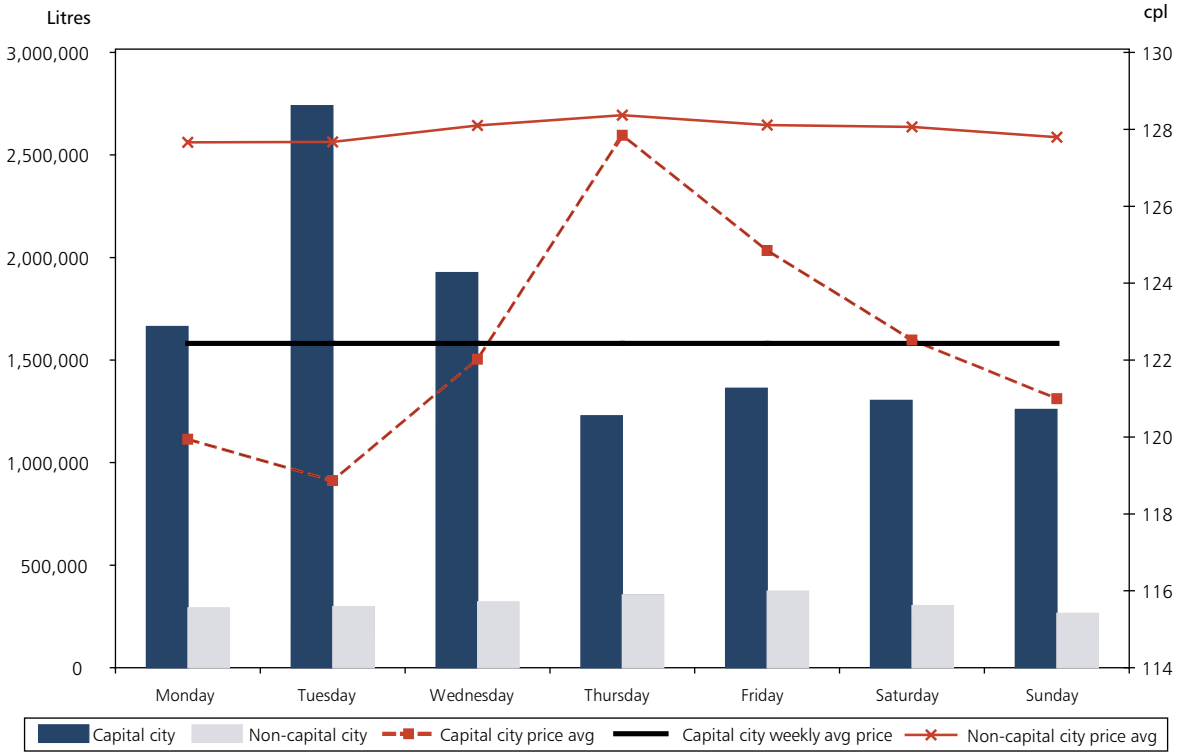
In Brisbane:

- average volumes were highest on Tuesday (at the trough of the price cycle), and lowest on Sunday
- average volumes on Sunday were 58 per cent of average volumes on Tuesday
- 20 per cent of petrol was bought on the day with the lowest average price, and 12 per cent was bought on the day with the highest average price (that is Thursday).
- 62 per cent of petrol was sold on four days where average prices were below the weekly average price, and 38 per cent of petrol was sold on three days where prices were above the weekly average price.

In non-capital city areas of Queensland:

- relative to sales in Brisbane, average volumes in non-capital city areas were stable
- relative to prices in Brisbane, retail prices in non-capital city areas were fairly constant over the course of a week
- average volumes were highest on Tuesday (16 per cent of weekly sales) and lowest on Sunday (11 per cent of weekly sales).

Chart P.4 Average retail prices and volumes in South Australia: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

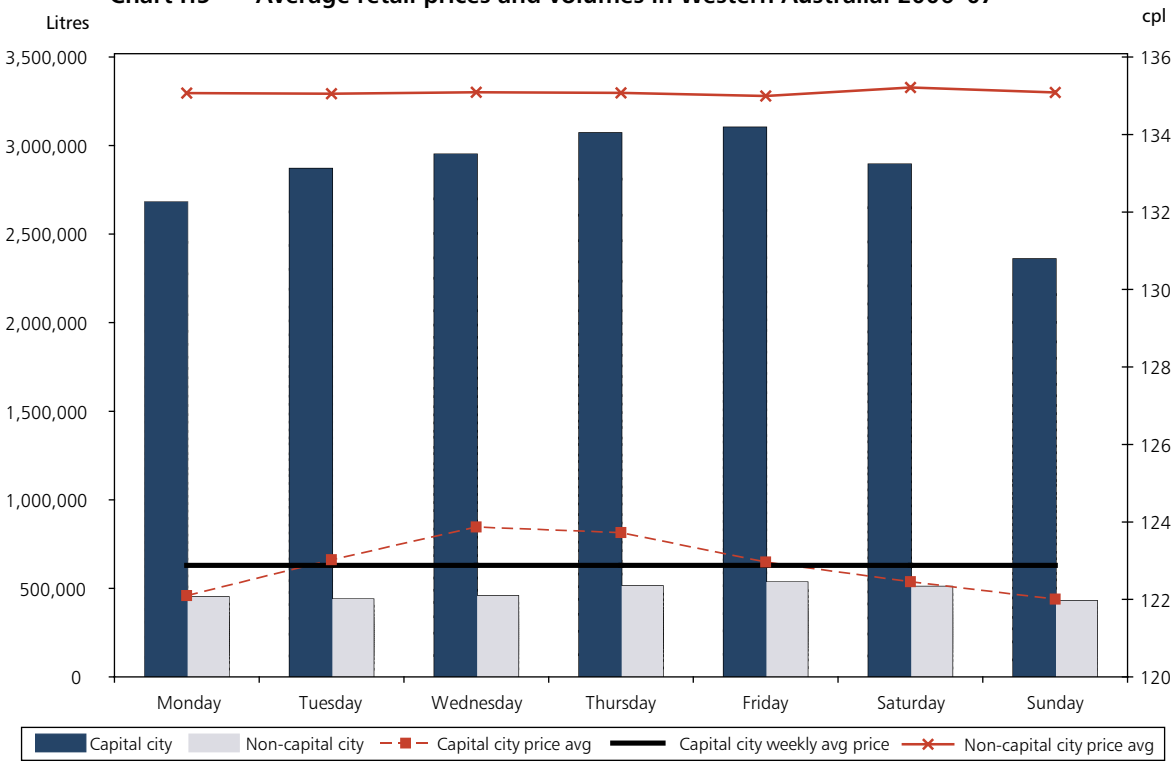
In Adelaide:

- average volumes were highest on Tuesday (at the trough of the price cycle), and lowest on Thursday (at the peak of the price cycle)
- 24 per cent of petrol was bought on Tuesday and 11 per cent was bought on Thursday
- average volumes on Thursday were 45 per cent of average volumes on Tuesday.
- 66 per cent of fuel was sold on four days where average prices were below the weekly average price, and 34 per cent of fuel was sold on three days where prices were above the weekly average price.

In non-capital city areas of South Australia:

- relative to sales in Adelaide, average volumes in non-capital city areas were stable
- relative to prices in Adelaide, retail prices in non-capital city areas were fairly constant over the course of a week
- average volumes were highest on Friday (17 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales).

