Impact of farmgate deregulation on the Australian milk industry: study of prices, costs and profits

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Contents

Figures

Tables

Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ADC	Australian Dairy Corporation
AFFA	Department of Agriculture, Fisheries and Forestry — Australia
AMS	aggregate measure of support
COAG	Council of Australian Governments
DASA	Dairy Authority of South Australia
DIAWA	Dairy Industry Authority of Western Australia
DMSP	domestic market support payment
DSAP	dairy structural adjustment payments
EU	European Union
FAO	Food and Agricultural Organisation
GATT	General Agreement on Tariffs and Trade
GST	Goods and Services Tax
IGA	Independent Grocers of Australia
MSP	market support payment
NCC	National Competition Council
NCP	national competition policy
NSWDC	NSW Dairy Corporation
OECD	Organisation for Economic Co-operation and Development
PS Act	Prices Surveillance Act 1983
QDA	Queensland Dairy Authority
TDIA	Tasmanian Dairy Industry Authority
UDV	United Dairyfarmers of Victoria
UHT	ultra heat treated
URAA	Uruguay Round Agreement on Agriculture
VDIA	Victorian Dairy Industry Authority
WTO	World Trade Organization

Glossary

Barriers to entry	Factors which prevent or deter the entry of new firms into an industry.
Barriers to exit	Factors which prevent or deter an incumbent firm from leaving an industry.
Convenience store	Includes stand alone convenience stores with extended trading hours and food and grocery outlets attached to service stations.
Corner stores	Includes traditional corner stores as well as milk bars, take-aways and delicatessens.
Economies of scale	Occur if the cost per unit of output decreases with an increase in the scale of the firm.
Economies of scope	The cost savings arising from combined production that cannot be captured by producing each product separately.
Farmgate price	Price paid to dairy farmers for raw milk.
Generic milk	Unbranded milk which is sold under the private labels of the retailers.
Light milk	Liquid milk containing less than 1% milk fat by volume.
Manufacturing milk	Raw milk used as an input to non-fluid dairy products.
Market (drinking) milk	Raw milk used as an input to fluid dairy products.
Milk manufacturers	Businesses engaged in production of non-fluid dairy products.
Milk processors	Businesses engaged in production of fluid dairy products.
Modified milk	Milk that has had its fundamental composition altered from the original state.
Pasteurised milk	Milk that has been heated to enhance microbiological properties in accordance with prescribed health regulations.
Plain milk	Fresh standard white milk.
Productivity	The ratio of converting business inputs into business outputs.
Reduced-fat milk	Liquid milk containing between 1% and 2% milk fat by volume.
Route trade	Taken to mean the non-supermarket retail milk market.
Specialty milk	Milk that is marketed using an attribute other than fat reduction, flavouring or ultra heat treatment.
UHT milk	Milk subjected to Ultra High Temperature treatment to extend shelf life.

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Summary

On 10 April 2000 the Minister for Financial Services and Regulation, the Hon. Joe Hockey MP, directed the Australian Competition and Consumer Commission under section 27A of the *Prices Surveillance Act 1983* (PS Act) to formally monitor prices, costs and profits of businesses dealing with market milk product sales. Subsequent to the issuing of this ministerial directive, all Australian State Governments agreed to abolish regulated farmgate price controls for market (drinking) milk from 1 July 2000. The ACCC was directed to monitor costs, prices and profits along the milk supply chain for leviable milk products. Monitoring was to commence three months before the introduction of the 11 cents per litre Dairy Industry Adjustment Levy on 8 July 2000 and conclude six months later on 8 January 2001. Under the ministerial directive, the ACCC was required to present a report of its findings to the Commonwealth Government within three months of completing its monitoring activities.

The ACCC used the PS Act to request financial performance data from milk processors and major supermarket and convenience chains selling milk products. The ACCC also commissioned several price surveys to gather further information on retail trends, most importantly in traditional corner stores which usually operate as small independent businesses. The ACCC used data collected from supermarket scanning machines to track trends in prices and sales volumes for milk products sold in supermarkets. It also drew on other sources including the Australian Dairy Corporation, the Australian Bureau of Agricultural and Resource Economics and the Australian Bureau of Statistics to examine broader trends in the Australian dairy industry, particularly changes in the farm sector.

Before dairy deregulation on 1 July 2000, milk that was channelled into the drinking milk sector in each State, but not the Northern Territory and Australian Capital Territory, was bought from dairy farmers at prices prescribed by State Governments. These prices were adjusted periodically and averaged around 47 cents per litre across Australia for the year to 30 June 2000 after adjustments for freight and contributions towards the administration of state milk arrangements. Across Australia, less than 18 per cent of milk is directed to drinking products with the remainder used to produce cheese, butter, milk powders and other manufactured dairy goods. However, in New South Wales, Queensland and Western Australia, more than 40 per cent of state milk production has historically been used as market milk thereby attracting higher regulated prices. Under regulated farmgate price controls, legislative provisions in each State eliminated arbitrage opportunities from cross-border flows of milk and enabled market milk premiums to be allocated to dairy farmers on a state basis. In contrast, payments for milk used in manufactured dairy products are determined by the international market and averaged around 21 cents per litre in 1999–2000.

This complex regulatory structure was abolished from 1 July 2000 and the milk industry moved to a fully commercial operating environment. There were concerns that milk processors and retailers would be the main beneficiaries of deregulation and that reductions in farmgate prices would result in only marginal savings to Australian milk consumers.

Consequently to help Government and the community better understand the impact of dairy deregulation the ACCC was asked to monitor prices, costs and profits in the milk industry.

Six months would normally be considered a relatively short period to fully assess the impact of such a substantial change in the regulatory environment. However, significant change has occurred over this period and the dynamics of the industry have undoubtedly altered, although further changes can be expected.

Before July 2000 farmer prices for market milk were protected. After July 2000 the bargaining position of dairy farmers became subject to a set of new circumstances although not all their bargaining power was lost with deregulation. Ultimately, as consumers are prepared to pay a premium for fresh milk, processors will have to pay farmers a sufficient return to guarantee a reliable supply if dairy farmers are not to exit into other areas of agricultural production.

A new dynamic has also emerged in the competitive relativities between processors and the retail sector. Processor bargaining power, and therefore ability to influence price, has been found to be relatively weak, partly due to pressure to lower excess processing capacity and firm up market shares in the newly deregulated environment. However, at the retail level the most complex dynamic has developed. This has been the result of supermarkets discounting generic products.

On 15 August 2000 Woolworths announced standard national milk prices for its generic-labelled milk that effectively created a new floor in the Australian price of plain milk. The new prices became effective immediately and was the first time that a retail chain had set national prices for 1, 2 and 3-litre packs of milk. These new prices followed the announcement of two-year supply contracts which were offered to tender and attracted aggressive bidding from the major milk processors. Following Woolworths' announcement of its new milk-pricing structure, Coles, Franklins and IGA announced that they would match Woolworths' lower milk prices for their respective private labels.

Before these announcements there had been significant state-based differences in retail milk prices. Thus the emergence of a national retail market for milk coincided with the first few months of full deregulation.

This strategy of the supermarkets, based on driving more store traffic rather than higher revenue from milk, meant that convenience and corner stores, which provide branded products as well as that intangible commodity called convenience, came under considerable competitive pressure. Accordingly, market share moved away from this part of the retail sector to the supermarkets. This illustrated the importance of basic products such as milk in shaping general consumer perceptions of pricing relativities across competing food retailers.

The report broadly concludes that Australian milk consumers are better off. Australian processors and retailers, therefore, have not captured the benefits of deregulation to the exclusion of consumers. Alternatively, as a recent ABARE report noted, many dairy farmers in Western Australia, Queensland and New South Wales have been badly affected by the removal of farmgate price controls for drinking milk. However, farmers in the other States that have traditionally had a high reliance on milk directed to

manufactured dairy products have seen reductions in market milk premiums largely off-set by recent increases in prices for internationally traded dairy commodities.

Given the changing competitive dynamics of the dairy industry, this report illustrates the following key trends in prices, revenue, margins and patterns of demand for milk.

Price changes

Australian supermarket prices for plain, reduced fat and low-fat milk decreased by an average of 22 cents, 6 cents and 9 cents per litre respectively across all pack sizes and brands from the June quarter to the December 2000 quarter. These products make up 81 per cent of total milk sold in supermarkets. However, prices for UHT, flavoured and specialty milk increased in price by averages of 10 cents, 14 cents and 3 cents per litre respectively over this same period. Across all categories of milk stocked by Australian supermarkets, the average price decrease in the six months to December 2000 was 12 cents per litre.

In convenience and corner stores, prices of 2-litre packs of plain milk decreased in response to lower supermarket prices. However, price reductions for 1-litre packs of plain milk and other milk categories were generally less pronounced.

Price reductions for milk were greatest in Victoria where plain milk fell by an average of 32 cents per litre in supermarkets. Price decreases in States such as New South Wales, which previously had low retail prices for milk, declined to a lesser extent. Overall, there is now less variability between milk prices in different States.

Table 1. Average national prices for 2-litre containers of plain milk sold in different retail outlets for 2000

Quarter 00	Supermarket (generic label) $/unit	Supermarket (branded) $/unit	Convenience stores $/unit	Corner stores $/unit
March	2.50	2.68	n/a	n/a
June	2.54	2.72	2.79	n/a
September	2.30	2.60	2.75	2.60
December	2.16	2.38	2.69	2.64

Note: n/a — not available. The December quarter was the first quarter to fully reflect changes resulting from the move by supermarkets in August 2000 to introduce lower milk prices for generic-labelled products (3-litre packs of generic-labelled milk were discounted to $2.94). This in turn had an effect on average milk prices of branded products sold across all food outlets.

Source: ACCC and ADC, 2001.

Impact on margins and sales revenues

From the June quarter to December 2000 quarter the gross margin on aggregate milk sales in supermarkets declined by 19 per cent with retail prices falling at a greater rate than wholesale prices. Despite sales volumes increasing by around six per cent, substantial reductions in per litre revenue led to an overall decrease in aggregate revenue derived from supermarket milk sales during this period.

In convenience stores, sales volumes declined by around 24 per cent in the September quarter. With the per litre cost of milk remaining relatively constant in convenience stores, aggregate revenue decreased by around 24 per cent as consumers sought an increasing volume of their milk requirements from supermarkets. Although prices and margins in convenience stores were largely unchanged when averaged across all milk categories following dairy deregulation, reduced sales volumes resulted in lower overall revenue.

The average net profit margins of Australian milk processors decreased by around 12 and 18 per cent respectively on a per litre basis for the September and December 2000 quarters relative to the June 2000 quarter. As the total volume of milk sold in Australia was relatively constant over this period, the overall profitability of milk processors decreased following deregulation. Although price discounting of branded milk products fell away in the December 2000 quarter, net profit margins remain considerably lower than for periods before deregulation.

The demand response to price changes

Demand followed price and subsequently milk sales shifted to the supermarket sector, towards plain milk (away from UHT milk), generic products (away from branded products) and the largest pack size (3-litre) where discounting has been greatest. Of these shifts in demand, the movement in supermarket sales away from branded plain milk to generic-labelled plain milk was the most dramatic.

Although average milk prices fell in all States following the removal of farmgate price controls, some milk prices increased in the Australian Capital Territory as did milk products retailing in the Northern Territory. This was because the additional costs of the dairy industry adjustment levy could not be offset by lower farmgate prices for raw milk. Similarly, milk used as an input to UHT milk products previously attracted regulated farmgate prices that were considerably lower than those applying to market milk. UHT milk prices also rose with the introduction of the new retail milk levy, inducing some consumers to switch to plain milk.

Prices for milk sold in traditional corner stores were found to be highest in metropolitan areas and small towns. This suggests that consumers who buy their milk from non-supermarket outlets in metropolitan cities may be less price sensitive than regional and rural milk consumers and more willing to pay a premium for convenience. For small towns, higher distribution costs and a lack of direct competition from supermarkets are likely to contribute to higher milk prices. As expected, milk prices in remote and very remote localities tended to be more expensive than milk sold in more accessible areas due to higher transport costs.

Following deregulation the total volume of milk sold in Australia was largely unchanged, however the total value of milk sales contracted across all categories, pack sizes and brands. In supermarkets, the increased revenue from a higher turnover because of discounting was insufficient to offset aggregate revenue losses from price reductions. In non-supermarket outlets, average milk prices were reduced to a lesser extent across all milk products but sales volumes declined as consumers purchased more milk from supermarkets. Assuming retail price levels remain the same, reductions in average supermarket milk prices since deregulation would represent a saving to Australian milk consumers of more than $118 million on a full year basis (refer appendix 6). In this regard, supermarkets have indicated that their lower milk prices for

generic-labelled products, introduced in August 2000, will apply indefinitely. Additional savings are also likely from milk sold through non-supermarket outlets. However, given the absence of long-term price information for milk products sold in the many small independent businesses across Australia, it is difficult to accurately quantify these additional consumer savings.

Since deregulation, most Australians have access to low-priced milk because of the availability of standard priced generic-labelled milk in the major supermarket chains.

1. Introduction

1.1 Background

The Australian dairy industry has traditionally been separated into two sectors — market (drinking) milk and manufacturing milk (butter, cheese and other dairy products). Historically, market milk arrangements were underpinned by state legislation while a series of Commonwealth Government schemes supported manufacturing milk prices. This notional separation of the milk market led to a two-tiered pricing system for Australian milk. Market milk, which was artificially differentiated from manufacturing milk according to end-use, typically attracted a legislated farmgate price that exceeded twice that of manufacturing milk. In reality, any price difference between market and manufacturing milk at the farmgate was arbitrary.

The artificial price controls of the dairy industry became increasingly difficult to justify given the removal of government price interventions in other agricultural industries. Consequently, the key question was not whether full deregulation of the dairy industry should occur but rather when and with what assistance.

As part of the implementation of national competition policy and the associated reviews of government regulation, the Victorian Government concluded that its farmgate pricing arrangements for market milk did not deliver a net public benefit. The Victorian Government committed itself to abolishing price controls for milk from 1 July 2000.

Other State Governments soon recognised that lower Victorian market milk prices and the dismantling of Victorian restrictions on interstate trade in drinking milk would render ineffective their own milk pricing arrangements. Farmgate price controls were therefore dismantled in all States from 1 July 2000. The Commonwealth Government's manufacturing milk scheme also ended on 1 July 2000, after a long period of adjustment assistance that started with the introduction of the Kerin Plan in 1986.

As with most major regulatory changes it was realised that the deregulation of farmgate milk prices was likely to significantly affect the dairy industry and therefore assistance to adjust to a deregulated market was considered appropriate. The *Dairy Industry Adjustment Act 2000* was passed by the Commonwealth Parliament to provide such assistance. The legislation provides a framework for the implementation of an adjustment program for the dairy industry.[1] Eligible dairy farmers receive quarterly adjustment payments over an eight-year period. Alternatively, dairy farmers may elect to be paid a tax-free exit payment of up to $45 000 in the first two years of deregulation should they wish to leave the industry. These payments will be financed by a levy of 11 cents per litre on 'leviable milk products'. Leviable milk products include standard white, flavoured, low-fat, fat reduced, ultra heat treated (UHT) and specialty milk and drinking yoghurts.

1 The dairy industry adjustment package comprises: the Dairy Structural Adjustment Program, the Dairy Exit Program and the Dairy Regional Assistance Program.

The levy is remitted by milk processors to the Commonwealth Government but is imposed on the retail sector.

To assess the effect of dairy deregulation on Australian milk consumers, the ACCC was directed by the Commonwealth Government to monitor changes in prices, costs and profits throughout the milk supply chain in the first six months after the deregulation of farmgate price controls.

1.2 Ministerial direction

On 10 April 2000 the Minister for Financial Services and Regulation, the Hon. Joe Hockey MP, directed the ACCC to formally monitor 'prices, costs and profits relating to the supply of leviable milk products by persons involved in the production and supply of dairy products'. The directive was issued under section 27A(1)(a) of the *Prices Surveillance Act 1983* (PS Act). The period of formal industry monitoring by the ACCC was to start three months before the introduction of the Dairy Industry Adjustment Program, subsequently designated as 8 July 2000, and to end six months after this date. The ACCC was directed to provide a report of its findings to the Minister within three months of the completion of the monitoring period. A copy of the directive is contained in appendix 1.

1.3 Approach to monitoring

The ACCC's monitoring brief covers the first six months of farmgate price deregulation. However, data was also collected for the three months before deregulation. The obvious focus of the monitoring exercise was on prices, costs and profits after deregulation when compared to the previous three months. This involved examination of price trends and changes in profit margins of milk processors and retailers as well as the effect of deregulation on Australian consumers.

On 30 January 2001 the Australian Bureau of Agricultural and Resource Economics (ABARE) released a report assessing the impact of deregulation on dairy farmers and regional communities.[2] The report provides revised forecasts on changes in farmgate milk prices, production costs and farm incomes for the 2000–01 production season. The ABARE report complements the ACCC's study of the milk supply chain by providing information to assess profitability changes at the farm level. Accordingly, the ACCC analysis of changes in the milk supply chain following deregulation draws on the findings of the ABARE report where appropriate.

Six months would normally be considered a relatively short period to fully assess the effect of changes in the competitive structure of an industry following deregulation. Nevertheless significant change has occurred over this period. It is, however, important to look at some longer term trends as the industry has been subject to considerable regulatory change over a number of years. Fortunately, a significant amount of public data is available on the dairy industry, particularly from the various state milk

2 ABARE, *The Australian Dairy Industry: Impact of an Open Market in Fluid Milk Supply*, ABARE Report to the Federal Minister for Agriculture, Fisheries and Forestry, Canberra, 2001.

authorities, the Australian Bureau of Statistics (ABS), ABARE and the Australian Dairy Corporation (ADC).

From this diversity of monitoring results and information sources, conclusions will be drawn about the changes in competitiveness of the Australian dairy industry.

1.4 Monitoring procedures

In accordance with the information-gathering powers under the PS Act, the ACCC requested price, cost and profit information from Australian milk processors and major food retailers (i.e. supermarkets, service stations and leading food convenience chains). A series of pro formas covering the three monitoring quarters ending 30 June, 30 September and 31 December 2000 were sent out to the industry.

Many businesses were receiving numerous requests for information connected with both the deregulation of the dairy industry and the implementation of the Goods and Services Tax (GST). While the ACCC attempted to keep its own information requests to a minimum, quite detailed information about cost changes and margin movements was necessary for the ACCC to adequately meet its brief. The ACCC is grateful for the high level of cooperation it received from the dairy industry in providing this information.

Coinciding with the introduction of the GST, the ACCC's GST Operations Division commissioned a series of retail price surveys to measure general pricing trends throughout the Australian economy. This was undertaken as part of its oversight role on the transitional arrangements to the New Tax System. These surveys span the monitoring period and include data on retail milk prices.

Given that around half of all milk sold in Australia passes through non-supermarket outlets (the route trade), the ACCC commissioned a marketing firm, Inteldata e-access, to collect spot price data on milk sold via corner stores during September and December 2000. Survey areas were selected to provide a balance of metropolitan, regional, rural and remote localities across Australia with retail outlets further classified according to the population size of the town in which they were situated.

Changes in the market shares of different brands, pack sizes and milk product types sold throughout Australian supermarkets were also tracked over the monitoring period to assess the effect of changes in retailer and processor pricing strategies following farmgate price deregulation.

A detailed explanation of the data sources used in the monitoring report is set out in chapter 5.

1.5 Report outline

This report, submitted to the Commonwealth Government in accordance with the monitoring directive, provides an analysis of the ACCC's findings from its program of monitoring prices, costs and profits of businesses dealing in leviable milk products for the nine months to 8 January 2001. The report begins with a description of the regulatory environment that existed before industry deregulation followed by a chapter that describes the key trends in the international dairy industry, which are partially

driving changes in the Australian milk industry. Chapter 4 is both a descriptive overview of the dairy industry as well as an account of the structural changes that have occurred with deregulation. An analysis of the ACCC's monitoring approach is outlined in chapter 5. Chapters 6, 7, 8 and 9 detail changes in retail milk prices, retail trends and processor trends as well as the changes in consumer demand in response to price movements. The report concludes with a commentary on the impact of deregulation on the Australian dairy industry in the context of the monitoring results.

2. Dairy industry deregulation

2.1 Introduction

Dairying is one of the most protected agricultural industries in the world. The Australian dairy industry was no exception to this rule. The dairy industry has historically been one of the most highly regulated and assisted industries in Australia. Regulation resulted in separate dairy industries operating in each State with artificial separation between manufacturing and market milk in each of those States.

However, recent changes have seen the establishment of a national market for milk in Australia. The removal of state government controls over the farmgate supply and pricing of milk has been a major final step in the deregulatory process for the dairy industry. An important feature of this process was the removal of state controls on retail milk prices that began in Western Australia in 1990.