Chart P.5 Average retail prices and volumes in Western Australia: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

In Perth:

- unlike other cities, the price cycle spanned a two-week period—thus, average volumes on each day of the week in the 2006–2007 financial year were relatively stable compared to the four major capital cities where weekly price cycles were present
- on average, prices were highest on Wednesday and lowest on Sunday—price differentials across days of the week were smaller relative to other major capital cities where weekly price cycles were present.
- average volumes were highest on Friday (16 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales).
- average volumes on Sunday were 76 per cent of average volumes on Friday.
- 40 per cent of petrol was sold on three days where average prices were below the weekly average price, and 60 per cent of petrol was sold on four days where prices were above the weekly average price.

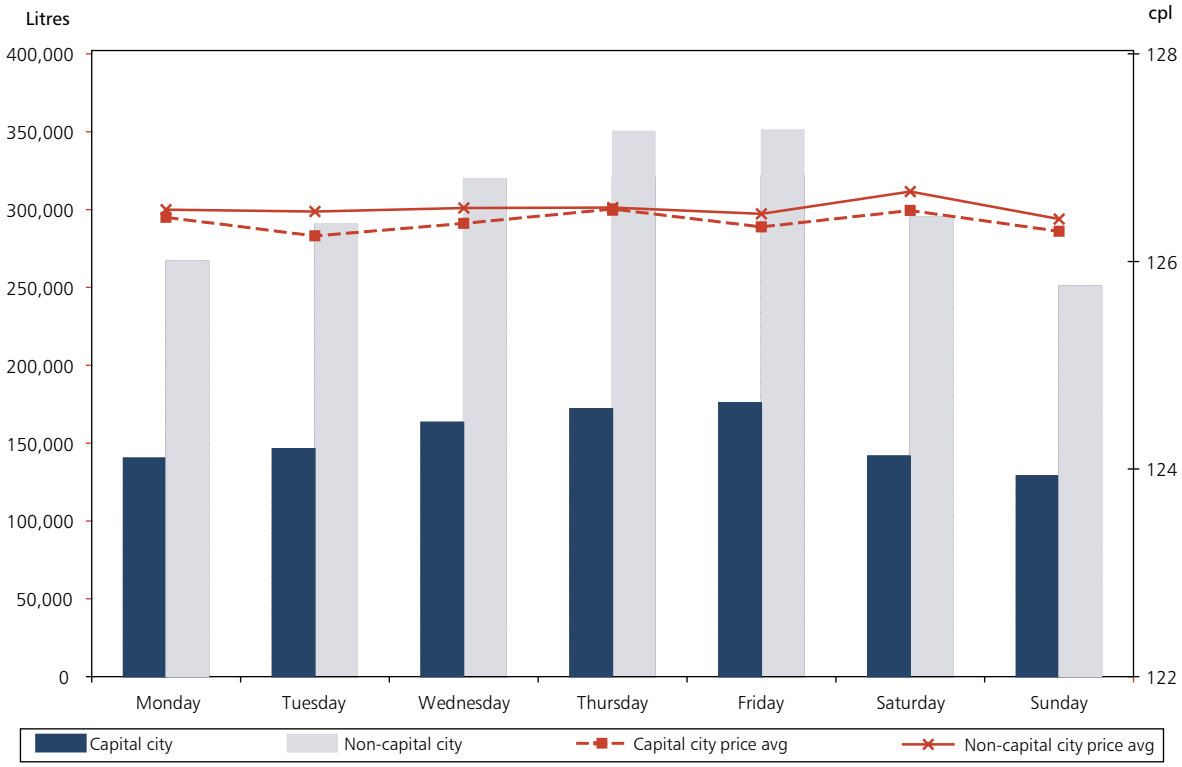
In non-capital city areas of Western Australia:

- average volumes in non-capital city areas were stable
- average retail prices in non-capital city areas were stable

- average volumes were highest on Friday (16 per cent of weekly sales) and lowest on Sunday (13 per cent of weekly sales)
- average volumes on Sunday were 80 per cent of average volumes on Friday.

Tasmania

Chart P.6 Average retail prices and volumes in Tasmania: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

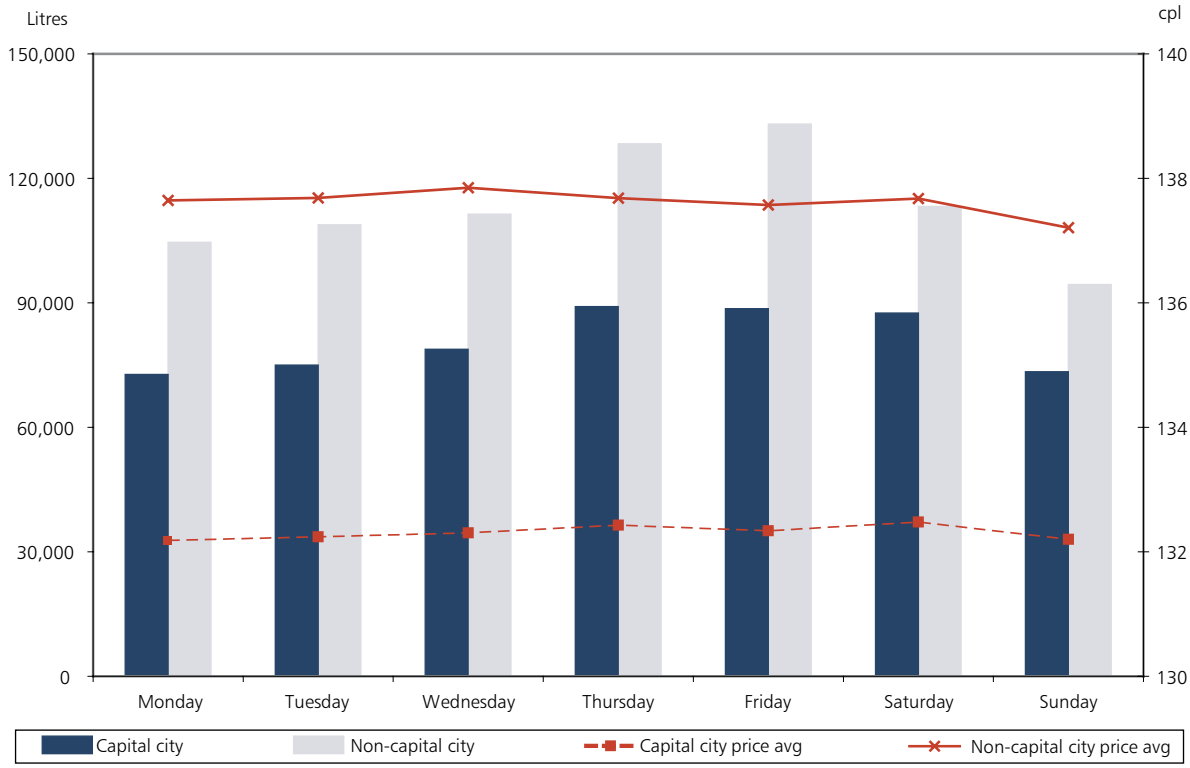
In Hobart:

- there was no price cycle: thus, the average volumes on each day of the week in the 2006–07 financial year were relatively stable compared with the four major capital cities where weekly price cycles were present
- average volumes were highest on Friday (16 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales)
- average volumes on Sunday were 73 per cent of average volumes on Friday.

In non-capital city areas of Tasmania:

- average volumes were highest on Friday (17 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales)
- average volumes on Sunday were 71 per cent of average volumes on Friday.

Chart P.7 Average retail prices and volumes in Northern Territory: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

In Darwin:

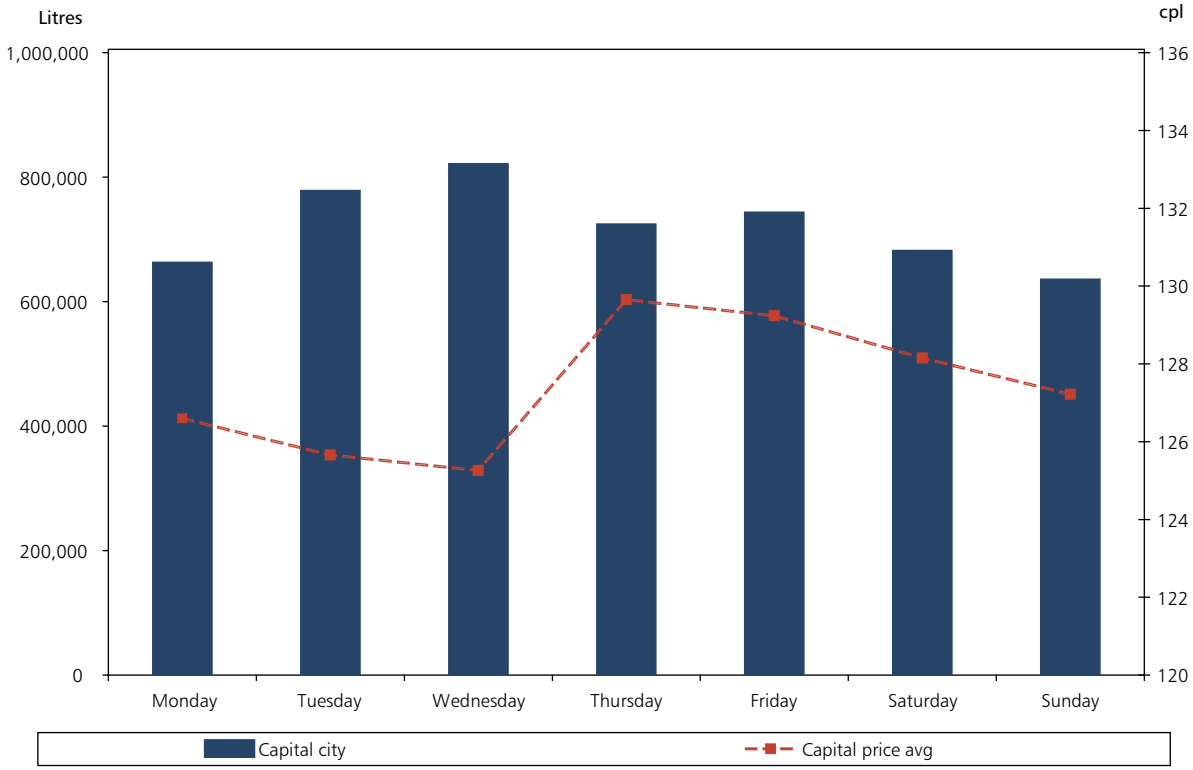
- there was no regular price cycle: thus, the average volumes on each day of the week in the 2006-07 financial year were relatively stable compared with the four major capital cities where weekly price cycles were present
- average volumes were highest on Thursday (16 per cent of weekly sales) and lowest on Monday (13 per cent of weekly sales)
- average volumes on Monday were 82 per cent of average volumes on Thursday.

In non-capital city areas of Northern Territory:

- average volumes were highest on Friday (17 per cent of weekly sales) and lowest on Sunday (12 per cent of weekly sales)
- average volumes on Sunday were 71 per cent of average volumes on Friday.

Canberra

Chart P.8 Average retail prices and volumes in Canberra: 2006–07



Source: ACCC from data supplied under s. 95ZK of the Act and Informed Sources.

In Canberra:

- there was no regular price cycle: thus, the average volumes on each day of the week in the 2006–07 financial year were relatively stable compared with the four major capital cities where weekly price cycles were present
- on average, prices were highest on Thursday and lowest on Wednesday—price differentials across days of the week were smaller relative to other major capital cities where weekly price cycles were present
- average volumes were highest on Wednesday (16 per cent of weekly sales) and lowest on Sunday (13 per cent of weekly sales)
- average volumes on Wednesday were 77 per cent of average volumes on Sunday.

Appendix Q:

Shopper docket arrangements notified to the ACCC

Types of shopper docket arrangements

Since 1996 shopper docket arrangements have evolved from requiring a minimum purchase of groceries from a particular supermarket to a variety of other arrangements as described below:

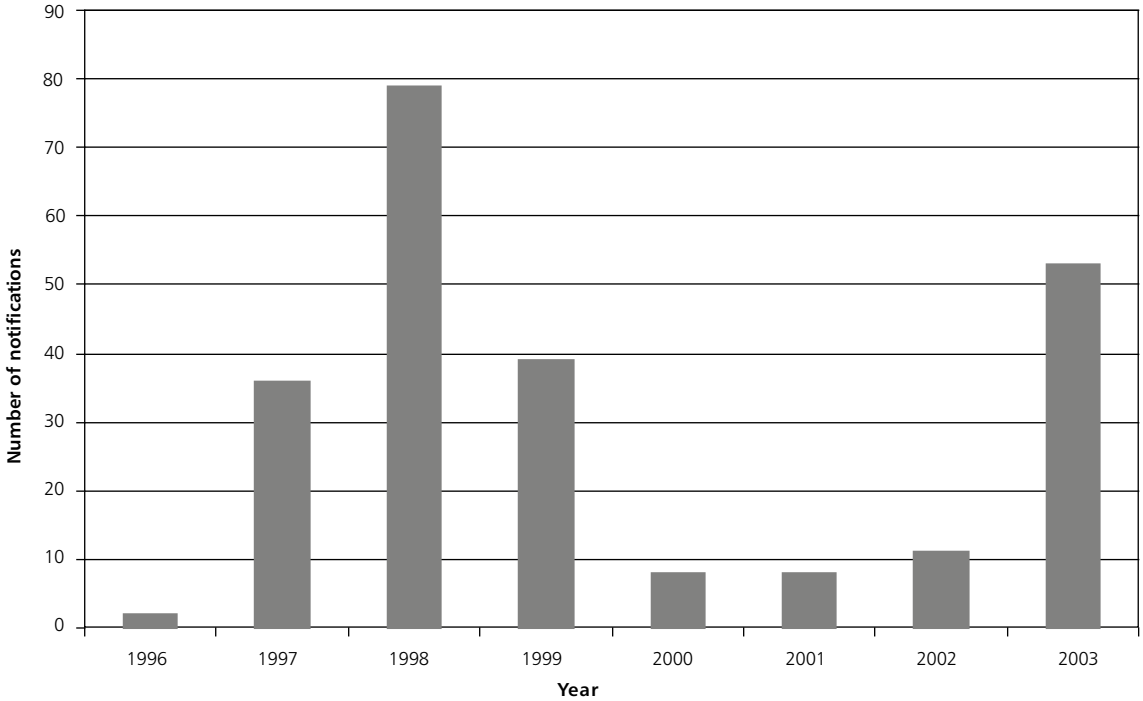
- Grocery—discounted petrol may be tied to the purchase of a minimum amount of groceries from a specific supermarket or a specific supermarket chain or any supermarket or supermarket chain. Any of these arrangements may involve the major supermarket chains or independent stores or both. For example, in 1997 a number of notifications were lodged by individual service stations that offered to provide a discount on petrol when presented with a docket from any supermarket.
- Grocery plus—an additional discount on petrol may be tied to the purchase of a minimum amount of groceries and, for example, the use of a particular credit card to pay for the petrol or the presentation of a docket from a liquor outlet associated with the supermarket (or supermarket chain) from which the groceries must be purchased. This category also includes arrangements whereby the fuel voucher obtained as a result of a grocery purchase may be redeemed for a benefit other than a fuel discount, such as Flybuy points. It is common for these types of arrangements to only be offered for a short period of time as an addition to an existing grocery arrangement.
- Other retailers—discounted petrol may be tied to the purchase of a good or service from a particular retailer (other than a supermarket) or retail location. For example, notifications have been lodged concerning initial purchases from video stores, butchers, hotels, automotive repair shops, greengrocers, hotels and building societies. The more comprehensive schemes involving independent service stations, such as the Servo Saver scheme, also generally involve other retailers.
- Petrol companies—a discount on petrol may be tied to the purchase of another good or service at the service station. For example, notifications have been lodged concerning the purchase of a carwash or the purchase of items from the on-site convenience store.