This chapter provides a broad overview of the movement to deregulation and sets out the regulatory structure operating in Australia up until June 2000, emphasising state differences.[3]

It is not possible to understand the Australian dairy industry without understanding the regulatory environment that moulded it nor is it possible to understand the impact of deregulation on the individual States without taking account of differences in the regulatory environment before July 2000.

2.2 The movement towards deregulation

State and Territory Governments traditionally regulated the production, processing and distribution of market milk. The push for deregulation commenced with moves to abolish controls on milk pricing at the retail level (Queensland was the last State to abolish regulated retail pricing of milk from 1 January 1999). However, a major fillip to deregulation occurred in April 1995 when the Council of Australian Governments (COAG) adopted the national competition reform package, arising from the Hilmer report.[4]

The National Competition Policy (NCP) includes the review, and subsequent reform where necessary, of all legislation restricting competition. The guiding principle of these reviews is that legislation and regulations should not restrict competition unless it can be shown that the benefits to the community outweigh the associated costs and that the objectives of the legislation can only be achieved through restricting competition. By signing the inter-governmental agreements, signatory governments committed themselves to a thorough process of evaluating all legislation within their jurisdiction.

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3 The recent report by ABARE, January 2001, op. cit. provides a very useful overview of these regulations.

4 Independent Committee of Inquiry into National Competition Policy, National Competition Policy (F G Hilmer, Chairman) AGPS, Canberra, 1993.

Connected with this review process, the implementation agreement specifies a program of financial grants from the Commonwealth to State and Territory Governments contingent on implementation of the agreed reforms. The Commonwealth makes the competition grants available to the States and Territories if they are viewed as having made satisfactory progress with reforms. Assessments are made by the National Competition Council (NCC), which monitors each jurisdiction's progress and makes recommendations to the Commonwealth Treasurer. However, it is the Commonwealth Government not the NCC that decides the amount of competition grants actually paid.

Subsequently from 1995 there were a number of reviews of the legislation governing dairy industries in different States. The outcome of these reviews varied considerably between States.

The Victorian review was the most clear cut in its outcome.[5] The State Government commissioned the Centre for International Economics (CIE) to undertake a review of Victoria's *Dairy Industry Act 1992*. The review concluded that gains to consumers from access to cheaper milk more than offset the losses to producers and therefore there was a net public benefit from the removal of price and supply controls on market milk. Given this conclusion, the review recommended that the regulation and supply management of market milk in Victoria should cease on 30 June 2000 to coincide with the end of the Commonwealth's Domestic Market Support scheme for manufacturing milk producers.

In South Australia (SA) a similar conclusion — to remove regulations — was reached but in a more qualified fashion.[6] The review concluded that removal of farmgate pricing would result in a small efficiency gain for SA because of improved price signals and restructuring of the processing sector resulting in increased efficiency. However, it was conceded that, in the short term, producers would lose benefits that have a direct impact on income levels, and that some regions were likely to experience a fall in both expenditure and employment. These costs were expected to be offset by gains in other regions and industries.

The Tasmanian review added further qualifications. The terms of reference included broad policy issues such as social and equity considerations as well as economic and regional development issues and concluded that in the short to medium term the adjustment costs would be considerable. On the other hand, in the longer term, there was potential for long-term efficiency benefits by removing restriction.[7]

In contrast, the Western Australian review found that regulation resulted in a net public benefit and recommended the continuation of existing arrangements. The Queensland review concluded that there was no compelling evidence in any of the scenarios tested to support immediate deregulation of the farmgate price.[8] However, it was also

5 *Deregulation of the Australian Dairy Industry*, report by the Senate Rural and Regional Affairs and Transport Reference Committee, October 1999, Canberra, 1999 cited from Centre for International Economics, 'NCP Review of the *Dairy Industry Act 1992*'.

6 ibid.

7 Legislation Review Program, 'Review of the *Dairy Industry Act 1994*, Regulatory Impact Statement', p. 12.

8 Queensland Dairy Legislation Review Committee, 'National Competition Policy Review of the *Dairy Industry Act 1993*', July 1998.

recognised that these arrangements could not be sustained, and that deregulation of the market milk sector of the dairy industry was inevitable. Despite this, the Committee recommended that a regulated farmgate price should be retained until 31 December 2003 with any further extension of regulation subject to further review.

The New South Wales review was particularly complex. While the review rejected the argument that Government intervention was needed to ensure stable prices and guarantee year round supply of market milk, opinion was divided about the other benefits of regulation. The majority report recommended that the current pricing and supply management arrangements should remain at least until the next review (in July 2003). A minority report recommended that the regulated farmgate prices and supply management for market milk should be removed given certain conditions. In May 1998 the Government announced that it had decided to maintain statutory marketing arrangements for milk until 2003.

The NCC voiced a number of concerns about these review processes.[9] While there was a recognition that deregulation was inevitable, the NCC noted that many of the reviews had largely recommended retention of current market arrangements without incorporating transitional arrangements, thereby providing no incentive for the dairy industry to prepare for change.

Despite the reluctance of some States and legislative reviews supporting the status quo, full deregulation of the industry emerged as a major issue in the latter part of 1998. Much of the impetus to achieve change came from Victoria. The objective within the dairy industry in Victoria was to bring about full deregulation to coincide with the termination of national market support arrangements for the dairy industry on 1 July 2000.

The Australian Dairy Industry Council led extensive discussions about the adjustment package that would be required to support deregulation. On 28 September 1999 the Commonwealth Government announced its support for a national dairy deregulation adjustment package, should all States and Territories deregulate their farmgate prices from 1 July 2000.

In Victoria the Government had given in-principle support to the deregulation of the industry following the findings of the NCP review of dairy industry legislation. However, following a change of Government in late 1999, a plebiscite of all Victorian dairy farmers was conducted to gauge support for deregulation. Of those farmers who voted, 89 per cent were in favour of accepting the restructuring package and moving to a fully commercial fluid milk market. It was well understood that the deregulation of the Victorian dairy industry would have flow-on effects to the other States. After the decision of the Victorian farmers, deregulation was largely seen by the other States to be inevitable.

As the Commonwealth Government passed the legislation to establish the Dairy Adjustment Authority (to administer the package of assistance), the various State Governments set about amending their dairy industry regulations. This was not without

9 For comments on the NSW review process see NCC 'Second Tranche Assessment of Governments' Progress with Implementing Competition Policy and Related Reforms Overview', June 30, 1999.

significant debate and controversy. In New South Wales, for example, the necessary legislation was introduced on 1 June 2000 but was not passed until 29 June with proclamation occurring at a special meeting of the Executive Council on 30 June 2000.

This is how the Commonwealth Government's condition that assistance to the Australian dairy industry be contingent upon all State and Territory Governments abolishing farmgate pricing arrangements by 1 July 2000 was met.

2.3 The regulatory structure in place before deregulation

The distinction between the market milk sector and the manufacturing milk sector is a key feature of the Australian dairy industry. State regulation and Commonwealth Government support policies were provided in accordance to the end use of milk with the States having control over market milk and the Commonwealth Government providing support to the farmgate price of manufacturing milk during the 1980s and 1990s. In a description of the regulatory regime in operation before July 2000, it is therefore necessary to look at both the regulations in place: at the state level for market milk and at Commonwealth level for manufacturing milk.

2.3.1 State government marketing arrangements

Historically, Government intervention in the liquid milk market was justified by a desire to ensure the year-round supply of fresh product that conformed to public health standards. In each State and Territory of Australia, with the exception of the Northern Territory, state milk authorities were established to undertake the functions necessary to achieve these broad objectives of safety and surety of fresh milk supply.

A brief overview of the activities of the regulatory regimes operating in the individual States before 1 July 2000 is provided below. Here it should be noted that market milk in the Northern Territory has never been subject to regulation.

Victoria

The Victorian Dairy Industry Authority (VDIA) was established in 1977 and was partially funded by a margin on the price of market milk and other trading activities. Since the late 1970s the Victoria dairy industry had been moving in the direction of less regulation by Government. Key changes included the phasing out of the quota system of supply management over a ten-year period commencing in 1977, the removal of maximum retail price controls for milk in 1992 and the abolition in January 1995 of minimum prices for milk at the wholesale level and retail level. Under the regulatory structure in place before July 2000, the VDIA played a key role in the operation of the milk pooling system and the monthly distribution of net proceeds to Victorian dairy farmers.

In accordance with the *Dairy Industry Act 1992*, the VDIA was required to ensure that licensed dairy farmers shared equitably in returns from market milk. Consequently the VDIA was empowered to determine farmgate prices for market milk. Premiums were also paid for winter milk as an incentive to maintain unseasonal milk supplies over the months of April, May, June and July. This winter incentive scheme was farmer-funded

and after consultation with the industry, discontinued at the end of 1999. Similarly, the Victoria Remote Area Allowance ceased with deregulation. This industry-funded scheme was originally designed to support the distribution of packaged milk to remote areas of the State when maximum retail prices were regulated.

The VDIA also oversaw standards applying to all dairy products, supplied products and services to the dairy industry, funded some research and development and was involved in developing industry brands such as Big M, Rev and Skinny Milk.

Under the provisions of the *Dairy Act 2000*, the VDIA ceased all substantive operations at the end of September 2000, following the termination of statutory arrangements for the supply of market milk, the transfer of dairy food safety responsibilities and the sale of its milk brands.

New South Wales

Under the *Dairy Industry Act 1979*, the NSW Dairy Corporation (NSWDC) was established as a statutory body to administer that Act. Pricing was a key function of the organisation, with NSW only deregulating retail milk prices in July 1998. With the deregulation of retail prices, NSWDC's pricing powers were concentrated at the farmgate level. All milk produced in New South Wales was vested in the corporation. Farmers were registered to supply designated factories which acted as the corporation's processing and selling agents. The corporation prescribed fixed market milk prices and also administered quota arrangements. Quota was tradeable through a quota exchange. In addition to these functions, the corporation was involved in reviewing and implementing quality standards. The corporation was funded from a margin in the price for milk.

NSWDC ceased operations on 1 July 1999 when Safe Food Production NSW (Safe Food) assumed the responsibilities and functions of the corporation. In 1999–2000 Safe Food continued to set prices to be paid to dairy farmers for their milk, as well as the prices to be paid by processors for market milk. Safe Food's responsibilities for equitable sourcing of milk throughout the State by means of the quota system were also continued, as was the responsibility to ensure the quality of milk.[10] Apart from ensuring milk quality, these other functions of Safe Food ceased with deregulation.

Queensland

The Queensland Dairy Authority (QDA) was established under the *Dairy Industry Act 1993*. Queensland was the last State to deregulate post farmgate prices (deregulation occurred on 1 January 1999). The management of the milk supply in Queensland has been complex, because, unlike the other States, a number of systems operated simultaneously. Statutory entitlements occurred in south-east Queensland only. In north Queensland a pooling system operated while factory quota arrangements occurred in central Queensland. In both regions this involved the supply of milk to a single processor. Neither of these two systems gave dairy farmers a statutory right to supply market milk.

In south-east Queensland dairy farmers held market milk entitlements to supply designated processors. The majority of entitlements were obtained by original

10 Safe Food Production NSW, Annual Report 1999/2000, p. 17.

allocation (1 April 1986) and expanded by the allocation of growth. Quota holders were at liberty to negotiate supply entitlements with other holders within or outside their processor group.

However, as a result of the National Competition Policy Review into the operation of the *Dairy Industry Act 1993* a recommendation was made to change these arrangements into a single supply management scheme under the QDA. The new arrangements were to entail the extension of the south-east Queensland supply arrangements across the State. These arrangements began on 1 January 1999.

QDA also conducted quality programs and was involved in a range of promotional activities. While the quality assurance and food safety function continued after July 2000, other key functions of pricing, supply management and promotion ceased. Amendments to the *Dairy Industry Act 1993,* proclaimed on 30 June 2000, removed the regulatory functions from the legislation.[11]

Tasmania

The *Dairy Industry Act 1976* provided a regulatory role for the Tasmanian Dairy Industry Authority (TDIA). In the early years of the Authority's operation it oversaw significant changes in the regulation of the milk market with the removal of the quota system and the movement over a number of years to a pool system. Pricing beyond the farmgate was also deregulated with the removal of retail price control for modified milks in July 1988 and of plain milk in July 1993.

The *Dairy Industry Act 1994* replaced the previous legislation taking into account changes that had occurred in the intervening period. All market milk quotas had been replaced by a milk pooling system. Under the 1994 legislation, the TDIA administered a milk pooling system similar to that in Victoria; managed the supply and purchase of milk for the Tasmanian market milk and cream trade; and determined the farmgate price of market milk with additional winter premiums for milk produced during the months of May to June. The TDIA also regulated the licensing of dairy farms, manufacturers, processors and vendors across the State and developed quality assurance programs based on industry self-regulation. Consistent with deregulation, the control of market milk sections of the *Dairy Industry Act 1994* were removed. The *Dairy Industry Amendment Act 2000* passed through Parliament in May 2000. While TDIA's regulatory functions ceased it was decided that the food safety and quality assurance functions would continue until the Tasmanian Government had reviewed quality assurance regulation across a range of rural products.[12]

Western Australia

The Dairy Industry Authority of Western Australia (DIAWA) was established under the *Dairy Industry Act 1974*. Milk supplies were regulated through transferable production quotas and vesting provisions. DIAWA would organise three quota auctions yearly on behalf of the industry. Market milk was subsequently onsold by the Authority to milk processors with manufacturing milk being divested to dairy manufacturers. From 1 January 1990 milk sourced for the flavoured milk, yoghurt and cream markets

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11 Queensland Dairy Authority, *Annual Report* 2000, p. 11.

12 Tasmanian Dairy Industry Authority, *Annual Report 2000*.

ceased to be treated as market milk for the purpose of paying regulated prices at the farmgate. Prices for market milk were determined by the Authority on advice from an independent prices committee. However, from July 1998 this was replaced with a benchmarking process which allowed Western Australian farmers to input their costs of production.[13]

In addition to monitoring the milk quota system the Authority administered various allowances associated with the production, promotion and country transport of milk. Quality assurance and technical assistance was also part of the Authority's legislative responsibility. Legislation repealing these industry regulations was passed by the Western Australian Parliament in June 2000. The Western Australian Government offered the industry the Western Australian Assistance Package of $27 million, supplementing Commonwealth assistance.

South Australia

The Dairy Authority of South Australia (DASA) was established on 1 July 1993 under the *Dairy Industry Act 1992*. The Authority is an independent statutory body fully financed by the dairy industry. DASA has not been involved in price control beyond the farmgate since 1 January 1995. Before deregulation it was the South Australian Market Equalisation Committee that managed access to the market milk premium. However, DASA was responsible for recommending the imposition, variation or removal of price controls for liquid milk products. Access to market milk premiums was provided to every South Australian dairy farmer on a pro rata basis. With deregulation, this particular function was removed from the *Dairy Industry Act 1992*.

However, milk pricing and equalisation were only a relatively small part of DASA's functions which covered industry training and quality assurance programs for both dairy farms and milk vendors. DASA regulates production, processing and vending of dairy products via industry-administered codes of practice and quality assurance programs.

The *Dairy Industry (Deregulation of Prices) Amendment Act 2000* was assented to on 15 June 2000. This Amendment Act removed milk pricing and equalisation provisions from the *Dairy Industry Act 1992* from 1 July 2000.[14]

Australian Capital Territory

In accordance with the *Milk Authority Act 1971*, the milk authority of the Australian Capital Territory set the maximum retail prices and maximum intra-industry prices for milk sold in the Australian Capital Territory and managed the supply and sale of bulk raw milk in the Territory. With only one dairy farm, most of the Territory's market milk was sourced from northern Victoria and south-east New South Wales under tender arrangements. The Authority also marketed and promoted the brand Canberra Milk. Legislative amendments to the *Milk Authority Act 1971* that were passed in February 1999, reduced the regulatory functions of the Authority and removed its marketing and promotion role. The *Milk Authority (Repeal) Act 2000*, which was passed on 25 May

13 *Deregulation of the Australian Dairy Industry*, op. cit., p. 31.

14 Dairy Authority of South Australia, *Annual Report 1999–2000*, p. 7.

2000, was the final step toward deregulation. The ACT Milk Authority ceased to exist from 1 July 2000.[15]

In general terms the various dairy authorities regulated the pricing, supply, distribution, health and safety and marketing of milk. Typically this included vesting milk in a statutory body, farmgate price setting for market milk, supply management arrangements, food and safety standards and compulsorily funded industry services.[16] Levies paid by dairy farmers and processors funded these activities.

To ensure the effectiveness of its market supply arrangements, each State implemented legislation prohibiting the sale of market milk within its borders at a discount to the regulated market milk price determined by its own state milk authority. The uniform existence of such legislation across all dairying States throughout Australia effectively prevented manufacturing milk being sold across state boundaries for the purpose of supplying fresh milk markets. Manufacturing milk was otherwise subject to Commonwealth arrangements.

2.3.2 Commonwealth arrangements

In 1986 the Commonwealth Government introduced national marketing arrangements for manufactured dairy products. This scheme, known as the Kerin Plan, was designed to support the selling price of locally produced dairy products sold on the domestic market through an industry-funded support payment on exported products. The scheme involved the imposition of an 'all milk levy' on dairy producers. This levy was appropriated to the Australian Dairy Corporation (ADC) which subsequently provided a market support payment (MSP) to manufacturers based on the monthly literage of milk exported as manufactured dairy produce.

To attract manufactured produce onto the domestic market, local retailers were forced to pay a price for dairy produce that incorporated both the prevailing international price and the MSP. This in turn raised the prices of manufactured dairy products on the Australian domestic market. The MSP was transferred to manufacturing milk producers in the prices paid for manufacturing milk. The Kerin Plan effectively involved a domestic support payment, which was delivered through an export subsidy, therefore allowing dairy manufacturers to operate at export parity prices. The 1992 Crean Plan provided a continuation of this mechanism of assistance to the dairy industry until 30 June 2000, with annual phased reductions in the maximum levels of support.

Australia's commitments under the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) necessitated the reconfiguration of Australia's dairy support measures. To become a signatory to the World Trade Organization (WTO) Agreement, Australia was obliged to reduce its export subsidies in both value and volume terms. The 1992 Crean Plan constituted an export subsidy under GATT. While enabling Australia to meet its commitments to reduce the overall value of support, the scheme could not provide for the necessary reduction in the volume of product receiving export subsidisation.

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15 Milk Authority of the Australian Capital Territory, *Annual Report 1999–2000*, p. 3.

16 *Deregulation of the Australian dairy industry*, op. cit., p. 26.

On 1 July 1995 Australia implemented the DMS arrangements, which provided a similar level of assistance to the 1992 Crean Plan, but through a reconfigured domestic support scheme that was compatible with WTO obligations. Export subsidisation, as defined under the GATT agreement on agriculture, was completely removed. However, assistance to the dairy industry was still subject to reduction disciplines with regard to Australia's aggregate measurement of support (AMS) as calculated annually in accordance with WTO requirements.

Under the DMS arrangements, support for manufacturing milk producers was delivered through an inter-sectoral transfer and a consumer transfer. The inter-sectoral transfer was generated from market milk producers by a levy on market milk while the consumer transfer was generated from domestic consumers of manufactured dairy products through a levy paid by manufacturers on the milk inputs used in manufactured dairy products. Manufacturers receive a rebate for any levy paid on manufacturing milk that was subsequently exported. The ADC, which administered the scheme, paid a domestic market support payment (DMSP) to manufacturing milk producers. In 1999–2000, the DMSP was 0.95 cents per litre. The consumer transfer was incorporated into the farmgate price of manufacturing milk. The DMS arrangements terminated on 30 June 2000 although Australian dairy farmers continue to pay around 0.32 cents per litre in Commonwealth milk levies.

Table 2.1 shows the change in Commonwealth levies imposed with the termination of the DMS arrangements.[17] The table includes the new dairy industry adjustment levy which is imposed at a rate of 11 cents per litre on most drinking milk products including plain, flavoured, UHT and modified milk and drinking yoghurts.[18] Given that this levy only applies to drinking milk products, there appears to be limited scope for retailers or processors to pass any associated costs of this new levy back to dairy farmers. This is because market and manufacturing milk supplies are broadly interchangeable with manufacturing milk prices determined by the international market.

17 The corporation levy supports the administrative costs of the ADC which, among other things, uses the promotion levy to undertake generic promotion of Australian dairy products in domestic and overseas markets. The research levy finances the portfolio of programs administered by the Dairy Research and Development Corporation while the animal health levy is the dairy industry's contribution to Animal Health Australia which provides a national approach to animal health systems.