Notifications before 2003

The first notifications concerning a shopper docket arrangement were lodged by Australian Independent Retailers Pty Ltd (AIR) in 1996. These two notifications related to an offer by Woolworths of discounted petrol to customers buying at least $30 of groceries or other products from Woolworths and Safeway supermarkets and Big W stores. In 2001, AIR and Woolworths lodged a further two notifications concerning the offer of discount petrol to customers buying a nominated product or products of not less than a nominated value from Woolworths and Safeway supermarkets and Big W stores.

The notifications lodged by AIR in 1996 were the first of over 200 notifications concerning petrol shopper docket arrangements lodged with the ACCC between 1996 and 2003. The chart below shows the number of notifications lodged each year during this period.

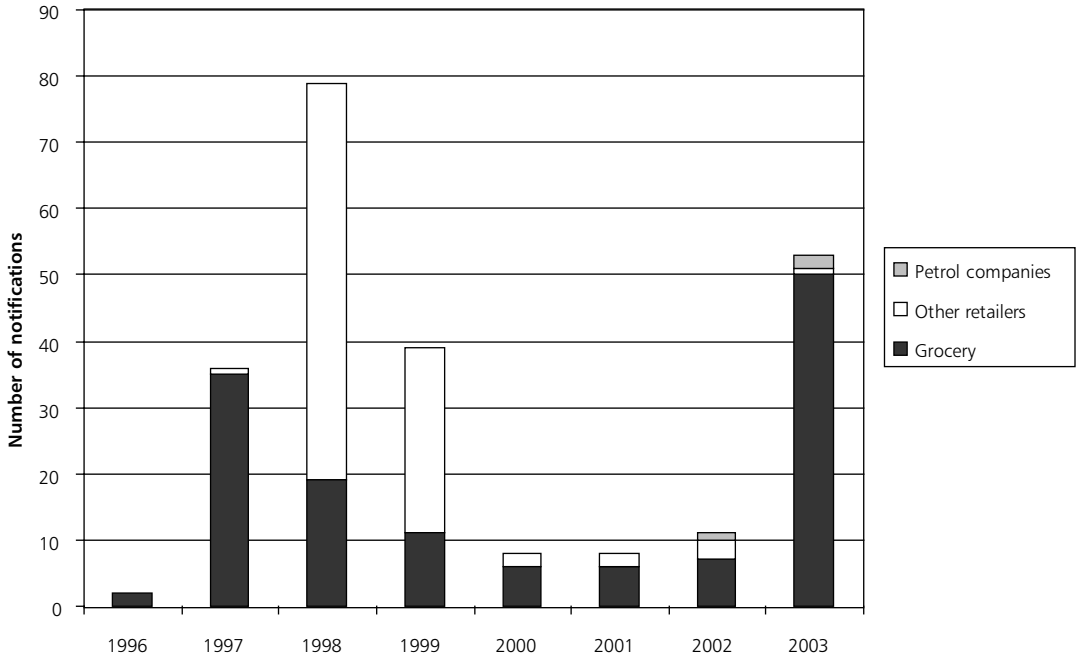
Chart Q.1 Number of notifications lodged: 1996–2003



The majority of these notifications concern arrangements tying discounts on fuel with minimum grocery purchases. These notifications were generally lodged by individual service stations that were prepared to honour shopper dockets from Woolworths' supermarkets or to provide discounted fuel when presented with a receipt from a specified supermarket (such as a Franklins, IGA or Coles supermarket) or any supermarket.

However, a significant number of the notifications concern arrangements that do not specify the purchase of groceries but instead require minimum or specific purchases from other types of retailers such as car wash providers, video stores, liquor outlets, seafood or chicken shops and building societies. Some arrangements involved tying discounts on fuel with minimum purchases from a petrol retailers' convenience store. The chart below illustrates the types of notifications lodged between 1996 and 2003.

Chart Q.2 Notification lodged by type of forced purchase: 1996–2003

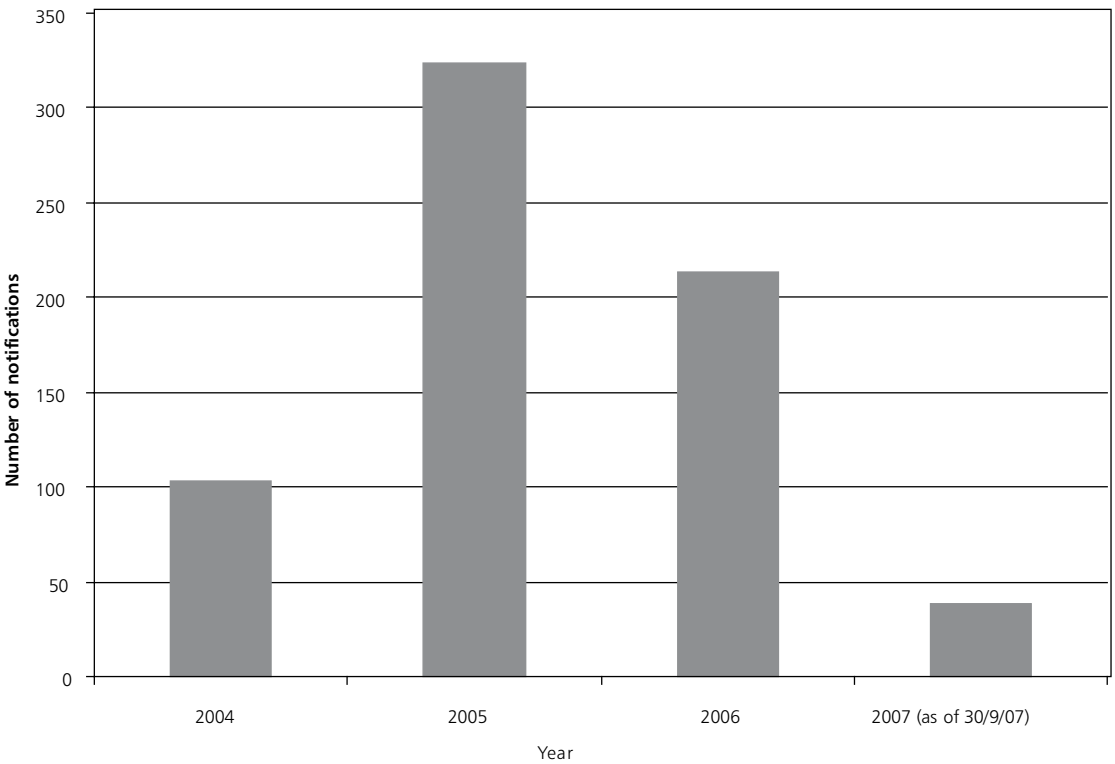


While these charts provide a picture of the number and general type of notifications lodged between 1996 and 2004, it is important to note that this information does not describe the breadth of any of the notified arrangements in terms of the number of sites (petrol stations, supermarkets or other stores) involved or the duration of the promotion. It is also important to note that some petrol discounting arrangements would not have been notified.

Notifications since 2004

Over 600 notifications concerning petrol discounting have been lodged since the ACCC released its 2004 report on shopper dockets. The chart below shows the number of notifications lodged each year from 2004–07 (as of 30 September 2007).

Chart Q.3 Number of notifications lodged: 2004–07



Some of the notifications were lodged by Coles and Woolworths and concern extensions to their existing shopper docket arrangements. For example:

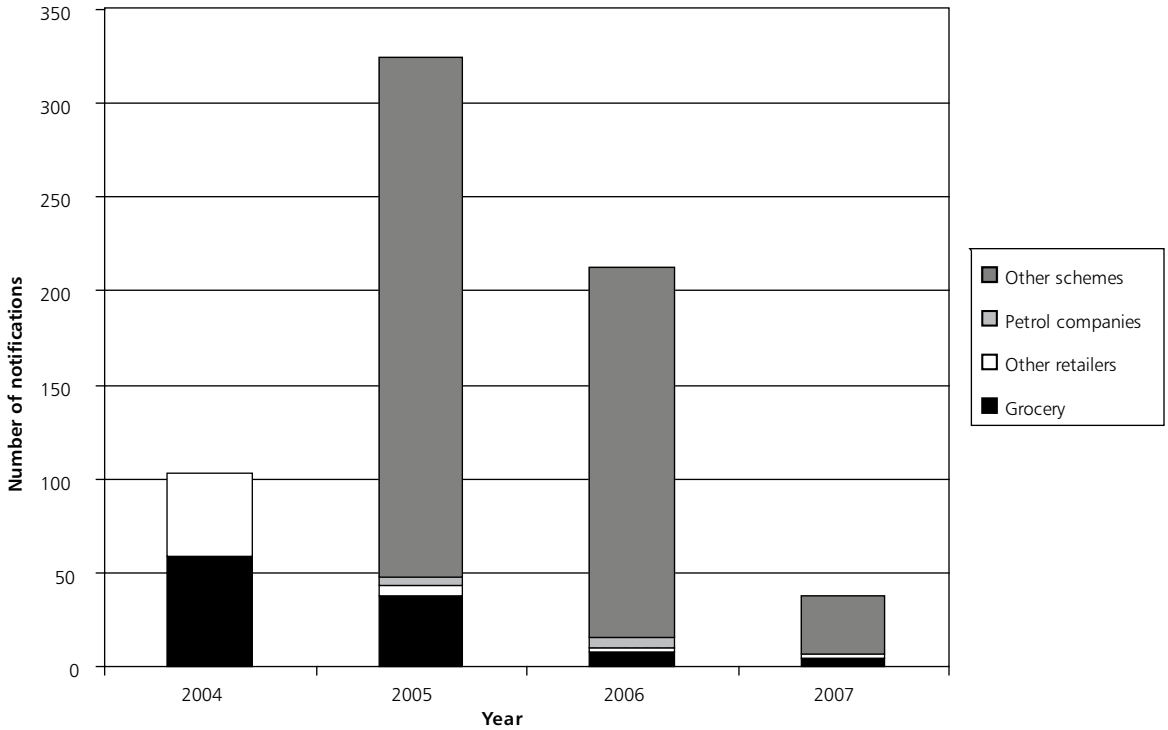
- In 2005 Coles notified an extension to its existing shopper docket arrangement to include an additional discount for customers who pay for petrol with a Mastercard. Coles also notified a further extension to its existing shopper docket arrangement to offer members of the Flybuys program a discount on petrol on condition that they redeem a specified number of loyalty reward points from FlyBuys
- In 2005 Woolworths notified a month-long extension to its existing shopper docket arrangement to include an additional discount for customers who pay for petrol with a Visa card.
- In 2006 Woolworths and AIR notified an extension to their existing shopper docket arrangement to include the offer of an additional discount on petrol to customers who have bought products of not less than a specified value from Dick Smith Electronics, Tandy or Dick Smith Powerhouse stores. In 2006 AIR also notified a further extension to Woolworths' shopper docket arrangement to include the offer of a discount on petrol to customers who buy products not less than a specified value from Calstores (or Caltex Site Operators).

Other notifications were lodged by independent retailers and concern alternative shopper docket and loyalty schemes such as the Servo Savers, SaveSmart, BEEPP and Petrol Price Buster schemes. Other notifications lodged concerned localised arrangements between individual supermarkets (and other types of retailers such as hotels, butchers, telecommunications providers, automotive repairers, pharmacies) and fuel retailers, or between groups of supermarkets within the same brand and a chain of petrol retailers.

The Servo Savers arrangement is the most widely notified 'independent' shopper docket scheme. Under this scheme, consumers may receive a discount of 6 cpl off the cost of the first 30 litres of fuel they buy by presenting a docket from participating businesses. As many as five dockets from participating businesses may be presented at once to receive a cumulative discount of 30 cpl off the cost of the first 30 litres of fuel purchased.

The chart below illustrates the types of notifications lodged between 2004 and 2007.

Chart Q.4 Notification lodged by type of forced purchase: 2004–07



As noted in a previous section, while these charts provide a picture of the number and general type of notifications lodged between 2004 and 2007, it is important to note that this information does not describe the breadth of any of the notified arrangements in terms of the number of sites (petrol stations, supermarkets or other stores) involved or the duration of the promotion. It is also important to note that other petrol discounting arrangements would not have been notified.

Appendix R:

Legal advice on section 45 of the Trade Practices Act 1974

ACCC: Trade Practices Act 1974
Section 45: 'Contract, Arrangement or Understanding'

OPINION

SUMMARY

1. The Trade Practices Act prohibits making or giving effect to an agreement, arrangement or understanding which has specified anti-competitive purposes or effects. The nature of anti-competitive agreements and arrangements is not contentious. Where an anti-competitive understanding is alleged, courts have looked at the conduct of the parties to see if it reveals a commitment to the proposed anti-competitive conduct and have considered that a 'mere expectation' in one or both parties is not enough.

2. In my opinion, the approach of the courts has excluded from the reach of the statute various forms of behaviour which parliament intended to prohibit. When an understanding is alleged, courts now look for something 'more than a mere expectation'. The problem ultimately rests on what is meant by 'mere expectation'. In my opinion, if the conduct of the parties in particular circumstances is such that each expects that the other will act in a particular anti-competitive way, and that expectation has been deliberately engendered by the other, then the parliament intended to proscribe the conduct giving rise to that expectation.