18 The only drinking milk products that do not attract the levy are: a) products containing at least 12 per cent milk fat (i.e. cream products); b) milk powder; and c) milk concentrates (i.e. condensed or evaporated milk). The levy is imposed on retailers of milk products but collected from milk processors. Manufacturing milk products such as regular yoghurt, ice cream, dairy desserts, cheese and butter are not leviable. The levy finances the Dairy Structural Adjustment Program.

Table 2.1. Commonwealth dairy levies (cents per litre)

Levy	1999–2000	2000–01
Manufacturing milk (a)	3.532	nil
Market milk (a)	1.901	nil
Promotion	0.175	0.175
Corporation	0.017	0.017
Research	0.122	0.122
Animal health	0.004	0.004
Dairy industry adjustment (b)	nil	11.00

Note: Levies are based on average 1999–2000 Australian milk composition of 4.11 per cent milkfat and 3.26 per cent protein. (a) Imposed under the dairy market support scheme. (b) Imposed on milk retailers.

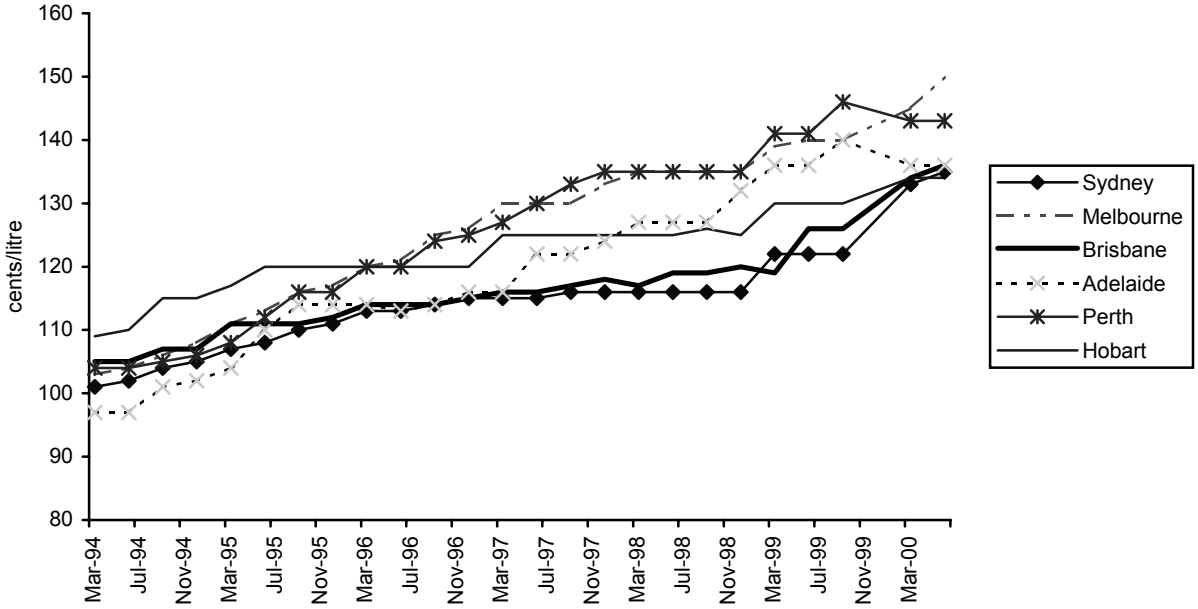
Source: ADC, 2001

2.4 Conclusion

Historically State Governments have had regulatory control over most elements of the fresh milk supply chain. Over the last decade the level of controls have diminished although this has varied between the different States. Controls on milk pricing at the retail level were gradually removed in all States over the 1990s with Queensland the last State to abolish regulated retail pricing of milk at the end of 1998.

However, retail price deregulation typically led to higher retail prices for market milk as indicated in figure 1 below. This is perhaps not surprising, as the object of post-farmgate regulation was to keep processing and retail margins 'tight'.

Figure 2.1. Standard white milk (1 litre)



Source: Australian Bureau of Statistics

Understandably, however, there is considerable community concern that further deregulation would impact unfavourably on consumer prices. The 1999 senate inquiry into the deregulation of the Australian Dairy Industry concluded that 'farmers and regional economies will suffer under deregulation and, at best, the position of the consumer will not be improved.'[19] A key goal of the monitoring function of the ACCC is to determine the impact on consumer prices of dairy industry deregulation.

19 Australia, Parliament, op. cit., p. 169.

3. Key international trends in the dairy industry

3.1 Introduction

The following chapter provides a broad overview of international trends in the dairy industry. There is obviously considerable diversity between countries and for some countries, especially those in South-East Asia, a dairy industry has only been recently developed. Nevertheless, in other ways many of those factors affecting the Australian dairy industry have international resonances.

3.2 Trade in dairy commodities

International trade in dairy commodities has been constrained by the domestic protectionist policies used in a number of countries. Many countries assist their dairy industries by supporting domestic prices through a combination of import restrictions, minimum price support, government purchasing, and subsidised disposal of surpluses. Dairy policy in many countries has been geared to the promotion of domestic self-sufficiency and the support of farm incomes through the maintenance of artificially high domestic prices.[20] As these aims can only be achieved in conjunction with restrictions on competitive imports, international access to many key markets remains heavily restricted.

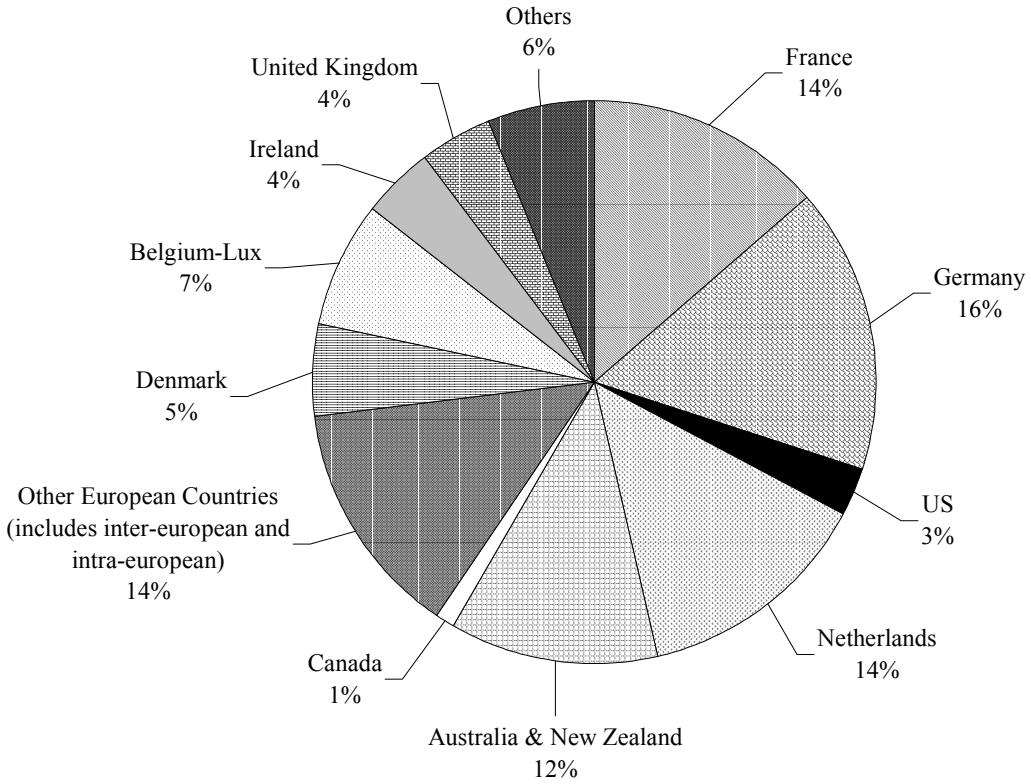
Changes have nevertheless been taking place. According to the Organisation for Economic Co-operation and Development (OECD), two key factors driving this change are the reduction in subsidised exports agreed under the Uruguay Round Agreement on Agriculture (URAA) and the wider adoption of more decoupled domestic support policies which deliver farm assistance without distorting production decisions. As a result of URAA, there has been increased access to major markets for dairy exports and reductions in the volume and value of subsidised exports. This has reduced the volume of surpluses available for 'dumping' on international markets and enabled supply and demand factors to exert more influence on both producer and processor decision-making. The more liberal world trading environment resulting from multilateral trade agreements is likely to improve the relative competitiveness of low-cost dairy producers such as Australia and New Zealand.

The nature of commodity trading is also changing from supply-led trade in basic commodities to demand-led high value-added products. The demand for dairy products is strongly influenced by consumer tastes and health perceptions. Global demand for dairy products is projected to continue to grow over the medium term (five to ten years), with increases in consumer incomes, changes in eating habits and food expenditure patterns expected to favour increased global consumption of dairy products.

20 The maintenance of artificially high prices for milk and dairy products encourages increased supply, while reducing domestic demand. Consequently, many countries with no competitive advantage in dairy production are now self sufficient in dairy, or have developed surpluses which must be disposed of through government subsidised sales (ABARE, 2000).

Figures 3.1 and 3.2 provide an overview of world trade in dairy commodities for 1998.

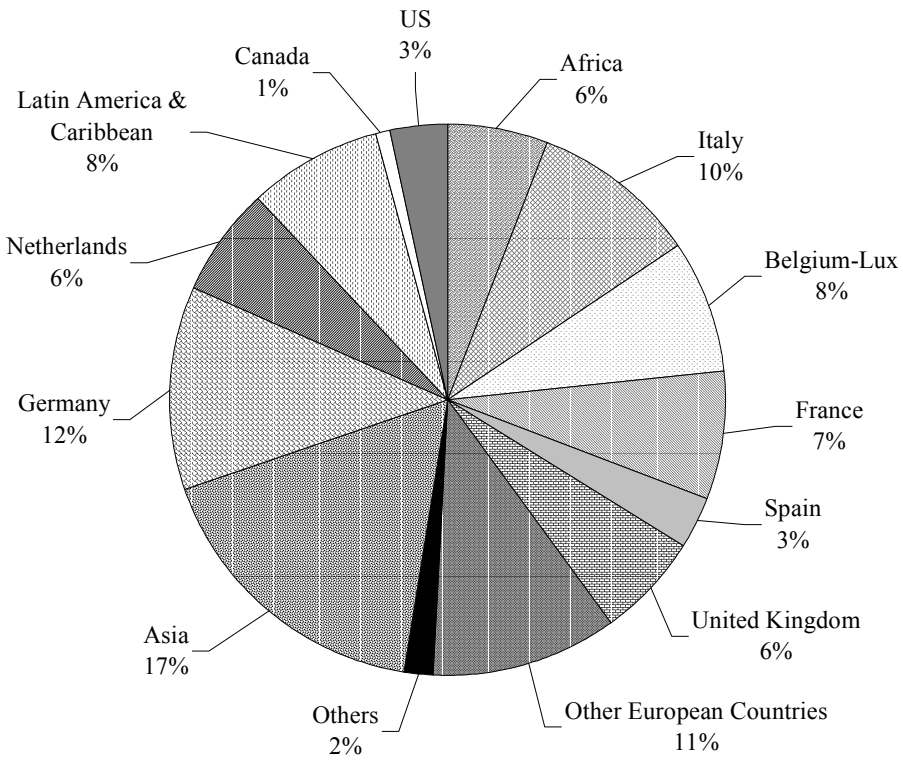
Figure 3.1. Dairy exports[21] by country or region, 1998



Source: FAO, 1999

21 Includes fresh, dry and concentrated milk, cheese, butter, ice cream, yoghurt, cream, buttermilk, lactose and whey products.

Figure 3.2. Dairy imports by country or region, 1998



Source: FAO, 1999

From the beginning of 1998 to mid-1999, international prices for dairy products showed a steady decline (the Food and Agricultural Organisation (FAO) Dairy Price Index dropped by a third over this period). An important factor behind this trend was ample supplies in the main exporting countries, coupled with reduced purchasing power because of currency devaluation in some dairy importing countries, such as South East Asia, and Brazil. These prices strengthened between mid-1999 and mid-2000 mainly due to major reductions in subsidies for dairy products by exporting regions or countries such as the European Union (EU). The short-term outlook for international dairy prices is favourable.

3.3 Changing role of regulation

Dairy industries around the world have undergone significant changes over the past decade or so. Changes in both domestic and export markets, together with changes in the nature and extent of government regulation, have led to rationalisation of the dairy industry in most countries. This has placed considerable pressure on the dairy industries of several countries.

However, a high degree of protection remains and further reductions in regulatory protection will be difficult to achieve. The EU has attempted to achieve some reforms in dairy policy. The primary drivers are the anticipated forthcoming round of multilateral trade negotiations under the WTO and the future enlargement of the EU. Additionally, the reforms are taking place within the context of a requirement by EU heads of governments for a freeze on farm spending at the 1999 level with adjustments for inflation. The reforms are to occur over several years and include a commitment to keep milk quotas in place until at least 2006 to be reviewed at the end of this period with a view to phasing out quotas.

An extensive regulatory framework for the dairy industry operates in the United States (US). Part of the US's domestic market policy consists of a price support system. The Dairy Price Support Program was due to terminate at the end of 2000, but has been extended for a further 2 years through to December 2002. The program, which has been in operation since 1949, is designed to provide a framework for the Federal Government to support dairy farmers' incomes and to guarantee the availability of milk and dairy products.

3.4 Supply trends

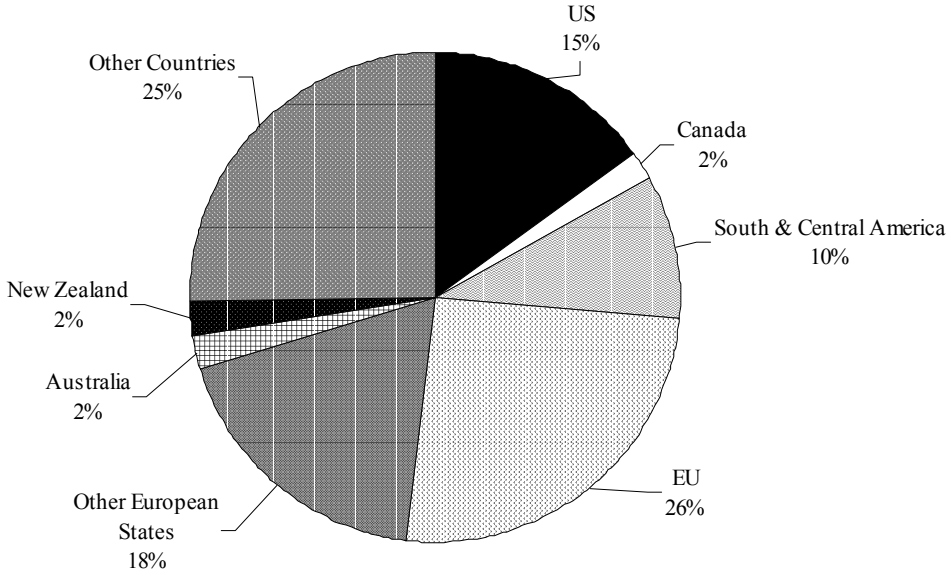
Over recent years, dairy farmers have made many changes to farm management practices. A range of technologies and innovations has been adopted to stimulate increased production of milk. These include: increases in supplementary feeding, more advanced genetic selection, better herd management systems, automated milking, and computerised feeding.

Among other things, the adoption of new technologies has resulted in more milk output per hectare of land. In most countries much of the increase in aggregate milk production in the late 1990s appears to be the result of increases in the average number of milking cows per farm and partly sustained by an increase in the use of supplementary feeding.

However, global milk production has only increased by 1 or 2 per cent each year. This stability is the result of the different milk production levels of producer countries. The EU and countries such as the US are the major milk producers (about 65 per cent of milk production is concentrated in developed countries). In these countries milk production is stable reflecting the fact that Governments have imposed controls in terms of underwriting farm income support. In contrast, there has been substantial growth in milk output in Asia and Latin America. This substantial growth has been offset by a steep decline in output in Eastern Europe and the former USSR.

Figure 3.3 shows milk (cow and non-cow milk) production by various countries in 1998 expressed as a percentage of world output.

Figure 3.3. World milk production in 1998[22]



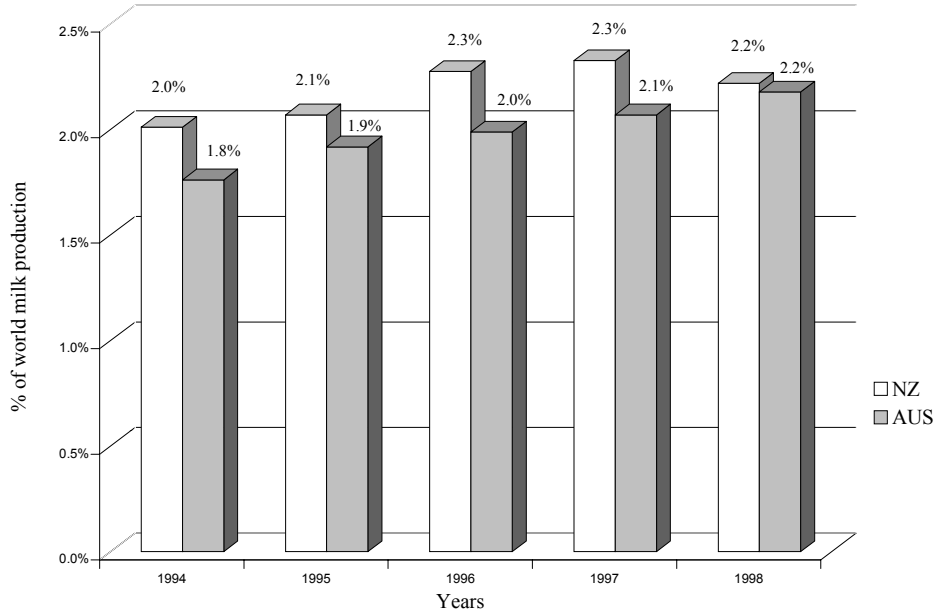
Source: FAO, 1999

In the future, global trends are expected to result in a shift in the balance of milk production away from the developed countries to the developing countries.[23] By 2005 developing countries are anticipated to account for over 40 per cent of world milk production, a share which could be expected to grow further during the course of the next century. The FAO expects strongest growth in milk output in the areas of the world where consumption is registering the fastest growth — Asia and Latin America. Countries where substantial growth in output is expected include India, Pakistan, China, Argentina, Brazil, Chile and Uruguay. Internationally, the largest producer of cow and non-cow milk is India while the US is the world largest single country producer of cow milk. Figure 3.4 shows the relative stability in the trend of milk produced in New Zealand and Australia in terms of world milk output.

22 This includes cow and non-cow milk production.

23 In a world market where subsidies are expected to play a decreasing role in trade, the price of the dairy industry's basic raw material, milk, will be the principal factor in deciding where exports will originate in the future. At current market prices, producer prices appear to be the key factors that will determine countries that can export dairy products without the use of subsidies and those that cannot. However, it is difficult to generalise, as higher returns from domestic sales may in some cases be used to compensate for lower returns on exports.

Figure 3.4 Milk produced in Australia and New Zealand as a percentage of world milk production



Source: IDF Bulletin #339/1999

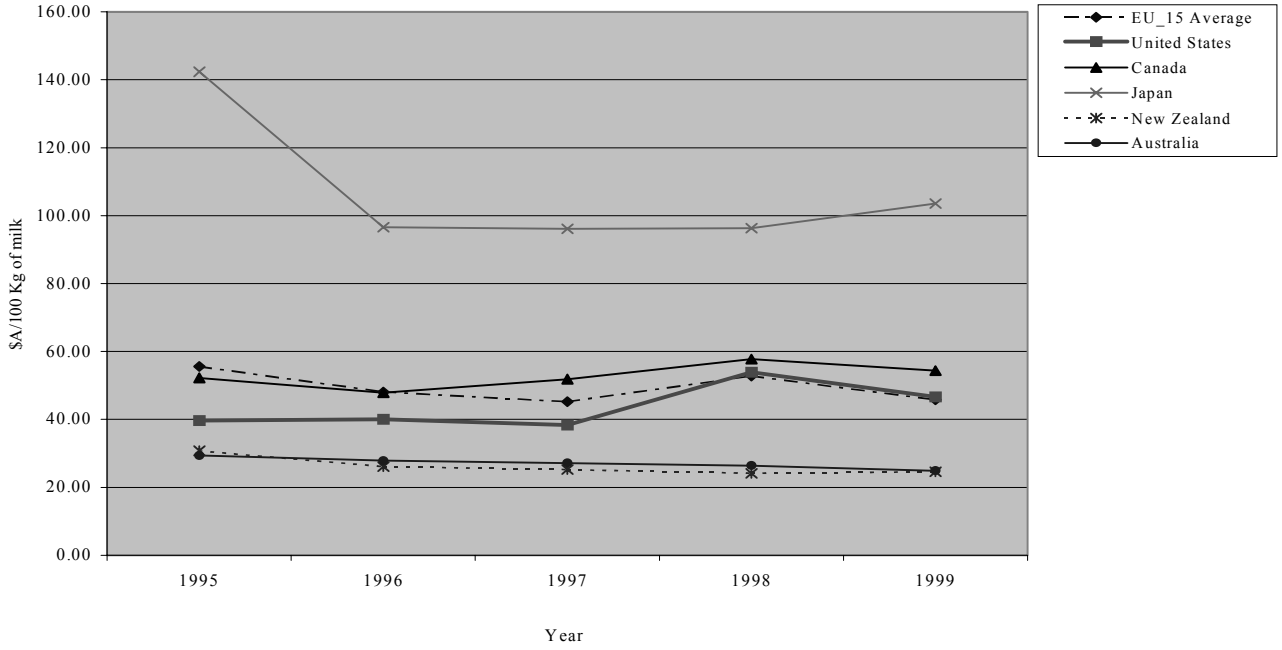
3.5 International farmgate milk prices

Figure 3.5 and table 3.1 show a four-year (1995 to 1998) international trend of farmgate milk prices expressed in equivalent Australian dollars ($A).[24] These figures indicate that relatively, Japan has the highest farmgate price with New Zealand the lowest. Differences in international farmgate prices reflect differences in milk production costs. Australian milk production costs are similar to those of New Zealand as reflected in near similar farmgate prices but well below those of most other major dairy producing countries. Milk producers in the US, EU-15 and Canada saw a decline in farmgate prices between 1998 and 1999. [25] Fall in the EU-15 average farmgate price during this period was driven by significant falls in farmgate prices of member countries such as the United Kingdom, Belgium, Germany and the Netherlands. Farmgate prices in Japan, New Zealand and Australia increased slightly during this period.

24 Farmgate milk prices have been adjusted using currency exchange rates reported on 30 June of each year from 1995 to 1999.

25 EU-15 represents the current membership of the EU.

Figure 3.5. International farmgate milk prices expressed in $A[26]



Source: ADC, 2000

Table 3.1. International farmgate milk prices ($A per 100 kg of milk)

Country or region	1995	1996	1997	1998	1999
EU-15 average	55.58	48.09	45.20	52.82	45.76
United States	39.62	40.08	38.35	53.85	46.65
Canada	52.24	47.84	51.86	57.76	54.39
Japan	142.36	96.59	96.12	96.28	103.54
New Zealand	30.75	26.08	25.18	24.15	24.59
Australia	29.35	27.88	27.17	26.43	24.90

Source: ADC, 2000

26 EU-15 average is the average farmgate price taking into account the current membership of the European Union. International farmgate prices reported in ADC (2000, p. 45) were adjusted using currency exchange rates reported on 30 June of each year from 1995 to 1999.

3.6 Role of cooperatives and trends at the processor level

In most countries both farmer-owned cooperatives and private companies process and manufacture dairy products. Manufactured dairy products have become increasingly important especially in advanced economies. For instance, most of the milk supply in the US (about 65 per cent), the EU (76 per cent), New Zealand (96 per cent) and Australia (80 per cent) is used for the manufacturing of dairy products. Global trends indicate that while a large proportion of manufactured dairy products (e.g. butter, cheese and cream) are sold to consumers or used in the catering trade, significant quantities are also used by food manufacturers as ingredients in the production of a large range of foods. The animal feed industry is also supplied with skim milk powder and whey.

In some countries, farmer or dairy cooperatives dominate market milk and manufacturing milk sectors. In Canada, dairy cooperatives process close to 60 per cent of Canada's total milk production. In the US dairy cooperatives have a prominent role as 68 per cent of the milk supplied by dairy farmers goes to them, however, a substantial proportion of cooperatives are bargaining cooperatives responsible for marketing their members' milk. In Denmark, a single cooperative — MD Foods — accounts for two-thirds of the milk processed and 85 per cent of the country's exports of dairy products.

There is also a trend towards rationalisation with mergers and plant closures occurring in a number of countries. This trend has the potential to increase economies of scale and scope and improve prospects for developing new markets and technologies. In Canada there are 270 plants that process market and manufacturing milk. That is 100 fewer than ten years ago. In New Zealand, within four years, the number of cooperative dairy companies operating 29 factories declined from 15 to 7 by 1998–99.[27] In the UK there has been progressive rationalisation of the sector over the last two decades as over-capacity resulted in the closure of several large dairy plants and the take-over or closure of several companies.

In other cases, and especially in the expanding dairy markets of Asia and Latin America, a common phenomenon is for international dairy companies to acquire and then expand, national processing capacity. For example, in Venezuela, two companies account for 85 per cent of powdered milk produced. The first of these, Parmalat owns Indulac, and the second, Ilapeca, is partly owned by the New Zealand Dairy Board. This process is also evident in Chile, where multi-national companies account for a substantial proportion of milk processed.[28]

27 Dairy Industries International, 2000.

28 FAO Dairy Outlook, 1999.

3.7 Demand factors and changes at the retail level

Many of the changes in demand for dairy products are the consequence of broader changes in the international economy. Developing countries are becoming increasingly urbanised. Urbanisation is generally accompanied by increased disposable income and access to a greater variety of food including increased consumption of high-value foods, such as milk and milk products. Urbanisation also results in the provision of electricity and access to refrigeration, which is of particular importance for a highly perishable product such as milk. Consequently, household expenditure shifts from tinned and dried milk products, which do not require refrigeration, to other dairy products that require refrigeration.

Concurrent with these changes, retail practices have altered considerably. One manifestation of this is the increased importance of supermarkets and mini-markets. In a number of countries the concentration of the distribution of dairy products in the hands of a small number of supermarket chains gives retailers a great deal of power in negotiating prices and deciding what products will be presented to the consumer. Centralised purchasing by these buying groups is a common feature in Europe. For dairy products the spread of supermarkets is particularly important as they offer both refrigeration capacity and space to display a wide range of fresh dairy products, thereby acting as a stimulus to increased consumption.

The growth of supermarket retailing is a world-wide phenomenon and is not limited to the developed countries. In Asia during the last decade, the number of supermarkets have grown considerably, they now account for more than half recorded grocery sales in countries like Singapore, Hong Kong, South Korea, Japan, Malaysia and the Philippines. Foreign retailers, particularly European multi-nationals, have gained increasing market share of the Asian retail trade entrenching their control of food retailing across all global markets.

In line with these changes, new marketing practices have affected the international dairy market. Dairy products were traditionally traded as bulk products for reprocessing (with the exception of cheese), however, branded products are now increasingly important. The globalisation of products through brands as well as the segmentation of consumption, and changes in eating habits have had an important impact on the international dairy market.

Where fresh milk was once a uniform product, there is now a multitude of fresh milk categories based on different fat combinations, enriched or flavoured in varying ways, and aimed at discrete sections of the market. The FAO has noted that in some countries with mature markets for dairy products, especially for drinking milk, such segmentation is reflected in increased market returns, as these products are sold at a premium. Niche products are geared to a specific market or group of consumers. For example, low-lactose milk powder, such as the New Zealand Dairy Board's Jental, was developed with a view to the large lactose intolerant population in South-East Asia.

As many items on the menus of fast food companies contain milk products, the growth of this sector has also influenced the dairy sector. Just as the coverage of these fast food

companies is international, so too are their sources of supply — the New Zealand Dairy Board supplies McDonald's restaurants in 16 countries, mainly in South-East Asia.[29]

3.8 Conclusion

The Australian dairy industry is a significant exporter of dairy products. Currently about half the milk supplies in one form or another ends up being exported. This proportion is expected to rise. Increasingly milk prices at farmgate will be driven off international prices and adjusted for seasonality and geographic differences. International trends therefore have considerable impact on the Australian industry. This is especially likely to be the case as Asia is the obvious target market for Australia dairy products. While about 65 per cent of Australia's exports currently go to Asia, Australia is not the only exporting country to recognise Asia's growth potential with regard to dairy products. The Australian dairy industry will therefore have to use the advantages of proximity as well as any other efficiencies that it can achieve to compete against some of the major international dairy groups which will also be competing for a larger share in these export markets.

29 FAO Dairy Outlook, 1997.

4 Overview of the Australian dairy industry

4.1 Introduction

The following chapter provides a descriptive overview of the dairy industry in Australia with specific emphasis on the liquid milk sector of the industry. The three facets of the industry — the farm sector, the processor sector and the retail sector — are covered separately. In addition to the descriptive detail required as background information to understand the monitoring results presented in the following four chapters, comment is also made about some of the structural changes that have occurred in the industry as a result of deregulation.

4.2 The dairy farm sector

4.2.1 Milk production

The vast majority of milk production in Australia is based on pasture grazing with supplementary feeds such as hay, silage and grain commonly used to enhance milk yields, particularly in months where pasture growth is limited by seasonal conditions. Weather patterns are a major influence on the volume, quality and cost of production of Australian milk. The rainfall and temperature of Australia's southern and eastern inland coastal regions are particularly suitable to dairy farming. The Holstein–Friesian is the dominant breed of dairy cattle in Australia.[30] Other breeds include the Jersey, Guernsey, Illawarra, Ayrshire, Dairy Shorthorn and the Australian Milking Zebu. Herringbone and rotary dairies are the most common methods of milk harvesting in Australia with cows generally being milked twice daily over an average 300-day lactation cycle.

30 According to ABARE, around 75 per cent of the Victorian dairy herd at 30 June 2000 comprised Friesian cattle (Australian Dairy Industry 2000, Canberra, 2000, p. 10).

Table 4.1 Australian dairy farm statistics

Year	Total Australian dairy farms	Dairy cows (a)	Total Australian milk production (million litres)	Average size of milking herd	Average milk yield per cow (litres)
1975	30 630	2 355 000	6 497	77	2 623
1980	21 994	1 880 000	5 432	85	2 848
1985	19 342	1 808 000	6 033	93	3 336
1990	15 396	1 654 000	6 262	107	3 781
1995	14 166	1 882 000	8 206	134	4 550
2000p	12 888	2 170 000	10 847	155	5 000

Note: (a) includes cows in milk and dry.
p — preliminary estimate

Source: ADC and ABARE — compilation of years.

The Victorian dairy industry accounts for around 63 per cent of Australia's milk production and has expanded rapidly in recent years to exploit economies of scale at the manufacturing level. Key production regions include Gippsland (18.8 per cent of national production), Northern Victoria (25.4 per cent) and the Western District (19.2 per cent).[31] New South Wales has a 13 per cent share of national milk production, Queensland has an 8 per cent share, South Australia and Tasmania each produce 6 per cent of the national milk harvest while Western Australia accounts for 4 per cent of Australian milk (refer table 4.2 and figure 1).

In 1998–99 the average Australian dairy farm, including areas set aside for the growing of crops, the production of supplementary feeds and any additional livestock enterprises, was 213 hectares. Australian dairy farms supported an average total dairy herd of 242 cows in 1998–99. This figure is inclusive of cows in the milking herd, replacement heifers and calves.

31 Australian Dairy Corporation, Dairy Compendium 2000, February 2001, p. 15. These regional share of estimated national milk production figures relate to the year ending 30 June 2000.

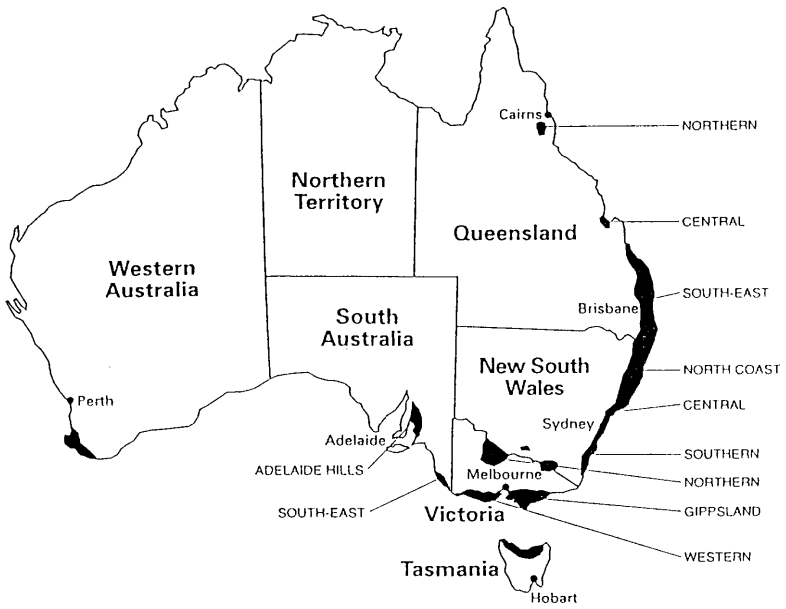
Table 4.2 Milk production figures by State for the year to 30 June 2000

State	Share of total milk production(a) (%)	Number of farms(b)	Average herd size(c&d)	Average farm size(c) (ha)
Victoria	63.3	7806	252	171
New South Wales	12.9	1725	225	244
Queensland	7.8	1545	185	298
South Australia	6.6	667	219	290
Tasmania	5.6	734	304	231
Western Australia	3.8	411	285	341
Australia	100.0	12 888	242	213

Note: (a) Share of estimated 1999–2000 national milk production of 10 847 million litres; (b) Preliminary estimate for number of farms as at 30 June 2000; (c) Preliminary estimates for 1998–99; (d) Total dairy herd including milking cows, replacement heifers and calves.

Source: ABARE and ADC 2001.

Figure 4.1 Major dairy regions in Australia



Source: ADC, 2001

4.2.2 Growth of milk production

While the number of dairy farmers has steadily declined since the 1970s, greater economies of scale and increased farm productivity has meant that national milk output has more than doubled over the past two decades (refer table 4.1). Australian milk

production is forecast at 11 066 million litres in 2000–01 compared with 5432 million litres in 1980. [32] Approximately 2.176 million cows will be milked in Australia for the year to 30 June 2001 with each cow producing an average yield of 5085 litres.[33]

4.2.3 Barriers to entry and exit for dairy farmers

There are no significant barriers to entry into Australian dairy farming. Certain health regulations apply to milk harvesting, cooling and on-farm storage. Capital investment of up to $1 000 000 is required for the purchase of sufficient land, milking cows, dairy shedding, milk harvesting equipment, storage vats and farm machinery to achieve a viable scale of dairy farming operations. But many dairy farmers enter the industry via share farming arrangements whereby properties are managed with reduced capital commitment, such as ownership of the dairy herd, in return for a share of the milk cheque. Such arrangements allow sharefarmers to work towards the purchase of their own dairy farms while being actively engaged in the industry.

Exit barriers for dairy producers are reasonably low with markets existing for most dairying assets including land, cows, milking and milk storage equipment and machinery. However, rationalisation pressures resulting from industry deregulation may depress prices of dairy farms in certain districts in the medium term. Nevertheless, as dairying typically occurs in high rainfall areas or on properties with access to irrigation, farmland used for dairying is generally amenable to alternative forms of agriculture such as beef and wool production. Urban encroachment has also increased the prices of some semi-rural dairy holdings to levels far exceeding the value of that land under milk production. The Dairy Structural Adjustment Program helps farmers exit the dairy industry if this is appropriate to their individual economic circumstances.

4.2.4 Farmgate prices for market and manufacturing milk

Until 1 July 2000 State Governments set regulated prices for market milk at the farmgate (refer chapter 2). These prices were typically around twice the export price of milk. Manufacturing milk prices were essentially determined by the prevailing international price of dairy commodities such as cheese, butter and milk powders. Manufacturing milk producers also received some assistance from the Commonwealth Government's dairy market support scheme before its termination on 30 June 2000. Regulatory mechanisms effectively restricted the arbitrage opportunities of interstate trade in market milk, thus ensuring milk premiums were preserved for the benefit of dairy farmers operating within individual States.

Each State had differing percentage splits of market and manufacturing milk (refer table 4.3). All Victorian dairy farmers had a notional 7 per cent of their milk allocated to the market milk sector in 1999–2000 while New South Wales, Queensland and Western Australia converted over 40 per cent of all milk produced into drinking products.

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32 Australian Bureau of Agriculture and Resource Economics (ABARE), Australian Commodities, vol 8, no. 1, Canberra, March 2001, p. 72.

33 ibid.

Table 4.3 Estimated milk production by State for 1999–2000

State	Total milk	Market milk		Manufacturing milk	
	(million litres)	(million litres)	(%) *	(million litres)	(%)*
Victoria	6870	495	7	6375	93
New South Wales	1395	567	41	828	59
Queensland	848	397	47	451	53
South Australia	713	187	26	526	74
Western Australia	412	190	46	222	54
Tasmania	609	66	11	543	89
Australia	10 847	1902	18	8945	82

Note: *Percentages of total state or national milk production. Figures include interstate milk transfers. Market milk sold in the Australian Capital Territory and Northern Territory has been included with manufacturing milk figures as it was not supplied at regulated prices.

Source: ADC, 2001

As a consequence of Government intervention in the fresh milk market, farmgate prices for market milk were estimated to average 47.2 cents per litre in 1999–2000 compared to an average per litre price of 20.9 cents for manufacturing milk (refer table 4.4). Due to differing splits between market and manufacturing milk in each State, the average bundled price at the farmgate of a litre of milk has historically differed considerably between States. Under farmgate price controls, Queensland dairy farmers received an estimated average of 39 cents per litre for their milk in 1999–2000 while Victorian farmers were paid 26 cents for an average litre of milk. Because market milk premiums have traditionally had a much smaller impact on total milk returns in Victoria, South Australia and Tasmania, the amount of excess production encouraged by farmgate price regulation in these States was considerably less than in New South Wales, Queensland and Western Australia.

Table 4.4. Farmgate milk prices by State — manufacturing and market milk

State	1998		1999		2000(p)	
	Manufacturing milk (c/l)	Market milk (c/l)	Manufacturing milk (c/l)	Market milk (c/l)	Manufacturing milk (c/l)	Market milk (c/l)
New South Wales	25.1	49.6	25.3	47.0	21.8	47.7
Victoria	22.7	43.1	23.0	43.4	20.7	42.7
Queensland	24.0	55.3	23.7	55.7	21.9	54.9
South Australia	21.8	43.8	23.1	44.2	22.2	44.6
Western Australia	25.6	45.1	24.7	44.4	24.6	45.5
Tasmania	20.4	45.0	21.8	45.7	18.9	44.3
Australia	22.9	47.9	23.2	47.4	20.9	47.2

Note: (p) Preliminary estimates for year to 30 June. Domestic market support payments not included in manufacturing milk prices. Market milk prices adjusted for freight charges and farmer contributions to state dairy authorities. Commonwealth levies not deducted from market or manufacturing milk prices.
Source: ADC, 2001

Following the removal of farmgate price controls from 1 July 2000, raw milk prices are now commercially determined. Farmgate milk prices are anticipated to fall in 2000–01 in all States with the greatest falls occurring in States with high proportions of market milk production (refer table 4.5). However, milk prices in Victoria are expected to fall by only 3 per cent in 2000–01 due to higher export prices for dairy commodities and a low reliance on market milk premiums under regulated farmgate pricing. Average milk prices should exhibit much less interstate variability in a deregulated market.

Table 4.5. Farmgate milk prices by State — all milk

State	Farmgate prices		Estimated post-deregulation change (%)
	1999–2000(p) (c/l)	2000–01(s) (c/l)	
New South Wales	36.0	25.4	-29
Victoria	26.0	25.1	-3
Queensland	39.3	30.0	-24
South Australia	28.0	24.2	-14
Western Australia	36.0	25.0	-30
Tasmania	25.9	24.0	-7
Australia (a)	28.8	25.4	-12

Note: (p) Projections based on information provided by farmers and major dairy companies in November 2000. (a) estimated prices are not adjusted for State and Commonwealth levies including adjustments related to the Domestic Market Support Scheme which terminated on 30/6/2000.

Source: ABARE and ACCC, 2001

4.2.5 Milk production costs

The typical cost structure of producing milk might be broadly represented as: feed costs (40 per cent); dairy overheads including hired labour, imputed labour, land and administration costs (19 per cent); milk levies and freight (15 per cent); other variable dairy costs including fuel and oil and repairs (12 per cent); herd costs (7 per cent); and shed costs (7 per cent). Additional expenses associated with operating a dairy farm might include depreciation and interest repayments.

Table 4.6. Average farm production costs by State

State	Production costs		Estimated post-deregulation change (%)
	1999–2000(p) (c/l)	2000–01(s) (c/l)	
New South Wales	23.4	20.2	-14
Victoria	18.8	17.7	-6
Queensland	24.3	22.7	-7
South Australia	21.3	18.1	-15
Western Australia	25.2	21.3	-15
Tasmania	19.7	18.1	-8
Australia (e)	20.3	18.6	-8

Note: (p) Preliminary estimate. (s) Provisional estimate based on phone survey carried out by ABARE in October 2000. Measures of costs of production exclude depreciation, imputed value of family labour and interest. (e) ACCC estimate according to farm numbers per State in 1999–2000.