OPINION

3. I have been asked by the Australian Competition and Consumer Commission (**ACCC**) to advise in relation to:

   (a) the construction of the expression 'contract, arrangement or understanding' as used in sections 45 and 45A of the Act,

   (b) the construction of that expression in several recent cases, in particular *Apco Service Stations Pty Ltd v ACCC* [2005] FCAFC 161 (***Apco***); and

   (c) whether, in light of the Full Court decision in *Apco*, amendments to the Act, including to sections 45 and/or 45A, are warranted and if so, what form any such amendments should take.

4. The most recent decision on the point is *Leahy*[1], where Gray J said that the terms 'contract', 'arrangement' and 'understanding' are intended to represent a spectrum of consensual dealings.[2] His Honour concluded that the word 'arrangement' connoted a consensual dealing lacking some of the essential elements that would otherwise make it a contract – for example it might not be legally binding.[3] His Honour also observed that the word 'understanding' connoted a less precise dealing than either a contract or arrangement.[4] Nevertheless, it required a consensual dealing and must involve a meeting of minds. His Honour expressly approved the observations of Smithers J in *Top Performance Motors Pty Ltd v Ira Berk (1975) 5 ALR 465*.[5]

5. Gray J also discussed the use of the word 'commitment' in the judgment of the Full Court in *Apco*.[6] His Honour concluded that the Full Court was correct in requiring that there be some commitment before there could be an understanding for the purposes of s.45 of the Act[7]. However it appears that the Full Court in *Apco* did not perceive a practical distinction between a 'commitment' and an 'expectation' about future conduct that arises from communications between parties. The significant factual finding in *Apco* was that other petrol retailers had no expectation concerning the pricing conduct of *Apco*, although it was clear that Apco and the other retailers understood exactly what was going on when retailers rang Apco with price information. In *Leahy*, Gray J also understood a commitment to be the essential requirement of an understanding. His Honour observed in respect of the facts of the *Apco* case:

> *'Information conveyed by some dealers to the uncommitted dealer may have been useful to the uncommitted dealer in enabling him to have his franchisees check competitors' prices and know when to raise his own prices if he chose to do so, but the absence of any expectation that he would do so was fatal to the existence of any understanding.'*[8]

6. In the context, it appears that the Full Court in *Apco* and Gray J in *Leahy* appear to equate, to a considerable extent, the notions of 'commitment' and 'expectation' at least insofar as the expectation arises by reason of the assumption of a moral obligation.

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[1] *ACCC v Leahy Petroleum Pty Ltd* [2007] FCA 794 (Leahy).
[2] at [24]
[3] at [26]
[4] at [27]
[5] at [28]
[6] at [35]-[38]
[7] See para [37]
[8] at para [36]

7. In *Leahy*, Gray J concluded that the word 'understanding' is intended to connote a less precise dealing than either a contract or arrangement.[9] His Honour perceived that one difference between the concepts is that, unlike an arrangement, an understanding can be tacit, in the sense that it can be arrived at by each party, either by words or acts, signifying an intention to act in a particular way in relation to a matter of concern to another party. Nevertheless, Gray J held that an understanding must also involve a meeting of minds and a commitment to carry out the provisions of the understanding.[10]

8. In my view, the effect of the case law is that 'commitment', at least by one party to an understanding, is a necessary element of an understanding for the purposes of s.45. The requirement can be traced back to the earliest cases concerning s.45. In *Ira Berk*[11], Smithers J said that one of the parties to the arrangement must undertake to regard himself as being in some degree under a duty to conduct himself in some particular way.

What is a 'commitment'?

9. The question is what is a commitment? An analysis of cases decided since *Ira Berk* suggests that the nature of the commitment required has shifted by degrees, or at least that the factual circumstances which enable a commitment to be inferred have changed. In early cases, the required commitment was merely a moral obligation which could arise as a result of each of two or more parties intentionally arousing in the other an expectation that she or he would act in a certain way.[12] On the formulation in *British Basic Slag*[13], a commitment could be found if a party's conduct gave rise to an expectation in another party such that it would be morally reprehensible to act contrary to that expectation. The test appears to be analogous to that required, in a different field of discourse, to raise an equitable estoppel. Accordingly, the 'commitment' arises from a common expectation about future conduct which has been consciously or intentionally engendered between two or more persons.

10. However in *ACCC v CC (NSW) Pty Ltd (No 8)* [14], Lindgren J observed that an understanding required at least one party to 'assume an obligation' or give an 'assurance' or 'undertaking' that he or she will act in a certain way, and that a 'mere expectation' that as a matter of fact a party will act

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[9] at [27]
[10] at [28]
[11] *Top Performance Motors Pty Ltd v Ira Berk (Qld) Pty Ltd* (1975) 5 ALR 465
[12] See *Re British Basic Slag Limited's Agreements* [1963] 2 All ER 807 at 814 per Wilmer LJ, cited with approval by Fisher J in *TPC v Nicholas Enterprises* [1979] 26 ALR 609 at 627.
[13] *Re British Basic Slag Agreements* [1963] 2 All ER 807 at 814 per Wilmer LJ and 819 per Diplock LJ
[14] (1999) 165 ALR 468

in a certain way is not enough, even if it has been engendered by that party.

11. In my view, this represents a subtle but significant shift. There is a real distinction between a 'mere expectation' as described by Lindgren J in *CC (NSW)* and the 'common expectation' referred to by Fisher J in *Nicholas Enterprises*[15]. The distinction arises from the circumstances giving rise to the expectation. In *Nicholas Enterprises*, Fisher J referred to communications by which parties intentionally arouse expectations, thereby creating at least a moral obligation to act in a certain way. In *CC (NSW)*, the 'mere expectation' referred to by Lindgren J was the expectation that arises by simply observing the manner in which other persons conducted themselves. The element of conscious or intentional communication to create the expectation, and the consequent moral obligation, is missing in that case.

12. In my view, the early cases recognize that a party to an understanding is free to withdraw from it, or to act inconsistently with it. Both Fisher J in *Nicholas Enterprises* and Gray J in *Leahy* cited the High Court decision in *Lutovi Investments*[16] as stating principles that were applicable to the meaning of the words 'arrangement' and 'understanding' as used in sections 45 and 45A. However, in *Leahy* Gray J made the observation, with which I agree, that although parties will be free to act inconsistently with the understanding that they have made, they must nevertheless have reached some consensus about future conduct for an understanding to arise.[17]

13. In my view, a degree of ambiguity has now arisen in the cases, beginning with *CC (NSW)*, from the statement that a 'mere expectation' about future conduct is insufficient to constitute an understanding. It is likely that Lindgren J used 'mere' to equate a 'mere expectation' with an unsupported hope. However that may be, later decisions have given it a life of its own and have thereby narrowed the concept of an understanding. I think there is an important difference between a 'mere expectation' and an expectation which has been intentionally engendered by the conduct of the parties. For that reason, I believe that there may be a benefit in inserting an inclusive definition of an 'understanding' in the Act.

14. The discussion above proceeds on the assumption that parliament intended that there be a distinction between 'arrangements' and 'understandings'. I think it did, as Gray J recognised in *Leahy*. If parliament uses two words,

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[15] *TPC v Nicholas Enterprises* [1979] 26 ALR 609

[16] *FCT v Lutovi Investments Pty Ltd* (1978) 140 CLR 434 at 444

[17] *Leahy* at [35]

it may be presumed to have intended to add something by the second word. Research into the earliest origins of s. 45 reveals little. I think that the ordinary meaning of the words 'contract, arrangement or understanding' are apt to encompass a spectrum of possibilities, ranging from binding obligations (contracts), arrangements which fall short of binding agreements, and understandings which can be inferred by coordinated conduct directed to a prohibited purpose.

15. As a matter of language, I think there is a distinction between arrangements and understandings. In particular, I think that as a matter of language an understanding is capable of being found by inference from conduct, without any words of agreement between the parties. It is a word apt to catch actions which are done in concert so as to permit a finding that they are done pursuant to a tacit agreement, whether formed previously or ad hoc. In *Attorney-General v. Associated Northern Collieries*[18] Isaacs J. said:

> '... there may be such a concurrence of time, character, direction and result as naturally lead to the inference that these separate acts were the outcome of preconcert, or some mutual contemporaneous engagement, or that they were themselves the manifestations of mutual consent to carry out a common purpose, thus forming as well as evidencing a combination to effect the one object towards which the separate acts are found to converge.'

16. In my opinion, those words convey a notion which can fairly be described as an understanding, and I think parliament intended that the legislation catch them by use of the word 'understanding'.

17. That said, before drafting a revised prohibition of collusive conduct, it is important to identify clearly the vice that is sought to be met by the prohibition. Clearly, the vice is anti-competitive collusive pricing. While the words of the Act are apt to catch such conduct, decisions of the courts have narrowed the conduct which is caught. My instructions propose a form of amendment to s.45. I agree that the approach suggested may succeed. However I would supplement the suggested amendment, and propose an amendment along the following lines:

(a) The Court may determine that a corporation has arrived at an understanding notwithstanding that:

(i) the understanding is ascertainable only by inference from any factual matters the court considers appropriate; and

[18] (1911) 14 CLR 387

(ii) the corporation, or any other parties to the alleged understanding, are not committed to giving effect to the understanding.

(b) The factual matters the court may consider in determining whether a corporation has arrived at an understanding include but are not limited to:

(i) the conduct of the corporation or of any other person, including other parties to the alleged understanding;

(ii) the extent to which one party intentionally aroused in other parties an expectation that the first party would act in a particular way in relation to the subject of the alleged understanding;

(iii) the extent to which the corporation was acting in concert with others in relation to the subject matter of the alleged understanding;

(iv) any dealings between the corporation and any other parties to the alleged understanding prior to the time at which the understanding is alleged to have been arrived at;

(v) the provision by the corporation to a competitor, or the receipt by the corporation from a competitor, of information concerning the price at which or conditions on which, goods or services are supplied or acquired or are to be supplied or acquired by any of the parties to the alleged understanding or by any bodies corporate that are related to any of them, in competition with each other.

(vi) whether the information referred to in (v) above is also provided to the market generally at the same time;

(vii) the characteristics of the market;

(viii) the likelihood of the information referred to in (v) above being useful to the recipient of the information for any purpose other than fixing or maintaining prices;

(ix) the extent to which, if at all, the communication referred to in (v) above was secret or intended by the parties to the communication to be secret.

18. In my opinion, there is some utility in amending the Act in the manner set out above. The proposed amendment largely restates the law as I understand it to have been in 1974, but gives guidance about the way in which an understanding can be found. The amendment should make it

clear that courts are entitled to infer the existence of an understanding from the surrounding circumstances and in the absence of a 'commitment' by the parties.

J.W.K. Burnside

6 December 2007

Appendix S:

Econometric analysis, price margin

Econometric approach

On 2 January 2001 FuelWatch was introduced into WA. This section provides details of tests to determine if this change was associated with a structural break in the price margin of unleaded petrol in WA relative to an average of the eastern capitals—Adelaide, Brisbane, Melbourne and Sydney.

The tests assume that the exact timing of the structural break is known to be at the time of introduction of FuelWatch. No deterministic trend is indicated or assumed. Unit root tests are first used to determine if the series are stationary. Dummy variable tests for a structural break are performed subsequently.

Data series

The data series was constructed using pricing information supplied by Informed Sources and Platts. The series tested was a measure of price margin that removes factors from the retail price that are beyond the scope of FuelWatch to affect, such as net taxes, fuel quality premiums and ex-refinery petrol prices:

Price margin = (Retail price – lagged Mogas95 price – net taxes – fuel quality premium) $_{\text{Perth}}$
– (Retail price – lagged Mogas95 price – net taxes – fuel quality premium) $_{\text{Average of eastern capitals}}$

The price margin is calculated for Perth relative to the average of the eastern capitals. This allows many items that could be assumed to be relatively common to Australia as a whole to be implicitly ignored. The price margin explicitly allows for lagged Mogas prices, net taxes and changes in indicative fuel standard premiums. The Mogas price is lagged by one week to reflect the typical lag seen between the effect of changes in Mogas on domestic retail petrol prices.

The data series used extends from 1 August 1998 to 8 June 2007. We do not go back before 1 August 1998 due to the major deregulation of petrol prices at that time. Data after 8 June 2007 was excluded as it was the time of the announcement of this inquiry.

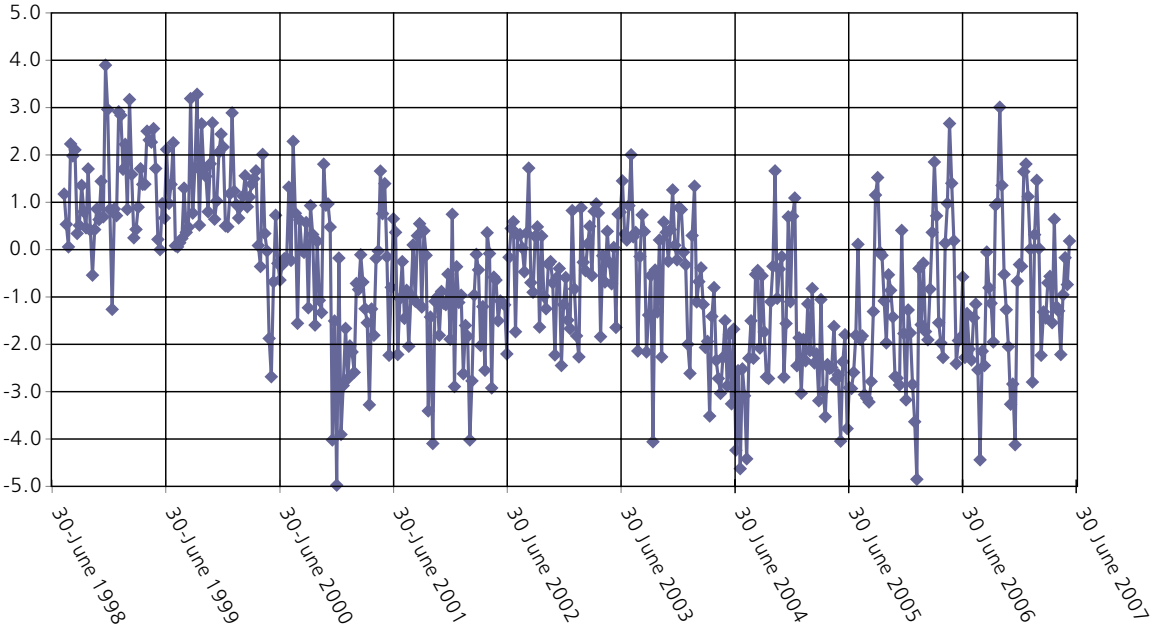
There are three data series tested using this price margin:

1. Weekly average: The primary data series uses weekly averages of prices to remove some of the effects of the price cycle.
2. Monthly average: This series uses monthly averages of prices rather than weekly averages. This further reduces the effect of the price cycle. It also helps to ensure that any apparent move from typically weekly to typically fortnightly cycles in Perth does not unduly affect the results.
3. Weekly minimum: This series uses a measure of the low point of the week's prices. The prices used are the average of the two lowest daily retail prices for each week. This measure represents the options of the most price conscious consumers.