Source: ABARE, 2001

Milk production costs on a per unit basis are estimated to fall across all States in 2000–01 with estimated cost reductions being greatest in New South Wales, Western Australia and South Australia (refer table 4.6). Given the dry summer conditions across many dairy regions throughout 2000–01, actual costs of milk production may be greater than originally forecast due to additional purchases of supplementary feed. Sustained high fuel prices over much of 2000–01 are also likely to impact on the cost of milk production and cartage.

Terms of trade for dairy farmers, the ratio of prices received to prices paid, declined by just over 1 per cent a year from 1977–78 to 1998–99. Milk prices fell less in real terms during this period than prices for other broadacre commodities such as grains, wool and beef.[34]

4.2.6 Bargaining power of dairy farmers

Dairy farmers can be considered weak sellers as they have limited capacity to influence prices received for their milk. Although the aggregate production decisions of dairy farmers can potentially have a significant impact on milk prices, individual farmers are essentially price-takers. This is due to each farmer's relatively small output compared to the total size of the farmgate market for milk. As milk is a perishable product, options for disposing of milk supplies are limited by the number of dairy processors operating factories within reasonable distances from a farm. Transport of raw milk to factories outside dairying regions may often compromise milk quality and increase cartage costs. Even in areas where a number of competing processors do exist, the countervailing power of dairy farmers may be constrained by the capacity of rival

34 ABARE, Australian Farm Surveys Report 2000, Canberra, 2000, p. 13.

factories to accept additional milk supplies. Many dairy farmers also have to provide considerable advance notice before switching milk processors.

The formation of dairy cooperatives has partially addressed the weak negotiating position of farmers through the vertical integration of milk production and processing activities. Dairy cooperatives are often considered to pay industry benchmark prices for milk at the farmgate which proprietary companies are challenged to match. However, cooperative loyalty and differential treatment of active and non-active shareholdings in cooperatives often result in dairy farmers being reluctant to switch to rival milk processors even when higher farmgate milk prices are available. Due to the fixed nature of production systems, dairy farmers have limited capacity to vary milk supply in response to short-term changes in prices. However, regular milk payments generally provide stronger cashflows and more stable returns relative to many other agricultural industries such as cropping where harvesting of produce is more susceptible to seasonal weather patterns.

4.2.7 Efficiency and productivity

Improvements in dairy genetics, the use of supplementary feeding, better pasture management, and the more intensive feeding of grains and concentrates have led to substantial increases in milk yields per cow in recent decades.[35] Productivity growth, calculated by measuring the ratio of total farm outputs to total farm inputs, provides an estimate of the contribution of technological changes and improved farming systems to overall farm performance. Over the period from 1977–78 to 1998–99, annual productivity growth on Australian dairy farms was estimated at 1.6 per cent.[36] During this period, aggregate output of dairy farms increased by 4.1 per cent per annum compared to annual growth in inputs of 2.5 per cent. Input growth reflected greater use of fertilisers and grain feeding to increase milk production. From 1976–77 to 1998–99, productivity growth in the dairy farm sector lagged that of farms producing wheat and other crops (3.6 per cent per annum), mixed livestock and crops (2.6 per cent per annum) and beef (2.1 per cent per annum) but was ahead of farms with sheep (0.6 per cent per annum) and mixed sheep and beef (1.4 per cent per annum).

4.2.8 Financial profile at the farm level

The majority of Australian dairy farms are owner-operated, with larger properties employing regular farm workers or share farmers in addition to contracting casual labour during hay and silage-making periods. In 1998–99, the average value of an Australian dairy farm was estimated at just over $1.2 million (refer table 4.7). The average farm business equity ratio, a measure of net worth expressed as a percentage of total farm assets, was around 82 per cent for dairy farms at 30 June 1999. Average farm capital and average farm business equity ratios for Australian dairy farms were slightly below the estimated averages of all broadacre farms in 1998–99. Higher financial gearing reflects regular cashflows from milking activities that can support higher levels of debt relative to enterprises with more variable income patterns.

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35 ibid, p. 20.

36 ABARE, Australian Dairy Industry 2000, Canberra, 2000, p. 2.

Some land used for dairying has come under downward price pressure following industry deregulation on 1 July 2000, particularly in States that previously operated market milk equalisation schemes. In other States, market milk premiums were instead largely capitalised into the value of milk quotas.

Table 4.7 Average farm capital and farm business equity ratios for broadacre farms

Enterprise	Average farm capital at 30 June		Average farm business equity ratio at 30 June (%)	
	1997–98 ($)	1998–99(p) ($)	1997–98 (%)	1998–99(p) (%)
Dairy	1 213 788	1 202 690	81.5	82.1
Wheat and Other Cropping	1 359 525	1 325 180	82.3	82.4
Mixed Livestock and Cropping	1 407 510	1 287 590	85.5	83.6
Sheep	1 075 199	1 091 140	89.5	87.9
Beef	1 342 354	1 330 900	89.6	90.8
Mixed Sheep and Beef	1 104 496	1 176 960	87.8	89.4
All Broadacre Farms	1 280 313	1 261 080	86.7	86.5

Note: (p) preliminary estimates.

Source: ABARE, 2000

4.2.9 Profitability of dairy farms

Decreases in average farmgate milk prices are expected to result in reduced dairy farm incomes for 2000–01 in all States except Victoria, where strong international prices for dairy commodities should translate into slightly higher farm cash incomes. New South Wales, Queensland and Western Australia, where market milk accounts for nearly half of all milk produced, will experience the largest reductions in dairy farm incomes following deregulation (refer table 4.8). Farm business profit, which adjusts farm cash income for changes in trading stocks, depreciation and operator and family labour, is forecast to be negative in 2000–01 for all States except Tasmania. The full impact of dairy industry deregulation will depend on the extent to which an individual farm's average milk price at the farmgate has fallen and the size of any Dairy Structural Adjustment Program (DSAP) payments. Farmers will receive 46.23 cents per litre for market milk produced in the 1998–99 base year and 8.96 cents per litre for manufacturing milk under the DSAP. Annual DSAP payments will range from nearly $31 000 per annum in Western Australia to just under $9000 in Tasmania with payments made quarterly over an eight-year period.

Table 4.8. Estimates of average farm cash income, farm business profit and DSAP payments for Australian dairy farms by State

State	1999–2000(p)		2000–01(s)		
	Farm cash income (a) ($)	Farm business profit (b) ($)	Farm cash income (a) ($)	Farm business profit (b) ($)	Annual DSAP payment ($)
New South Wales	81 942	19 614	37 264	-30 533	20 319
Victoria	57 148	1290	57 789	-2123	12 338
Queensland	80 350	10 845	47 517	-31 899	15 869
South Australia	75 322	15 700	57 515	-15 760	18 165
Western Australia	127 185	50 735	55 823	-31 321	30 926
Tasmania	91 158	20 257	68 187	+1117	8947

Note: (a) Farm cash income represents the difference between total cash costs and total cash receipts excluding DMSP payments. (b) Farm business profit represents farm cash income, excluding DSAP payments, adjusted for changes in trading stocks, depreciation and operator and family labour. (p) Preliminary estimate. (s) Provisional estimate based on phone survey carried out by ABARE in October 2000. DSAP Dairy Structural Adjustment Program — payments are made quarterly for an 8-year period commencing 2000–01. Figures weighted according to farm numbers in each State at 30 June 2000.

Source: ABARE and ACCC, 2000

4.2.10 Benchmarking the financial performance of the dairy farm sector

In general, profitability of farming is low compared to other business activities, particularly given the price and yield risks associated with agricultural production that often lead to highly variable returns. Notwithstanding the distorted nature of international trade in agricultural commodities, the relatively low profitability of Australian agricultural industries reflects the fact that the farm is seen as a lifestyle as well as a business, and therefore there are non-economic reasons for not exiting the industry despite low profitability.

Over the three years to 30 June 2001, average farm cash incomes and business profits are forecast to be higher in the dairy industry than for other broadacre farming activities except for wheat and other cropping (refer table 4.9). However, for the year to 2001, lower average milk prices and higher returns from beef and wool markets are likely to result in similar average farm cash incomes for dairying and other broadacre industries. Importantly for comparative purposes, average levels of farm capital employed to generate cash income were similar across all broadacre industries (refer table 4.7). In the first full year of a deregulated dairy market, farm cash incomes for dairy farmers in New South Wales, Queensland and Western Australia are expected to fall to levels below the average of all broadacre farms (refer table 4.8). However, higher international prices for manufactured dairy commodities in the year to 30 June 2001 should ensure that average farm cash incomes remain above the broadacre farming benchmark in other States.

When the dairy structural adjustment program payments are taken into consideration, average incomes of dairy farmers in the year to 30 June 2001 for all States should increase to levels exceeding the expected three-year average of other broadacre farmers. Due to the relatively high-imputed value of operator and family labour on dairy farms, estimated to be $50 200 across Australia for 1999–2000, farm business profit figures for dairying compare less favourably to other farming enterprises until adjusted for DSAP payments.

Table 4.9 Comparison of farm profitability across industries

Enterprise	Farm cash income			Farm business profit		
	1998–99 ($)	1999–2000(p) ($)	2000–01(s) ($)	1998–99 ($)	1999–2000(p) ($)	2000–01(s) ($)
Dairy	67 920	70 420	57 100	4855	7350	-9000
Wheat and other cropping	86 851	96 050	88 000	29 297	12 670	3600
Mixed livestock and cropping	44 759	57 430	61 800	-14 287	-4860	-1500
Sheep	14 722	26 380	40 600	-30 672	-20 200	-7600
Beef	45 470	46 640	51 000	-7341	610	8900
Mixed sheep and beef	21 064	32 030	38 100	-26 475	-8960	-4400
All broadacre farms	45 484	53 680	57 500	-8185	-3390	400

Note: (p) Preliminary estimate; (s) Provisional estimate.

Source: ABARE, 2001

4.2.11 Outlook for farmgate prices

Given the continuing strong demand for international dairy commodities and competitive Australian dollar throughout much of the 2000–01 season, actual milk prices for 2000–01 may be higher than originally forecast. The robust export market is likely to result in some dairy cooperatives paying additional 'step-up' payments in the last half of 2000–01.

In an open market farmgate milk prices will be governed by several factors. In general, milk supply will be influenced by seasonality, the ability of farmers to make productivity gains and the pace of structural adjustment within the dairy farm sector. On the demand side, prices will be strongly influenced by the import price of dairy commodities. As milk in liquid form is costly to transport long distances and shows quality deterioration over time, the aggregate availability of fresh milk to supply regional drinking milk markets may also impact on farmgate milk prices at the regional level. Dairy farmers with access to drinking milk markets that cannot readily be supplied with milk from alternate dairying districts may eventually benefit from a premium price for supply of fresh milk once the farm sector has fully adjusted to the effects of deregulation. Any premium for fresh milk would be dependent on the amount of manufacturing milk available that can potentially be substituted into fresh milk products to meet regional demands for drinking milk.

4.3 The dairy processing sector

4.3.1 Composition of the processor sector

There were 53 milk receival companies collecting an estimated 10 846 million litres of milk from Australian dairy farms in 1999–2000. However the top 15 companies accounted for over 97 per cent of total milk intake (refer table 4.10) with many of the remaining dairy companies operating in specialty cheese markets. The factories of the leading three companies, Murray Goulburn, Bonlac Foods and the Dairy Farmers Group, which each have annual revenue in excess of $1 billion, accepted 64 per cent of the Australian milk supply in 1999–2000 from a combined supplier–member base of over 7500 farmers. In 2000–01, dairy companies are expected to transform an estimated 11 066 million litres of milk into packaged liquid milk and manufactured dairy products.[37] International companies operating milk factories in Australia include Nestle, Kraft, Lactos and Parmalat Finanzaria[38] which together served as the first point of collection for around 13 per cent of Australia's milk harvest. Some proprietary companies also buy milk in bulk from cooperatives.

Table 4.10 Milk intake by Australian dairy companies in 1999–2000

Company	Milk intake for 1999–2000 (million litres)	(%)*
Murray Goulburn (c)	3142.3	29.0
Bonlac Foods[1] (c)	2321.6	21.4
Dairy Farmers Group (c)	1457.5	13.4
Nestle Australia	631.5	5.8
National Dairies	584.0	5.4
Warrnambool Cheese & Butter Factory (c)	519.0	4.8
Tatura Milk Industries (c)	424.7	3.9
Parmalat Australia[2]	420.8	3.9
Kraft Foods Limited	287.5	2.7
Norco Co-operative (c)	183.3	1.7
Bega Co-operative (c)	171.8	1.6
Peters and Brownes Foods Limited	164.2	1.5
Lactos	101.2	0.9
Capel (Wesmilk)	75.6	0.6
Cadbury Schweppes	67.0	0.6

Source: ADC, 2001

Note: 1 Includes Murrumbidgee Dairy Co-operative.
2 Includes Dairyfields Co-operative and Port Curtis.
(c) Co-operative.
*Percentage of national milk intake.

37 ABARE forecast.

38 Parmalat acquired Pauls in June 1998 for $437 million.

4.3.2 Distribution of processors by State

Within each State, the vast majority of milk is still controlled by two dominant milk processors. In New South Wales, Dairy Farmers and National Foods have a combined market share in excess of 85 per cent with Norco, Parmalat and Perfection servicing the vast remainder of fresh milk requirements. National Foods and Parmalat are the major milk processors in Victoria with Dairy Farmers, Murray Goulburn (via Kiewa), Warrnambool Cheese and Butter Co-operative and Snowy Mountains holding smaller market shares. However, the re-tendering of the Victorian supply contract for Woolworths (Safeway) supermarkets in August 2000 significantly increased the volume of Victorian milk sourced from the Dairy Farmers cooperative.

In Queensland, Parmalat and Dairy Farmers are market leaders with Norco and National Foods holding minor market shares. National Foods is the leading processors in Tasmania, South Australia and Western Australia with Betta Milk (Tasmania), Dairy Farmers (South Australia) and Peters and Brownes (Western Australia) providing the bulk of additional fresh milk in those States.

Table 4.11 Percentage of milk processing facilities by State (1998)

State	Share of Australian milk processing facilities (%)
New South Wales	35.6
Victoria	27.4
Queensland	12.3
South Australia	8.2
Western Australia	5.5
Tasmania	5.5
Australian Capital Territory	2.7
Northern Territory	2.7

Source: IBIS Business Information, 2000.

As the quality of milk steadily deteriorates with time, dairy processors require access to raw milk supplies within reasonable proximity to milk processing factories. In turn, these factories must be located in areas from which major consumer markets can be easily serviced with packaged fresh milk products. This is in contrast to manufacturing milk operations where considerations such as proximity to market and ex-factory transportation distances are much less important. Milk-processing facilities are therefore generally situated in the dairying districts located nearest to metropolitan cities and large regional centres.

National milk brands have emerged in recent years as milk processors seek to maximise marketing and distribution synergies across State boundaries. The tendering of contracts for generic-labelled milk by supermarket chains has provided additional incentive for leading milk processors to expand their capacity to supply milk to a broad

range of geographical markets. Because the growth in per capita consumption of milk is relatively flat, there have been competitive pressures within the sector to reduce costs by minimising excess processing capacity.

4.3.3 Special role of dairy cooperatives in the processing sector

Over 75 per cent of all Australian milk is controlled by farmer cooperatives (refer table 4.10). Dairy cooperatives guarantee acceptance of all milk produced by supplier–members thus providing a secure outlet for farmgate milk supplies. Producer cooperatives can also reward members through payment of dividends on shares; potential increases in the capital value of producer shareholdings over time; and provision of farm services to supplier–members. The average equity of supplier–shareholders in Australian dairy cooperatives is estimated at about one-fifth the value of their capital investment at the farm level.[39]

While increases in cooperative milk prices enable dairy farmers to undertake additional on-farm investment or retire debt, raising milk prices often comes at the expense of deployment of capital at the factory level. This can potentially dilute overall returns to farmers in the longer term if deployment of capital at the factory level would have been more profitable. Transparent and sustainable pricing policies are particularly important for dairy cooperatives seeking to maximise the value of vertically integrated supply chains that extend from the farm to the point of wholesale distribution. By providing accurate pricing signals, additional milk that is channelled into low-value product lines would most likely be only produced by dairy farmers that can do so at a profit. In contrast to policies of price averaging of milk payments across all farms and supply quantities, this should lead to greater efficiencies in the milk supply chain and optimise returns to both farming and processing activities.

Dairy cooperatives are seen as providing benchmark prices for raw milk that serve to partially discipline the farmgate pricing policies of proprietary companies. A recent study by the United Dairyfarmers of Victoria (UDV) found that farmers can derive considerable advantage from having ownership in the transformation of their milk to bulk dairy products via cooperative marketing arrangements.[40] Dairy cooperatives allow milk to be collectively marketed by farmers in tradeable form, partially overcoming the otherwise weak bargaining power of farmers at the farmgate due to the perishability of milk.

4.3.4 Pricing of raw milk

Payment of Australian milk is generally based on protein and milk fat levels. Adjustments for bacterial composition may also be made depending on milk quality. On average, milk comprises around 3.0 to 3.3 per cent protein by volume and around 3.8 to 4.4 per cent milk fat with actual levels varying according to breed of cattle, seasonal conditions and time of year. In contrast to the price averaging policies of the past, most dairy companies now structure their milk payment systems to reflect the ex-

39 United Dairyfarmers of Victoria, Dairy Co-operative Opportunities, Policies and Structures, July 2000, p. 21.

40 ibid.

factory value of different intake volumes of milk supply. Dairy companies typically pay set prices for specified volumes of raw milk from each supplier with surplus milk being paid at rates that fluctuate according to the spot price of milk.

Incentives may also be offered for supply of non-seasonal milk to optimise the production capacity of factories or to meet year-round demand for perishable products such as fresh milk.

While fresh milk is essentially non-traded, the threat of increased exports of manufacturing milk products from New Zealand acts to discipline prices paid for manufacturing milk in Australia. In a deregulated market, manufacturing milk prices are likely to influence farmgate pricing of market milk in most dairying districts where manufacturing milk is available for redirection into fresh milk lines. In this way, changes in the world price of manufacturing milk are likely to impact to some degree on the prices paid by milk processors for market milk in most regions of Australia.

4.3.5 Allocation of Australian milk

The gross value of production of the Australian dairy industry in 1999–2000 was around $2.8 billion at the farmgate.[41] Measured ex-factory, industry output was estimated at nearly $8 billion.[42] A largely saturated domestic market for dairy products means that annual increases in national milk production must be channelled into export markets. Australia exports around 50 per cent of its annual milk production and around 65 per cent of its annual output of manufactured dairy products. Due to the slow rate of domestic growth in market milk sales, attributed to largely stable liquid milk consumption of around 103 litres per capita over the past decade,[43] the proportion of milk directed to market milk has steadily decreased as a percentage of total milk output.

Table 4.12 Trends in Australia's milk production and export growth

Year	Manufacturing milk (million litres)	Market milk (million litres)	Gross value of farmgate production ($A)	Value of exports ($A)
1997	7116	1920	2811	1779
1998	7521	1919	2817	1937
1999	8247	1931	2900	2257
2000 (p)	8915	1932	2853	2439
2001(f)	9084	1982	2752	3306

Source: ADC and ABARE, compilation

Note: (p) preliminary estimate. (f) forecast.

41 ABARE forecast.

42 ADC, Dairy Compendium 2000, p.5.

43 ibid., p. 29.

The milk processing sector produces packaged liquid milk largely for the domestic market and accounts for about 0.1 per cent of Australia's gross domestic product.[44] The processing milk sector is dominated by Dairy Farmers, Pauls Parmalat and National Foods which together account for over 90 per cent of Australian market milk. Around 23 additional milk processors supply fresh milk at the state and regional levels. Since deregulation, a small number of micro-processors have also developed niche markets by bottling milk on-farm for local sale under private labels.

4.3.6 Supply of market milk

Unlike manufacturing milk that is directed into non-perishable product lines, milk for the fresh drinking market cannot be stored without spoilage. Market milk must therefore be supplied year-round and is subsequently more costly for dairy farmers to produce. Farmers are therefore usually paid higher prices for constant year-round volumes of milk. Alternatively, some processors pay premium prices on those quantities of milk supplied out-of-season.

High transportation costs and the perishability of fresh milk generally mean that processing facilities are situated near major markets. Many milk processors have made considerable capital investments in state-based milk processing facilities. These investments would be foregone should local farms cease to supply sufficient quantities of milk to justify the continuation of factory operations. Provided consumers are prepared to pay the necessary premium for fresh milk and technology advances do not increase the distances milk can be transported, processors will continue to require a reliable supply of market milk sourced from areas in reasonable proximity to drinking milk markets. Consequently, farmers will have to be paid a sufficient return to guarantee supplies of this milk.

However, while market milk is likely to continue to be produced within reasonable proximity to drinking markets, there may be an aggregate shift in manufacturing milk production to lower cost dairying districts over time. This would also lead to a corresponding shift in the location of dairy manufacturing plants to those regions where dairy farmers are able to competitively produce raw milk at export prices.

4.3.7 Demand for processed milk

There continues to be strong consumer demand for fresh milk products even though the heat treatment of milk has enabled the development of products with extended shelf-life such as UHT and long-life milks. Nevertheless, the concentration in the supermarket sector combined with the excess capacity within the dairy processing sector and the importance of supermarket contracts to processor turnover imposes demand conditions on the processor sector which limit their capacity to influence pricing outcomes.

As milk is essentially a homogenous product and milk labels are only weakly differentiated, retailers can switch demand to a different processor without risking a consumer backlash. Milk processors would appear to have limited capacity to protect sales of branded milk from aggressive price discounting of supermarket generic-

44 Refer IBIS business report.

labelled milk. Consequently processor bargaining power and therefore ability to influence price is weak. The aggressive tendering by processors for supermarket contracts following deregulation showed the competition within the industry as processors sought to build market share and reduce excess processing capacity in the deregulated market. Also by tendering for generic milk contracts, supermarkets are provided with knowledge of processor cost structures and the associated value of proprietary brands. This information is likely to be useful to supermarkets in contract negotiations.

In the route trade, where processors have often developed long-term relationships with buyers, processor bargaining power is much greater. Processors often offer rebates to corner stores based on volumes of sales turnover. This encourages corner stores to maintain pricing that is broadly competitive with supermarkets given a 'convenience premium' for corner store location and access.

The margins on flavoured milk are high in comparison to white milk. The majority of flavoured milk is sold through traditional corner stores and convenience stores with supermarkets accounting for only a very small proportion of total sales. This allows milk processors to have greater influence over price negotiations because overall sales revenue is less affected by the loss of sales contracts to any individual retailer. This also applies to the modified and specialty milks that attract stronger brand premiums due to greater product differentiation.

4.3.8 Barriers to exit and entry for milk processors

Milk processing is capital intensive and characterised by economies of scale. Given existing excess capacity in Australian milk processing factories and stagnant per capita consumption of liquid milk, industry participants can be expected to adopt aggressive pricing strategies should new players enter the national drinking milk market.

Establishment or acquisition of a viable distribution network provides the most significant entry barrier. New entrants would generally require a strong presence in both the grocery and route trades to gain maximum leverage from dairy brands. This can be achieved by owning a wholesale supply network or contracting-out distribution. However, both options require significant capital. Even if suitable distribution channels are available, exclusive supply contracts at the retail level may mean that access to supermarket shelf-space for branded products is limited.

Supplying milk to supermarkets for sale under generic labels may avoid advertising and marketing costs. However, access to a broad distribution network would still be required to service a geographically diverse range of supermarket stores. Recent growth in the generic milk market has made this option more attractive.

With a highly saturated drinking milk market, new entrants would generally require complementary dairy dessert and yoghurt businesses to maximise economies of scale, particularly in distribution. While there is greater potential to grow niche markets for soft-dairy products, market entry would require the purchase of brands or capital-intensive brand building. Economies of scale and scope for soft-dairy products are significant and demand high levels of start-up capital coupled with on-going investment in technology.

In contrast to the high entry barriers for the national milk market, entry to local niche markets for fresh milk supply is much lower. In these markets distribution is less problematic and local brands have strong appeal to consumers in regional dairying communities. Accordingly, a small number of micro-processors have recently started bottling milk on-farm for sale through small local retail outlets.

Barriers to entry into the UHT milk market are lower than for fresh milk although considerable levels of initial capital investment are required. Long life milk can be stored allowing it to be distributed to supermarket shelves through existing grocery distribution channels. Most UHT milk is sold through supermarkets avoiding the development of costly distribution networks required for delicatessens, milk bars and traditional corner stores. UHT milk is much more amenable to transportation allowing production in low cost dairying regions and market growth opportunities through the development of exports.

The capital intensive nature of milk processing lends itself to high exit barriers as equipment used for milk processing has limited alternative uses. Since the deregulation of the dairy industry on 1 July 2000, there has been much industry speculation concerning the possible rationalisation of the milk processing sector.

4.3.9 Efficiency and productivity changes in the processing sector

Milk processors have little scope to grow the overall milk category therefore profitability of the sector is partially dependent on the ability to produce and market innovative products for which there is strong demand. Considerable changes in the areas of packaging, distribution and processing technologies have occurred. Cardboard cartons and plastic containers have replaced glass bottles while demand for increased pack sizes, such as the 3-litre pack, has led to the design of new milk containers.

In terms of adoption of technologies in the processing sector, such as those relating to milk pasteurisation and homogenisation, Australian dairy companies are generally believed to be comparable to overseas processors. However, Australian technologies for modified milks are generally considered superior when compared internationally.[45]

Improvements in transport systems and changing patterns of farm production have led to a rationalisation in the overall number of milk processing factories. This has reduced excess capacity for many processors and generally lowered fixed processing costs for milk. In recent years there has been a trend toward developing national dairy brands to capture marketing efficiencies as regulations governing milk sourcing, storage, distribution, pricing and retailing have gradually been dismantled by State Governments. Some processors have also sought economies of scope by distributing other beverages, yoghurts and dairy desserts through their wholesale supply networks. The national tendering for supply of generic-labelled milk to supermarket chains has further encouraged the development of a national market for the supply of fresh milk. This is particularly the case given supermarkets typically demand that prospective tenderers have the capacity to supply fresh milk products to a wide geographical range of stores.

45 IBIS Business Information Pty Ltd 2000, p. 14

4.3.10 Profitability of the processing sector

While a number of measures of profitability can be used to analyse financial performance, the following assessment of the profitability of the milk processing sector was made using three standard indicators: operating profit to sales ratio; operating profit to total assets ratio; and operating profit to total shareholders' equity ratio.[46]

These ratios are useful not only in analysing the apparent financial strength or weakness of individual companies, but also for comparing companies within an industry and between related industries. For this study it was considered appropriate to compare the Australian processing industry with a comparable industry in Australia (juice manufacturing was chosen) as well as appropriate international benchmarks.

Juice manufacturing was selected as an appropriate benchmark industry because a number of dairy processing firms are involved in the production of fruit juice. Also, these two industries have similar technologies — for example, both products require pasteurisation, packaging may be similar, and product may be delivered via similar distribution systems. International milk processors were selected from countries with industries that had attained a similar level of development to that in Australia. Selection was also based on the level of public information available and whether milk processing was separately identifiable in financial reports.

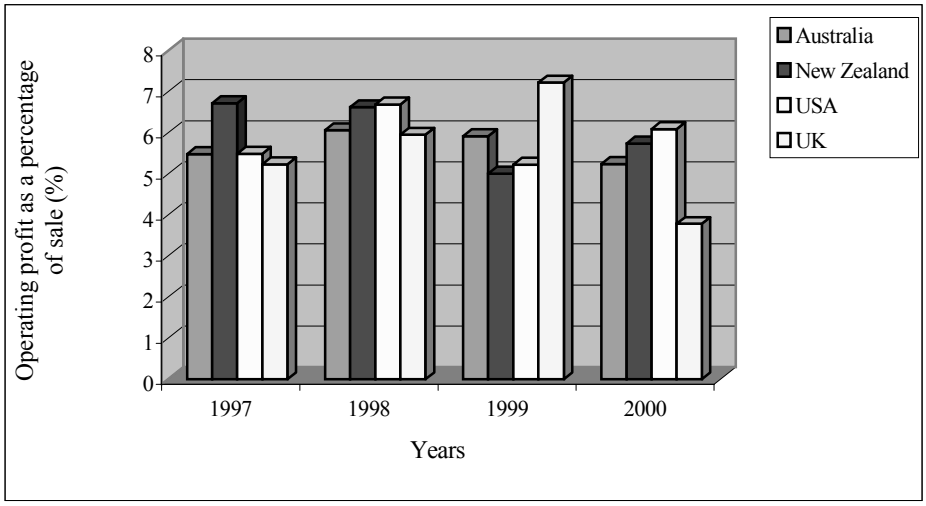
Benchmark comparisons should be seen as indicative. In this respect, they have been used in this analysis to give some context to the understanding of the profitability of the milk processing sector. The following broad conclusions can be drawn from analysing financial performance ratios for milk processing companies.

Return on sales

The operating profit to sales ratio for Australian milk processors remained relatively constant over the period 1997 to 2000 at around 5 to 6 per cent, despite a slight decline in 2000.

46 PricewaterhouseCoopers was commissioned to report on this issue and the analysis presented here is taken from that report. In the following analysis operating profit does not include tax. Tax is subject to timing and other abnormalities and may change over time (e.g: carrying forward losses, accelerated depreciation, investment allowances, etc.). Interest is removed to make the ratios insensitive to financing methods. Operating profit is also presented before abnormal items. Appendix 3 provides an explanation of these ratios and a detailed description of the relevant data.

Figure 4.2 Return on sales for the milk processing sector



Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

While Australian processors avoided the fluctuations experienced by other countries, the Australian average operating profit ratio was not the highest of the countries analysed. Nevertheless, in comparison with Australian juice processors, ratios for milk processors were significantly higher (see table 4.13).

Table 4.13 Return on sales for Australian milk processors compared with juice processors (%)

Return on sales	1996 (%)	1997 (%)	1998 (%)	1999 (%)	2000 (%)
Average for milk processors	5.00	5.48	6.06	5.92	5.24
Average for juice processors	0.81	2.03	3.88	-0.19	n/a

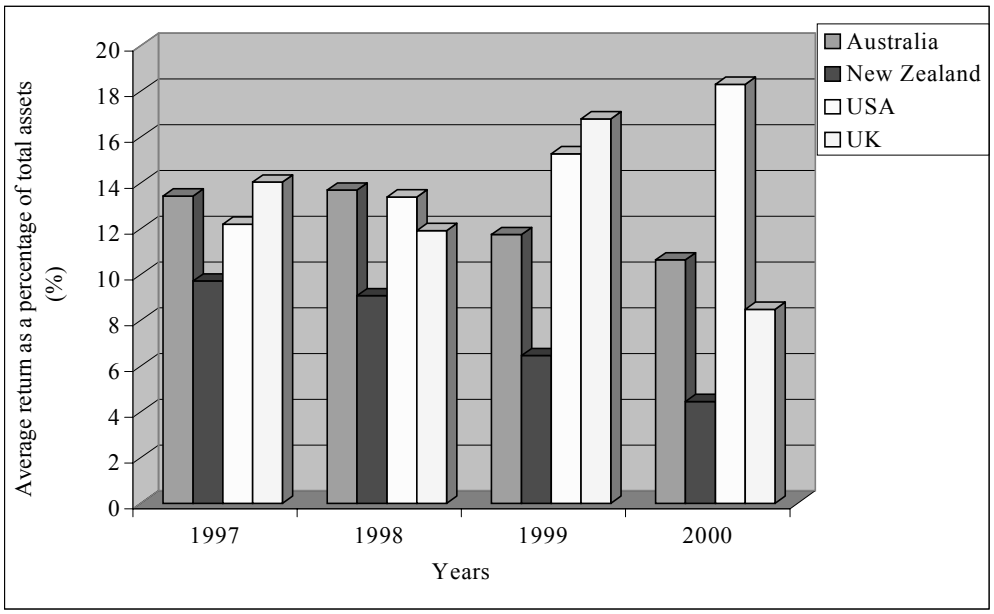
n/a — not available

Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

Return on assets

Of the countries examined, the Australian milk processors collectively generated the most consistent average return to total assets ratio between 1997 and 2000. This included the highest average return to total assets ratio in 1998. However, since 1998 the Australian return on assets has declined, consistent with the trend experienced by New Zealand. This trend is in contrast to that generated in the USA, where the ratio has continued to increase over the period to produce the highest return on assets of the countries analysed in 2000. Australian milk processors generated a better return on assets than Australian juice processors over the period. Australian juice processors displayed a high level of fluctuation and a significant decline from 1998.

Figure 4.3: Return on assets for the milk processing sector



Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3

Table 4.14 Return on assets for Australian milk processors compared with juice processors (%)

Return on assets	1996 (%)	1997 (%)	1998 (%)	1999 (%)	2000 (%)
Average for milk processors	11.02	13.43	13.69	11.74	10.64
Average for juice processors	1.34	3.37	6.52	-0.29	n/a

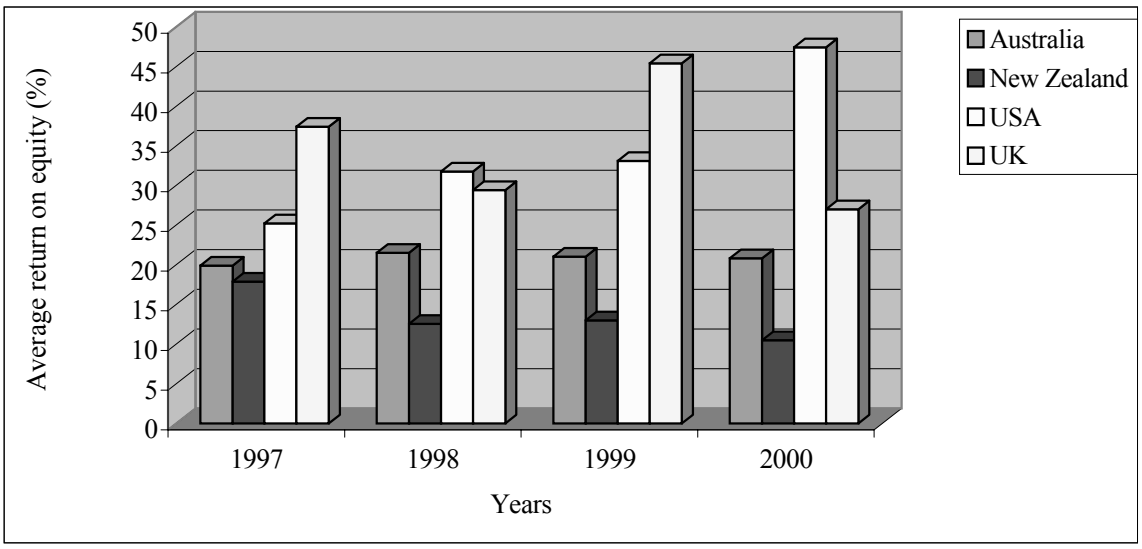
Note: n/a — not available

Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

Return on equity

The average return to equity ratio for Australian milk processors remained relatively constant from 1997 to 2000. In general, Australian milk processors generated a lower average return to equity ratio than milk processors in the USA and the United Kingdom, but a higher average return to equity ratio than milk processors in New Zealand. Australian milk processors generated a higher average return on equity than Australian juice processors.

Figure 4.4 Return on equity for the milk processing sector



Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

Table 4.15 Return on equity for Australian milk processors compared with juice processors (%)

Return on equity	1996 (%)	1997 (%)	1998 (%)	1999 (%)	2000 (%)
Average for milk processors	18.62	19.89	21.51	21.04	20.81
Average for juice processors	2.75	6.93	12.52	-0.66	n/a

Note: n/a — not available

Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

From these comparisons, it can be seen that Australian processors have experienced a relatively consistent financial performance over the period from 1997 to 2000. In contrast, New Zealand has displayed a declining trend over this period, while the USA has exhibited an increasing and higher profitability than that generated by Australian processors. Based on the three ratios analysed, processors in the United Kingdom generated either comparable or higher profit ratios than those of Australian processors. However, in 2000, milk processors in the United Kingdom experienced a sharp decline in profitability.

In all instances where profit ratio analysis was employed, the financial performance of Australian milk processors was more consistent than that experienced by juice processors, which tended to show a high level of fluctuation in their profit levels. Profitability of Australian milk processors was also significantly higher than Australian juice processors.

4.4 The milk retailing sector

4.4.1 Demand for milk

Fresh milk has few direct substitutes aside from soy milk. However, milk is essentially a weakly-differentiated product that is largely consumed in conjunction with products such as breakfast cereal, tea and coffee. The overall volume of milk sold to consumers is unlikely to significantly increase unless consumption of these complementary goods also increases.

Factors affecting consumer demand for fresh milk include: taste, price relative to substitutes such as soy and long-life milk products,[47] marketing strategies, general health perceptions of dairy products, and to some degree, household income. In contrast, flavoured milk is subject to competition from other beverages such as soft drinks, fruit juice and sports drinks but can generate greater brand premiums on the basis of product differentiation. As per capita milk consumption has been relatively stable over the past decade at around 103 litres per annum, growth in the value of liquid milk sales has reflected population increases, moderate price rises across all milk categories and a switch to higher-priced modified and specialty milks.

Dietary and nutritional perceptions have the potential to shift demand and may precipitate switching to milks marketed on the basis of health benefits. The advantages of dairy products in addressing calcium deficiencies and preventing degenerative bone disease such as osteoporosis have supported the sale of differentiated milk products at the expense of wholemilk sales as is indicated in table 4.16. Sales of drinking yoghurt have also increased in recent years in line with the general growth of the yoghurt market, which grew by about 30 per cent between 1995 and 2000.

Table 4.16 Australian milk consumption by category (million litres)

Year ending 30 June	Plain	Reduced	Low-fat	Flavoured	UHT	Other	Total
1995	1217	332	111	143	77	14	1894
1996	1195	336	113	146	94	20	1904
1997	1163	352	120	160	104	21	1920
1998	1125	359	130	163	122	19	1918
1999	1111	358	141	169	131	20	1930
2000	1078	353	144	170	170	21	1936

Source: ADC, 2001.

Note: Figures include all pack sizes and both generic and processor brands.

47 Price elasticity of demand for milk is –0.15 (Industry Commission, Australian Dairy Industry, Report no. 14, AGPS, Canberra, 1991).

In international terms, Australia accounts for around 13 per cent of milk traded on the world market,[48] even though Australian milk production represents less than 2 per cent of world milk output. Exports of liquid milk products, largely to Asian markets, have grown steadily in recent years from a small base. Over two-thirds of liquid milk exports comprise UHT products. The food services sector, which includes the hotel trade, represents a considerable proportion of this expanding market.

On the import side, Australia imported 3201 tonnes of liquid milk in 1998–99, a rise of 23 per cent over the previous year. The overwhelming majority of this milk came from New Zealand with most of this product being UHT milk for the Australian food services and consumer markets.

4.4.2 Demand characteristics associated with the different outlets for milk

Milk is typically sold in Australia via supermarkets, convenience stores and traditional corner stores. A small volume of milk is still home delivered although milk sold in this way has declined significantly in recent decades. As is indicated in table 4.16, plain white milk is the dominant milk category in Australia accounting for 56 per cent of total milk sales in 2000. Reduced fat (18 per cent in 2000), UHT, (9 per cent), low-fat (7 per cent) and flavoured (9 per cent) represent other leading categories of milk. Total liquid milk sales were estimated at over 1930 million litres in 2000 representing approximately 18 per cent of Australian milk production.

Table 4.17 Annual volume of national milk sales by retail outlet and category (million litres)

Year	Retail outlet	Milk category						Total
		Plain white	Reduced-fat	Low-fat	Flavoured	UHT	Other	
1998	Supermarket	467	181	70	28	106	18	871
	Other	658	179	60	135	16	1	1048
1999	Supermarket	455	170	86	31	114	17	873
	Other	656	188	55	139	17	3	1057
2000	Supermarket	458	169	95	34	139	16	910
	Other	620	184	49	136	31	5	1026

Source: ADC compilation of years

Note: Figures for year to 30 June.

The fresh milk retailing market is highly differentiated because consumers demand milk on a regular basis with milk products having to be readily available. Milk retail prices vary in accordance with the different cost structures of various food retailing formats. Consequently, consumers prepared to purchase 3-litre packs of generic-

48 Excludes intra-European trade.

labelled milk from supermarkets will typically pay less on a per litre basis than they would for the purchase of 1-litre branded milk products from corner stores near their home.

In contrast to fresh milk, more than 85 per cent of UHT milk is sold through supermarkets while most flavoured milk is sold through convenience and corner stores. From 1 July 2000, a Goods and Services Tax of 10 per cent was levied on flavoured milk, drinking yoghurt and fermented yoghurt but not on other liquid milk products.