The primary series examined, using weekly averages, is plotted in Chart S1. Visual inspection of the graph suggests that the relative price margin before around May 2000 is higher than it is after around May 2000. There are two clusters of lower values. One appears around December 2000. The other appears around July 2004. This is close in time to the entry of Coles into Perth. The graph is not

suggestive of any strong deterministic trend and so the remaining analysis focuses on results excluding a deterministic trend.

Chart S1 Weekly average relative price margin in cpl



Unit root tests

Testing for a unit root is used to establish which series are suitable for dummy variable tests for a structural break. Results using an augmented Dickey Fuller test for a unit root are reported in table S1. All series rejected the null of a unit root.

Table S1 Unit root test[a] findings for relative price margin, August 1998 to June 2007

Series	ADF Including trend & constant	ADF Including constant
Weekly average	I(0)	I(0)
Monthly average	I(0)	I(0)
Weekly minimum	I(0)	I(0)

[a] The unit root test reported is the augmented Dickey-Fuller (ADF) test, at the 5 per cent significance level. It assumes no structural breaks. The selection of the final lag length used a sequential t-test using a significance level of 10 per cent.

The maximum length was selected according to $k_{\max} = \mathrm{int}\left[m\{(T)/100\}^{0.25}\right]$, where m=12 for series with more data points such as the weekly time series and m=4 for series with fewer data points such as the monthly series (Schwert 1989).[1]

Source: ACCC estimates.

1 GW Schwert, 'Tests for unit roots: A Monte Carlo investigation', *Journal of Business & Economic Statistics*, 7(2), 1989, pp. 147–59.

Testing for a structural break

A dummy variable approach is used to test for a structural break in the time series data. The tests assume the date of structural break is 2 January 2001, when FuelWatch began.

The simplest possible test is reported, with an intercept, a break dummy equal to 0 before the break and equal to 1 after the break and no time trend. The intercept coefficient represents the average before the break date. The break dummy coefficient represents the change in average after the break date. Results are presented in table S2.

Table S2 Structural break test[a] for relative price margin, cpl, August 1998 to June 2007

Series	Average (August 1998 to December 2000)	ΔAverage (January 2001 to June 2007)
Weekly average	0.83 (0.002)	-1.92 (0.000)
Monthly average	0.88 (0.001)	-1.86 (0.000)
Weekly minimum	0.30 (0.277)	-0.90 (0.003)

[a] Coefficient given with p-value in brackets. Diagnostic testing indicated serial correlation so Newey West standard errors used.

Source: ACCC estimates

For each series the average relative price margin from January 2001 to June 2007 was lower than the average relative price margin from January 1998 to December 2000. For each series this difference was statistically significant at the 5 per cent level.

Caveats

There may be other items that may have induced a structural break aside from FuelWatch. However, the use of the eastern capitals for relativity means that any missing items would need to have a significantly different effect for Perth relative to the other capitals.

Different timeframes could conceivably give different results. At this stage we have not extended the data series back beyond August 1998 primarily because this was a time of significant deregulation of prices.

The fuel standard premiums used are as reported by refiners. WA has had generally stricter fuel standards although the gap in reported premiums between WA and the eastern states has decreased over time. However, the results are robust even allowing for the exclusion of fuel standard premiums.

Two other specific factors have been identified as potentially problematic: transport and port charges. These have not been explicitly modelled. To the extent that imports are a constraint on pricing, the costs of transport and port charges could affect the econometric analysis. For the impact from transport or port charges to be significant it would need to entail a significant change in the relativity between Perth and the other capitals, not simply a change in the level for Perth or a constant difference between Perth and the other capitals.

Of potentially greater concern is the possibility that something else entirely has driven the improvement in the relative price margin. For example, Perth's recent relatively high growth may have made it such a relatively larger market that it has enjoyed greater competition and/or economies of scale. Note that the issue here is whether Perth's relative growth rate has been enough to do this, not just its absolute growth rate, as the eastern capitals have grown over this period as well.

ACCC contacts

Infocentre: 1300 302 502

Website: www.accc.gov.au

Callers who are deaf or have a hearing or speech impairment can contact the ACCC through the National Relay Service **www.relayservice.com.au**.

TTY or modem users—phone 1333 677 and ask for 1300 302 502.

Voice-only (speak and listen) users—phone 1300 555 727 and ask for 1300 302 502.

Addresses

National office

23 Marcus Clarke Street
Canberra ACT 2601

GPO Box 3131
Canberra ACT 2601

Tel: (02) 6243 1111
Fax: (02) 6243 1199

New South Wales

Level 7, Angel Place
123 Pitt Street
Sydney NSW 2000

GPO Box 3648
Sydney NSW 2001

Tel: (02) 9230 9133
Fax: (02) 9223 1092

Victoria

Level 35, The Tower
360 Elizabeth Street
Melbourne Central
Melbourne Vic 3000

GPO Box 520
Melbourne Vic 3001

Tel: (03) 9290 1800
Fax: (03) 9663 3699

Queensland

Brisbane
Level 3, 500 Queen Street
Brisbane Qld 4000

PO Box 10048
Adelaide Street Post Office
Brisbane Qld 4000

Tel: (07) 3835 4666
Fax: (07) 3832 0372

Townsville
Level 6, 370 Central Plaza Building
Flinders Mall
Townsville Qld 4810

PO Box 2016
Townsville Qld 4810

Tel: (07) 4729 2666
Fax: (07) 4721 1538

Western Australia

3rd floor, East Point Plaza
233 Adelaide Terrace
Perth WA 6000

PO Box 6381
East Perth WA 6892

Tel: (08) 9325 0600
Fax: (08) 9325 5976

South Australia

Level 14
13 Grenfell Street
Adelaide SA 5000

GPO Box 922
Adelaide SA 5001

Tel: (08) 8213 3444
Fax: (08) 8410 4155

Northern Territory

Level 8 National Mutual Centre
9–11 Cavenagh St
Darwin NT 0800

GPO Box 3056
Darwin NT 0801

Tel: (08) 8946 9666 (general)
Tel: (08) 8946 9610 (reception)
Fax: (08) 8946 9600

Tasmania

3rd floor, AMP Building
86 Collins Street
(Cnr Elizabeth and Collins streets)
Hobart Tas 7000

GPO Box 1210
Hobart Tas 7001

Tel: (03) 6215 9333
Fax: (03) 6234 7796

Australian Energy Regulator

Level 42, The Tower
360 Elizabeth Street
Melbourne Central
Melbourne Vic 3000

GPO Box 520,
Melbourne Vic 3001

Tel: (03) 9290 1444
Fax: (03) 9290 1457
Email: AERInquiry@aer.gov.au
Web: www.aer.gov.au