4.4.2.1 Convenience and corner stores

In recent years the volume of fresh food products sold through convenience outlets has expanded rapidly with the introduction of food and grocery stores at service stations. The location of service stations on prime sites and the frequency of fuel purchases by motorists has allowed petrol companies to capture an increased share of the retail milk market. Other types of convenience outlets include chain stores such as 7-Eleven. Many convenience stores operate under franchise arrangements with centralised purchasing operations. The availability of short-life products such as milk, bread and newspapers often attract consumers to convenience stores providing proprietors with the opportunity to sell additional discretionary items that attract higher margins.

Traditional corner stores include milk bars, takeaways and delicatessens and are generally small independent businesses. Corner stores provide milk processors with an extensive retail network for marketing their branded milk products. Accordingly, processors often sponsor store signage and sometimes assist with refrigeration costs. While processors have established their own distribution systems in many areas, a considerable number of corner stores are still serviced by independent milk vendors. Wholesale prices are generally fairly standard within milk distribution areas with rebates sometimes offered to stores with high volumes of milk sales. Occasionally wholesale prices may be discounted for short periods of time in response to competition from other wholesale distributors or local milk retailers.

Distribution costs are more expensive in the route trade and many corner stores have relatively small turnovers from which to recoup fixed overheads such as wages, rent, electricity and business administration costs. As a result, individual products bear a higher proportion of general business costs than items sold through stores with high turnover. Milk is generally more expensive when purchased in corner stores but many consumers have a preference for convenience. Milk processors have an interest in the financial health of corner stores given the importance of these outlets in marketing processor milk brands.

4.4.2.2 Supermarkets

As indicated in table 4.17, sales of milk through supermarkets have increased in recent years from 45.3 per cent of all milk sales in 1998 to 47.0 per cent of total milk sales in 2000. The three largest supermarket chains, Woolworths, Coles and its subsidiary Bi-Lo, and Franklins, hold more than 80 per cent of the packaged grocery market (see table 4.18) compared with about 45 per cent some 20 years earlier.[49] While the supermarket chains dominate sales of grocery items, supermarkets account for only

49 'Turbulent year marked by internal and external change', *Retail World*, vol. 53, no. 24, December 2000, p. 21.

about half of all milk sold in Australia. Supermarkets must offer attractive prices to overcome the convenience advantages of other retail outlets.

Table 4.18 National market shares of Australian grocery retailers

Supermarket chain	Market share to Sept 2000 (%)	Market share to Sept 1999 (%)	Annual share point change (%)
Woolworths	37.0	35.9	+1.1
Coles	27.2	26.7	+0.5
Franklins	12.5	13.4	-0.9
Metcash	12.0	13.0	-1.0
Bi-Lo	5.7	5.3	+0.4
FAL	3.7	3.8	-0.1
AIW	1.7	1.7	0.0
Others	0.2	0.2	0.0

Source: *Retail World*, 2000.

Note: Figures exclude fresh meat, fruit and vegetables, delicatessen and bakery products. Metcash was formerly Davids and services the majority of independent retailers in the eastern states of Australia. Metcash figures are based on warehouse withdrawals and include Campbells Cash and Carry. Bi-Lo is a subsidiary of Coles Myer and its figures include Newmarket stores in Western Australia. FAL figures include Action supermarkets.

Supermarket sales of milk on a state basis, which is shown in table 4.19, generally mirror population demographics.

Table 4.19 Annual volume of total milk sold in supermarkets by State (million litres)

Year	NSW	VIC	QLD	SA	WA	TAS	AUST
1998	257	244	170	111	69	19	871
1999	261	235	174	112	72	19	873
2000	273	245	185	114	74	20	910

Source: ADC, 2001.

With the recent entry into the Australian market of Aldi, the German discount supermarket chain, the pricing of staple goods such as milk may be central to any subsequent battle for market share. When Aldi opened its first Australian stores in New South Wales in January 2001, 2-litre packs of milk were retailing at $1.89 compared to $2.16 for generic-labelled milk sold in other supermarket chains.

4.4.3 Pricing strategy between retailers

Controls on retail milk prices were removed over the last decade with Queensland the last State to abolish regulated retail pricing of milk from 1 January 1999 (see chapter 2). Retail price deregulation led to increased branding and enhanced product

differentiation as well as higher retail prices for liquid milk. Milk prices have tended to be higher in recent years in States such as Victoria and Western Australia that removed post-farmgate controls earlier than States such as Queensland and New South Wales. Between 1995 and 2000, retail prices for plain white milk increased by an average of 27.9 per cent nationally against an increase in the consumer price index of 8.6 per cent.[50] This may reflect the fact that post-farmgate pricing controls kept milk prices at levels below those that would otherwise have applied in a competitive market. It appears that retail price controls inhibited development of product innovations such as modified and specialty milk products as processors were constrained by regulation from benefiting from the marketing of these value-added products.

In recent years supermarkets have developed a range of generic-labelled products to compete with the brands. Generic products are typically less expensive and do not generally require the support of advertising and promotion expenditures (see table 4.20).

Table 4.20 Annual average prices of milk sold nationally in supermarket by label ($/litre)

Milk category	Year ending 30 June 1998		Year ending 30 June 1999		Year ending 30 June 2000	
	Branded	**Generic**	**Branded**	**Generic**	**Branded**	**Generic**
Fresh milk						
Wholemilk	1.23	1.20	1.26	1.22	1.34	1.26
Fat modified	1.42	1.19	1.47	1.34	1.56	1.38
Flavoured	2.35	n/a	2.45	n/a	2.42	n/a
Total fresh milk	**1.35**	**1.20**	**1.40**	**1.24**	**1.24**	**1.28**
UHT milk						
UHT wholemilk	1.18	0.86	1.21	0.91	1.23	0.94
UHT fat modified	1.12	0.86	1.19	0.91	1.24	0.94
UHT flavoured	2.14	n/a	2.21	n/a	2.45	n/a
Total UHT milk	**1.23**	**0.86**	**1.28**	**0.91**	**1.33**	**0.94**

Source: ADC, compilation of years

Note: n/a — product not sold. Prices include all pack sizes.

As table 4.21 indicates, sales of generic-labelled milk have grown steadily in the past few years with this trend recently accelerating.

50 The increase in retail price of plain white milk was calculated using a weighted national average milk price for 1-litre units sold in supermarkets. Average prices for 1 litre units of milk sold in supermarkets for metropolitan areas were sourced from the ABS (Source: ABS, *Average Retail Prices of Selected Items*, cat. no. 6403.0). Weighting was based on state proportions of national population (Source: ABS, *Australian Demographic Statistics*, cat. no. 3101.0). Metropolitan prices were used as proxies for state milk prices.

Table 4.21 Annual volume of milk sold nationally in supermarket by label (million litres)

Milk category	Year ending 30 June 1998		Year ending 30 June 1999		Year ending 30 June 2000	
	Branded	Generic	Branded	Generic	Branded	Generic
Wholemilk	375 (78.5)	103 (21.5)	365 (77.3)	107 (22.7)	339 (71.5)	135 (28.5)
Fat modified	246 (98.8)	3 (1.2)	239 (93.0)	18 (7.0)	241 (90.9)	24 (9.1)
Flavoured	27 (100.0)	0 (0.0)	31 (100.0)	0 (0.0)	34 (100.0)	0 (0.0)
UHT wholemilk	23 (41.8)	32 (58.2)	24 (40.7)	35 (59.3)	29 (39.7)	44 (60.3)
UHT fat modified	27 (61.4)	17 (38.6)	30 (60.0)	20 (40.0)	35 (58.3)	25 (41.7)
UHT flavoured	5 (100.0)	0 (0.0)	5 (100.0)	0 (0.0)	6 (100.0)	0 (0.0)

Source: ADC, compilation of years

Note: Years to 30 June. Wholemilk includes plain white milk and specialty milk; fat modified milk includes low and reduced-fat products. Percentage of total category sales is indicated in brackets.

Table 4.22 shows that sales of generic-labelled products represented nearly 22 per cent of the total value of supermarket sales of white milk in the year to September 2000. While this was less than the value of sales of milk brands owned by National Foods (Pura brand) it was more than the value of sales of the other major Australian milk processors — Dairy Farmers and Parmalat. Supermarkets can increase their profits by positioning products and managing stocking rates in a manner that subtly directs consumers to items with higher retail margins. Here it should be noted that many generic-labelled products have comparatively high retail margins despite low price tags.

Table 4.22 Market shares of white milk brands sold in Australian supermarkets by value and volume (Sept 1999 – Sept 2000)

Brand proprietor	Value share (%)	Annual share point change (%)	Volume share (%)	Annual share point change (%)
Private labels/ generics	21.7	+4.7	23.8	+5.8
National Foods	28.7	+1.7	28.5	+1.5
Dairy Farmers	17.8	-2.2	16.6	-2.4
Parmalat	16.5	+2.5	16.2	+2.8
Industry brands	8.0	n/a	7.6	n/a
Others	7.3	n/a	7.3	n/a

Source: *Retail World*, 2000.

Figures include all categories of white milk.

n/a — not reported as a separate category in the previous year.

On 15 August 2000 Woolworths announced new milk prices for its generic-labelled milk (Safeway and Woolworths labels). The new prices, representing significant savings on previous prices, became effective immediately and signalled the first time that a retail chain had set national prices for 1, 2 and 3-litre packs of milk. These new prices followed the announcement of two-year supply contracts, which had previously been offered to tender and attracted aggressive bidding from milk processors. Following Woolworths' announcement of its new milk pricing structure, Coles, Franklins and IGA (Independent Grocers of Australia) each announced that they would match Woolworths' lower milk prices for their respective private labels. Table 4.24 indicates the new national prices for generic-labelled milk.

Table 4.23 Standard national supermarket prices for generic labelled milk introduced from August 2000

Pack size	New price	Maximum reduction*
1-litre	$1.19	27 cents
2-litre	$2.16	74 cents
3-litre	$2.94	90 cents

Source: Woolworths

Note: * Based on the previous price of the same milk product in the highest-priced State.

It is understood that lower prices were used as a strategy for competing against the convenience advantages offered by smaller outlets. The impending entry of Aldi into Australia may have also influenced this pricing policy.

Should supermarkets be successful in encouraging greater sales of discounted 3-litre milk containers they could also be expected to capture a significant amount of high-margin discretionary expenditure at the expense of convenience stores such as 7-Eleven. Industry sources suggest that the average additional spending by consumers visiting convenience and corner stores to buy milk, bread or newspapers is roughly around $9. However, supermarkets face a considerable challenge in countering a growing trend towards convenience shopping. Long queues and parking congestion often provide a disincentive for consumers to shop at supermarkets, particularly when only a small number of items are required.

The move by the supermarket chains to lower the price of generic-labelled milk has placed significant competitive pressure on retail prices of the branded milk products controlled by milk processors. Consequently, price discounting spread to convenience and corner stores. Although retail margins on milk sold in traditional corner stores are tight, milk plays a major role in attracting customers who then typically make other purchases.

4.4.4 Profitability of the supermarket sector

To understand the profitability of the Australian food and grocery sector at retail level, a similar study to that undertaken for the Australian milk processing sector was conducted.[51] Appendix 3 provides further details on the methodology that was employed to undertake this analysis. In addition to analysing Australian food and grocery retailers according to the three standard measures of profitability, some international benchmarks were established to provide context to the Australian profitability ratios.

However, international benchmarks are invariably constrained, especially in terms of data compatibility. Although operating profit figures for the supermarket operations of Coles Myer Limited and Woolworths Limited are available, they are not consistent with other accessible figures which are based on the entire operations of the company.[52] As a result, the ratio analysis conducted in this report uses figures generated by the entire operations of each company. The following broad conclusions can be drawn using the three financial performance ratios.

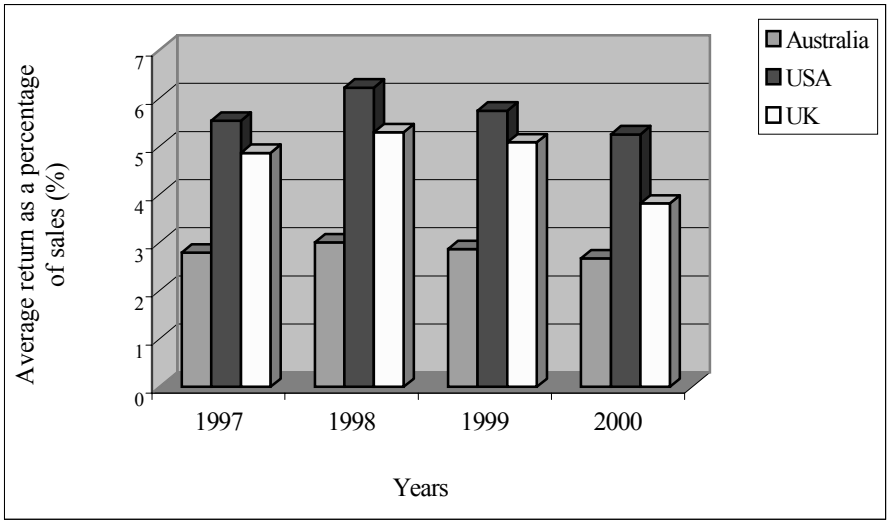
Return to sales

Figure 4.5 indicates that the average return to sales ratio for Australian retailers, USA retailers and United Kingdom retailers showed a similar annual trend. In general, Australian retailers generated a significantly lower average return to sales ratio than retailers in the USA and the United Kingdom from 1997 to 2000.

51 This analysis is also based on a report conducted by PricewaterhouseCoopers.

52 The supermarket operations of Coles Myer Limited include figures for the Red Rooster fast food chain. In addition, the supermarket operations of Coles Myer and Woolworths Limited also include the sale of liquor. The operating profit ratios of the supermarket operations of Woolworths are considerably higher than those for its total company operations. However, the operating profit ratios for Coles Myer of both its supermarket and total company operations are relatively similar. As Franklins Limited operates entirely as a supermarket, there are no changes to its operating profit ratios.

Figure 4.5: Return on sales for major food retailers



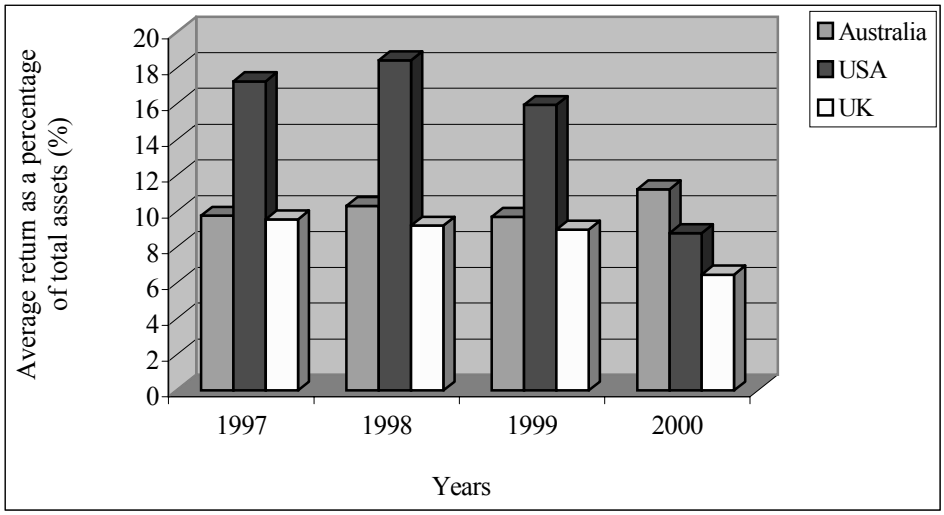
Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

Return on assets

Australian retailers generated a significantly lower average return to total assets ratio than retailers in the USA, but consistently generated a higher average return to total assets ratio than retailers in the United Kingdom.

Figure 4.6 shows that different trends were generated within the three countries analysed. While Australia displayed a slight increase in its return on total assets from 1997 to 2000, by the end of this period it was outperforming the USA, which experienced a sharp decline in 2000. The United Kingdom generated the lowest return on total assets over the period.

Figure 4.6: Return on assets for major food retailers

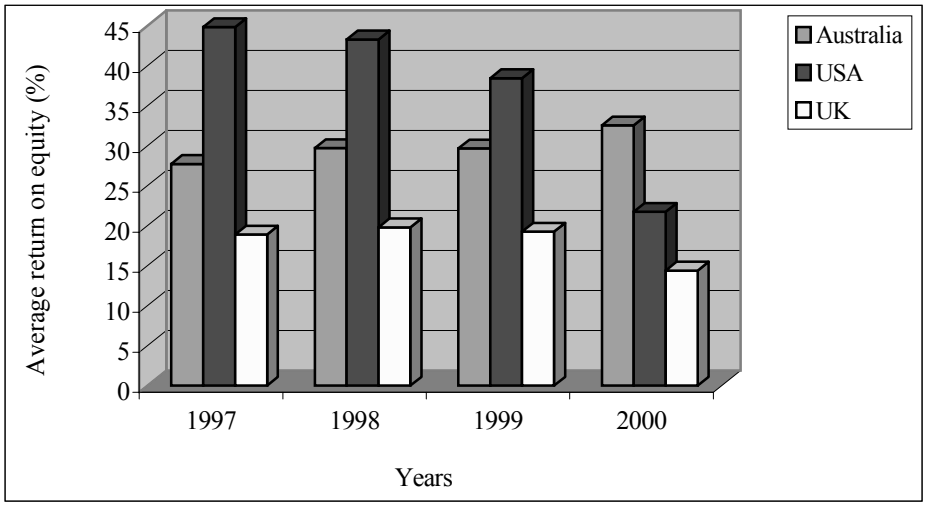


Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

Return on equity

Australian retailers generated a lower average return to equity ratio than retailers in the USA, but a higher average return to equity ratio than retailers in the United Kingdom. Figure 4.7 illustrates varying trends for the three countries analysed. Australia showed a slight increase in its return to equity ratio from 1997 to 2000 and by the end of this period was outperforming the USA, which displayed a dramatic decline in 2000. The United Kingdom showed the lowest return to equity ratio from 1997 to 2000.

Figure 4.7: Return on equity for major food retailers



Source: Analysis by PricewaterhouseCoopers. Data as set out in appendix 3.

In summary, Australian retailers displayed a significantly lower return based on sales, assets and equity when compared with retailers from the USA. In contrast, Australian retailers displayed a lower return on sales than retailers in the United Kingdom, but a higher return based on assets and equity. The profitability of Australian retailers and international retailers declined from 1998.

4.5 Conclusion

The deregulation of farmgate prices completes the lengthy process of deregulation within the Australian dairy industry. The dynamics of the industry have undoubtedly been altered although the impact of these changes is yet to be fully played out. Before July 2000 farmer prices for market milk were protected. After July 2000 the bargaining position of dairy farmers became subject to a set of new circumstances.

Individual dairy farmers are undoubtedly weak sellers and they have a limited capacity to influence price. Nevertheless, not all bargaining power was lost with deregulation. Over 75 per cent of all Australian milk is controlled by farmer cooperatives. Dairy cooperatives guarantee acceptance of all milk produced by supplier–members thus providing a secure outlet for farmgate milk supplies. Dairy cooperatives allow milk to be collectively marketed by farmers in tradeable form, partially overcoming the otherwise weak bargaining power of farmers.

High transportation costs and the perishability of fresh milk generally mean that processing facilities are situated near major markets. Many milk processors have made considerable capital investments in state-based milk processing facilities. These investments would be lost should local farms cease to supply sufficient quantities of milk for processing. As consumers are prepared to pay a premium for fresh milk, processors require a reliable supply of market milk and will have to pay farmers a sufficient return to guarantee such supplies.

This is especially the case as many dairy farmers can use their land for alternative systems of agricultural production. Dairying typically occurs in high rainfall areas or on properties with access to irrigation, which means that dairy farms are amenable to alternative forms of agriculture such as beef and wool production, if farmgate prices for milk are not comparable with returns from other farming activities.

While farmgate deregulation has allowed a new dynamic in the competitive relativities between farmers and processors, there are similar changes in the comparative bargaining positions of processors relative to supermarkets. As milk is essentially a homogenous product and milk brands are only weakly differentiated, retailers can generally switch to a different processor without risking a consumer backlash. Milk processors have limited capacity to protect sales of branded milk from aggressive price discounting of supermarkets' generic-labelled milk. Consequently, processor bargaining power and therefore ability to influence price is weak. This is compounded by the capital intensive nature of milk processing. This means that there are high exit barriers as equipment used for the processing of milk has limited alternative uses. Pressures to reduce excess processing capacity across the industry and a desire to establish increased market shares in a newly deregulated milk environment have increased competition.

At the retail level, the dynamic is between supermarkets discounting generic products and convenience and corner stores providing branded products as well as that intangible commodity called convenience. In both cases, milk is the hook to attract consumers to capture other high margin discretionary expenditure.

While the profitability of Australian dairy farmers has been higher than most other broadacre farmers in recent years, the financial performance of the agriculture sector relative to other industries is extremely low. The lifestyle benefits of farming play a

major role in discouraging many agricultural producers from leaving the land. The financial performance of the Australian milk processing industry has been relatively steady in recent years with profitability levels higher than for Australian juice processors, but broadly comparable with similar milk processing industries overseas. Average retail margins are significantly lower in Australian supermarkets relative to food retailers in the United States and the United Kingdom. However, the financial performance of Australian retailers has been better than UK retailers regarding other criteria such as returns on assets and equity.

5. Methodology for analysing change in the milk supply chain

5.1 Introduction

This chapter describes the ACCC's approach to analysing pricing and profitability trends in the milk supply chain following the removal of farmgate price controls for milk from 1 July 2000 and the introduction of the dairy industry adjustment levy on 8 July 2000. To gain a broad understanding of the impact of dairy deregulation on consumers, retailers, milk processors and dairy farmers, movements in prices, costs, revenues and margins were considered at all levels of the industry. While the removal of regulatory controls has significantly influenced the Australian milk industry since 1 July 2000, other factors such as the competitive strategies of milk processors and retailers have also contributed to industry change in the post-regulatory period. It is difficult to differentiate between change solely attributed to the process of deregulation and the imposition of the levy, and changes resulting from the underlying competitive dynamics of the industry.[53] The following four chapters assess movements in prices, costs, margins and the subsequent demand response over the monitoring period without quantifying the extent to which those movements were influenced by the various forces of industry change. However, discussion of the monitoring results in the context of other industry developments is taken up in the final chapter to provide a broad assessment of the impact of deregulation.

5.2 Data collection

The ACCC used a diverse range of sources in its monitoring task. It used its information-gathering powers under the PS Act to request financial performance data from milk processors and major supermarkets and convenience stores.[54] Surveys gathering information on retail price trends were commissioned. Data from established sources such as Australian Bureau of Statistics was also examined. Details of the type of information gathered from these different data sources are set out below.

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53 Empirical research into agricultural marketing margins has demonstrated that differences between the retail, wholesale and/or farmgate prices of commodities can often be explained by variations in purchase costs, production levels, product values, product prices and/or the inventory behaviour of retailers (Tomek and Robinson 1972, Lyon and Thompson 1993 and Griffith and Moore 1991).

54 Although the monitoring period formally commenced three months prior to the introduction of the dairy industry adjustment levy on 8 July 2000 and concluded six months after this date, milk processors and retailers were requested to provide information on the basis of quarterly reporting periods ending 30 June, 30 September and 31 December 2000. This allowed the ACCC's analysis of trends in the milk supply chain to be consistent with standard accounting periods and reduced compliance costs for processors and retailers of milk products. The reporting format also enabled the ACCC to reconcile data from various information sources with greater accuracy. The ACCC continued its monitoring activities until the formal conclusion of the monitoring program on 8 January 2001. Industry trends observed in the first week of January 2001 did not appear to depart from those apparent in the December 2000 quarter.

5.2.1 Information from milk processors

The ACCC sent information pro formas to Australian milk processors requesting revenue data on a monthly basis and quarterly information on general business costs relating to the production of leviable milk products. These information pro formas covered the three-month periods ending 30 June, 30 September and 31 December 2000 and were required to be submitted within six weeks of the completion of each quarter. The pro formas requested monthly revenue and volume figures from processors on sales to the retail sector of leviable products including fresh white standard milk, fresh white modified milk (low-fat, reduced-fat and specialty milk),[55] fresh flavoured milk, UHT standard white milk, UHT white modified milk and UHT flavoured milk. Cost data was broken into various categories including packaging, labour, distribution and raw milk inputs.

5.2.2 Information from supermarket and convenience chains

The ACCC also sent information pro formas to leading Australian retailers of liquid milk products requesting sales revenue and volume data on a monthly basis and wholesale cost figures for milk purchases on a quarterly basis. Again, these information pro formas covered the three-month periods ending 30 June, 30 September and 31 December 2000 and were required to be submitted within six weeks of the completion of each quarter. Retailers involved in this survey comprised supermarket chains, wholesale grocery distributors supplying independent supermarkets, and leading convenience chains, including petrol companies operating food and grocery outlets at service-station sites.

5.2.3 Supermarket and convenience store price surveys

The ACCC commissioned a series of supermarket price surveys as part of its oversight role in the implementation of the Goods and Services Tax (GST). Surveys by data collection agencies, Retail Facts and Informed Sources, were used to track price movements of various milk products. The Retail Facts survey was used specifically to track monthly movements in the price of 1-litre packs of milk sold in supermarkets across each State and Territory. This survey was conducted monthly throughout 2000 and comprised the collection of 290 prices for plain milk sold in chain and independent supermarkets. Within each State, supermarkets were categorised as regional or metropolitan for price monitoring purposes. Most products tracked by this survey were marketed under processor brands (as opposed to supermarket generic-labelled products). Supermarket sales of 1-litre containers of fresh white standard milk sold under processor labels account for about 5 per cent of total Australian sales of fresh white standard milk.

The Informed Sources survey covered UHT and flavoured milk prices in chain and independent supermarkets and food stores throughout 113 towns in Australia. Five surveys were conducted throughout 2000 in the months of January, March, May,

55 Low-fat milk is classified as milk containing less than 1 per cent fat. Reduced-fat milk contains more than 1 per cent fat but less than standard milk (around 3.8 per cent). Specialty milk is milk that is marketed on the basis of qualities not relating to milk fat extraction. These qualities are generally health related such as vitamin enhancement or mineral fortification.

August and October. For UHT milk, prices for products sold in 371 sites were tracked throughout the survey while 204 flavoured milk prices were collected in each survey. Around 80 per cent of UHT milk is sold through supermarkets compared to about 20 per cent of flavoured milk. The balance of milk in these product categories is sold through convenience stores and corner stores including milk bars, delicatessens and take-aways.

5.2.4 Corner store price surveys

To gain an understanding of the range of price variability across traditional corner stores (including milk bars, delicatessens and take-aways) in different localities, two price surveys were commissioned in September 2000 and December 2000. These surveys were conducted by Inteldata e-access and covered milk sold in corner stores located in a range of demographic bands throughout all States and Territories in Australia.

Prices of liquid milk products were collected from corner stores in areas classified as highly accessible, moderately accessible, accessible, remote and very remote based on an index used by the Bureau of Rural Sciences.[56] Survey locations were also selected to provide coverage of towns and cities populated by varying numbers of residents. A list of survey locations is contained in appendix 5. Approximately 330 corner stores were surveyed with price data also collected from 40 supermarkets for price referencing purposes. A total of 6192 prices were recorded including approximately 1000 benchmark prices collected from supermarkets.

5.2.5 Additional information sources

The ACCC also used the following information sources in undertaking its analysis:

- the Australian Bureau of Statistics' (ABS) quarterly survey of milk prices;
- the Australian Dairy Corporation's (ADC) data on: the supply of milk by State and region; annual median milk prices paid to dairy farmers on a state basis; and sales of major liquid milk products by supermarkets; and
- the Australian Bureau of Agricultural and Resource Economics' (ABARE) report entitled, *Impact of an open market in fluid milk supply,* (January 2001) for information at the farm level.

5.2.6 Statistical summary of retail price surveys

Table 5.1 provides a summary of the surveys commissioned by the ACCC in monitoring retail prices for milk products. These surveys complemented information obtained from the Australian Dairy Corporation (ADC) on the prices and sales volumes of various milk products sold through Australian supermarkets.

56 The Bureau of Rural Sciences (BRS) is a scientific agency within the department of Agriculture, Fisheries and Forestry — Australia (AFFA).

Table 5.1 Statistics for retail price surveys

Price collection agency	Number of surveys	Number of price collection points	Market sub-sector	Timing of surveys	Milk products surveyed
Retail Facts	12	290	Supermarkets	Monthly throughout 2000	Plain milk (1 litre)
Informed Sources	5	575*	Supermarkets and convenience stores	January, March, May, August and October 2000	UHT standard white milk and fresh flavoured milk
Inteldata e-access	2	370	Corner stores	September and December 2000	All leviable milk products available in surveyed outlets

* This figure includes 371 price collection points for UHT milk and 204 price collection points for flavoured milk.

While providing a quantitative analysis of the milk supply chain over the monitoring period, the ACCC tried to minimise the disclosure of commercially sensitive information. In several parts of the report, data has been presented in the form of indexed numbers. As the focus is upon the trends in costs, profits and prices, index numbers rather than absolute figures are used.

6. Pricing trends for milk products sold over the monitoring period

6.1 Introduction

This chapter provides an overview of retail price trends across various milk categories in supermarkets, convenience stores and corner stores during the milk monitoring period. The chapter begins with an examination of milk prices in Australian supermarkets for 2000 to identify relevant price trends. Scan data from the Australian Dairy Corporation has been assimilated with information from the monitoring pro formas submitted by the supermarket chains and wholesale distributors to independent supermarkets. Pricing in convenience stores is examined next using information from leading convenience chains. The results of the survey commissioned by the ACCC covering all leviable milk products sold in corner stores and conducted by market intelligence company, Inteldata e-access, are then presented. The chapter concludes with a comparison of average prices for various milk products sold in supermarkets, convenience stores and corner stores during the monitoring period and a consideration of likely consumer savings.

6.2 Price trends in supermarkets

6.2.1 Average prices of supermarket sales of milk across various categories

The price of most milk products sold in Australian supermarkets decreased significantly following dairy deregulation with the greatest reductions evident for plain milk. These reductions occurred despite the introduction of an 11 cents per litre levy on sales of milk products from 8 July 2000. Factors contributing to lower average prices for most milk products sold in supermarkets included:

- lower input costs for raw milk bought at the farmgate;
- aggressive bidding for supply tenders by milk processors to supply generic-labelled products under tender arrangements; and
- lower retail pricing strategies for milk to combat loss of business to convenience outlets targeting just-in-time consumers and top-up shoppers. .

As shown in table 6.1, Australian supermarket prices for plain, reduced-fat and low-fat milk decreased by an average 22 cents, 6 cents and 9 cents per litre respectively across all pack sizes and brands from the June quarter to December 2000 quarter. However, prices for UHT, flavoured and specialty milk increased by an average of 10 cents, 14 cents and 3 cents per litre respectively. Combined, these milk categories represent slightly less than 19 per cent of total milk products sold in supermarkets.

Why did the average price of these products rise? Under farmgate price controls, milk used in UHT products was regulated at prices below those for fresh milk. With the introduction of the dairy industry adjustment levy of 11 cents per litre from 8 July

2000, UHT products were expected to rise in price. This was because lower raw milk costs for UHT milk products following deregulation were expected to be insufficient to offset the new levy. Around 80 per cent of UHT milk is sold through supermarkets. Supermarket sales of UHT milk declined immediately following deregulation due to a reduction in the price differential between UHT and fresh milk at retail level. This corresponded with an increase in volume of fresh milk sales.

Flavoured milk is mostly sold in convenience and corner stores and typically attracts higher margins than other milk categories. As a high-margin product, the replacement from 1 July 2000 of the 12 per cent Wholesale Sales Tax with a 10 per cent Goods and Services Tax levied at the retail level may have placed slight upward pressure on prices of flavoured milk products. This was possibly a factor in the supermarket price of flavoured milk increasing in the September 2000 quarter. Specialty milk includes vitamin-enhanced and mineral-fortified milks and commands strong brand loyalty due to perceived health benefits and a lack of direct substitute products. Prices of milk in this niche market fell in the September quarter but increased in the December quarter to levels slightly higher than for the June quarter immediately before deregulation. Increased prices for this milk category also reflect product innovations that have led to the launch of new specialty milk products sold at premium prices.

Table 6.1 Quarterly national average prices of various milk categories sold in supermarkets (March quarter to December quarter 2000)

Quarter	Standard white ($/litre)	Reduced-fat ($/litre)	Low-fat ($/litre)	UHT ($/litre)	Flavoured ($/litre)	Specialty ($/litre)
March (3 months to 26/03)	1.32	1.58	1.51	1.13	2.36	1.58
June (3 months to 25/06)	1.34	1.61	1.52	1.14	2.44	1.60
September (3 months to 24/09)	1.23	1.58	1.47	1.23	2.52	1.58
December (3 months to 24/12)	1.12	1.55	1.43	1.24	2.58	1.63

Source: ADC, 2001.

Note: Figures include all pack sizes and both generic and processor brands of milk.

6.2.2 Average prices of supermarket sales of milk across various categories by State

The average price of milk sold in Australian supermarkets decreased by 12 cents per litre (8.5 per cent) from June to December 2000. This was an average reduction measured across all milk categories, pack sizes and brands. In every State, prices of plain milk reduced more in absolute and percentage terms compared to other milk

categories sold in supermarkets (refer table 6.2). Average price reductions for plain milk and reduced-fat milk were greatest in Victoria, the State that previously had the highest average milk prices in Australia before deregulation. Plain, reduced-fat and low-fat milk decreased in price in all States over the monitoring period while UHT, flavoured and specialty milk increased in price in each State.[57] South Australia experienced a very large increase in the price of specialty milk sold in supermarkets in the December quarter.[58] The results of the two price surveys commissioned by the ACCC covering UHT standard white milk and fresh flavoured milk conducted by data collection agency, Informed Sources, are presented separately in appendix 4.

57 These are conclusions at the aggregate level. Survey data collected from Informed Sources allows trends from specific products to be observed more closely. For example, 600 millilitre cartons of flavoured milk sold at supermarkets and food stores decreased in price over the monitoring period in all States except Victoria and Western Australia. Results of the Informed Sources survey are contained in appendix 4 along with price trends for 1-litre cartons of a leading brand of UHT milk.

58 This corresponded with a six-fold increase in sales volumes of specialty milk in this State as previous sales figures for South Australian supermarket sales of specialty milk had been exceptionally low. In 2000 South Australia did not record any sales of 2-litre packs of specialty milk which were nearly 10 per cent cheaper than 1-litre packs on a per litre basis across Australia. Interestingly, across Australia over 40 per cent of specialty milk was sold in 2-litre packs in the December quarter.

Table 6.2 Average price changes for various milk categories sold in supermarkets by State (June quarter to December quarter 2000)

Milk category	NSW		VIC		QLD		WA	
	(c/litre)	(%)	(c/litre)	(%)	(c/litre)	(%)	(c/litre)	(%)
Plain	-17	13.4	-32	-22.1	-20	-15.5	-19	-14.3
Reduced-fat	-1	-0.6	-9	-5.4	-8	-5.1	-5	-3.6
Low-fat	-12	-8.0	-3	-1.7	-9	-6.3	-7	-5.1
UHT	+9	+8.0	+10	+8.6	+14	+10.8	+5	+4.1
Flavoured	+9	+3.5	+24	+9.6	+14	+5.4	+20	+10.0
Specialty	+2	+1.2	+4	+2.4	+5	+3.3	-2	-1.3
All milk	-10	-7.3	-16	-10.6	-13	-9.4	-9	-6.6

Milk category	SA		TAS		AUST	
	(c/litre)	(%)	(c/litre)	(%)	(c/litre)	(%)
Plain	-19	-13.9	-23	-17.0	-22	-16.4
Reduced-fat	-5	-3.4	-4	-2.8	-6	-3.7
Low-fat	-8	-5.6	-9	-6.7	-9	-5.9
UHT	+13	+13.0	+13	+11.2	+10	+8.8
Flavoured	+7	+2.8	+31	+13.5	+14	+5.7
Specialty	+53	+32.3	n/a	n/a	+3	+1.8
All milk	-3	-2.1	-12	-8.9	-12	-8.5

Source: ADC, 2001.

Note: Figures include all pack sizes and both generic and processor brands. Figures for NSW include the ACT while figures for the NT are included with SA. n/a — category not sold or data not available.

6.2.3 Average prices of combined milk sales in supermarkets by State

Following deregulation, the average price of supermarket milk aggregated across all categories, pack sizes and brands decreased in every State (refer table 6.3). The largest reductions occurred in Victoria where average supermarket prices across all milk categories decreased by 16 cents per litre in the last six months of 2000. The aggregation of Northern Territory data with that for South Australian is again likely to have underestimated the reported savings to South Australian milk consumers following deregulation. Differences between States in average supermarket milk prices are likely to be attributable to factors such as category and pack size mix, historical pricing trends, brand loyalty, wholesale pricing strategies of milk processors, and the

price of milk, especially differentiated products such as modified and specialty milk, sold via the route trade.

Table 6.3 Quarterly average prices of all milk sold in supermarkets by State (March quarter to December quarter 2000)

Quarter	NSW ($/litres)	VIC ($/litres)	QLD ($/litres)	WA ($/litres)	SA ($/litres)	TAS ($/litres)
March (3 months to 26/03)	1.37	1.49	1.36	1.36	1.42	1.34
June (3 months to 25/06)	1.37	1.51	1.39	1.37	1.40	1.35
September (3 months to 24/09)	1.31	1.44	1.33	1.34	1.39	1.33
December (3 months to 24/12)	1.27	1.35	1.26	1.28	1.37	1.23

Source: ADC, 2001.

Note: Figures include all pack sizes, milk product types and both generic and processor brands. Figures for NSW include the ACT while figures for the NT are included with SA.

6.2.4 Average prices of plain milk sold in supermarkets by State

Prices for plain milk sold in supermarkets decreased in all States following deregulation (refer table 6.4). The largest price reductions, on a per litre basis across all pack sizes and brands, occurred in Victoria where prices fell an average of 32 cents per litre. Prices in New South Wales fell the least (17 cents per litre on average) however, consumers in New South Wales enjoyed lower milk prices than consumers in all other States except Queensland. Figures for South Australia also include the Northern Territory while New South Wales data includes the Australian Capital Territory.

Table 6.4 Quarterly average prices of plain milk sold in supermarkets by State (March quarter to December quarter 2000)

Quarter	NSW ($/litre)	VIC ($/litre)	QLD ($/litre)	WA ($/litre)	SA ($/litre)	TAS ($/litre)
March (3 months to 26/03)	1.26	1.43	1.25	1.34	1.37	1.33
June (3 months to 25/06)	1.27	1.45	1.29	1.33	1.37	1.35
September (3 months to 24/09)	1.18	1.30	1.18	1.24	1.29	1.28
December (3 months to 24/12)	1.10	1.13	1.09	1.14	1.19	1.12

Source: ADC, 2001.

Note: Figures include all pack sizes and both generic and processor brands of milk. Figures for NSW include the ACT while figures for the NT are included with SA.

Historically, milk for the Northern Territory has mostly been imported from Queensland and South Australia with market milk products not previously subject to regulated farmgate price controls. Therefore the 11 cents per litre levy from 8 July 2000 led to an increase in retail milk prices in the Northern Territory. The inclusion of Northern Territory price information in South Australian figures is likely to explain the comparatively higher recorded average prices of supermarket milk in South Australia following deregulation.

6.3 Spot prices of 1-litre cartons of fresh milk

The spot price survey of 1-litre cartons of milk conducted by data collection agency, Retail Facts, tracked category-leading milk products on a monthly basis in metropolitan and regional supermarkets throughout 2000. Nearly all products included in this survey were marketed under processor brands as opposed to the generic-labelled products sold by supermarkets. Branded milk products are generally more expensive than their generic equivalents with milk sold in 1-litre cartons typically less likely to be discounted than larger pack sizes. Milk sold in 2 and 3-litre cartons are also more likely to be cheaper on a per litre basis. This survey enables state trends for 1-litre milk sold in supermarkets to be compared with intra-state price trends on a regional and metropolitan basis.

6.3.1 Monthly price trends — metropolitan supermarkets

During the six months to 30 June 2000, supermarket prices for 1-litre cartons of plain milk increased significantly in Sydney (up 8 cents) and Brisbane (up 6 cents), rose in Melbourne (up 4 cents), increased slightly in Hobart (up 2 cents) and Darwin (up 2 cents) and remained largely unchanged in Canberra, Perth and Adelaide (refer table 6.5 and figure 6.1). In absolute terms, prices in Brisbane, Adelaide and Sydney (all at $1.36) for June 2000 were lower than other capitals except Canberra ($1.22). Prices were highest in Melbourne ($1.50) and Darwin ($1.47). During the second half of 2000, milk prices fell in all capital cities except Canberra and Darwin where prices increased by 2 and 9 cents per litre respectively.

Price reductions for 1-litre cartons of milk sold in supermarkets were greatest in Melbourne where reductions averaged 15 cents per litre. Excluding Darwin, where transport costs impact heavily on milk prices, the spread of average milk prices across capital cities decreased from 28 cents per litre in June 2000 to 12 cents per litre in December 2000. The decision by major supermarket chains to introduce lower national prices for generic-labelled milk from August 2000 is likely to have heavily influenced this trend. One litre cartons of generic-labelled milk retail for around $1.19 in major supermarket chains across Australia.

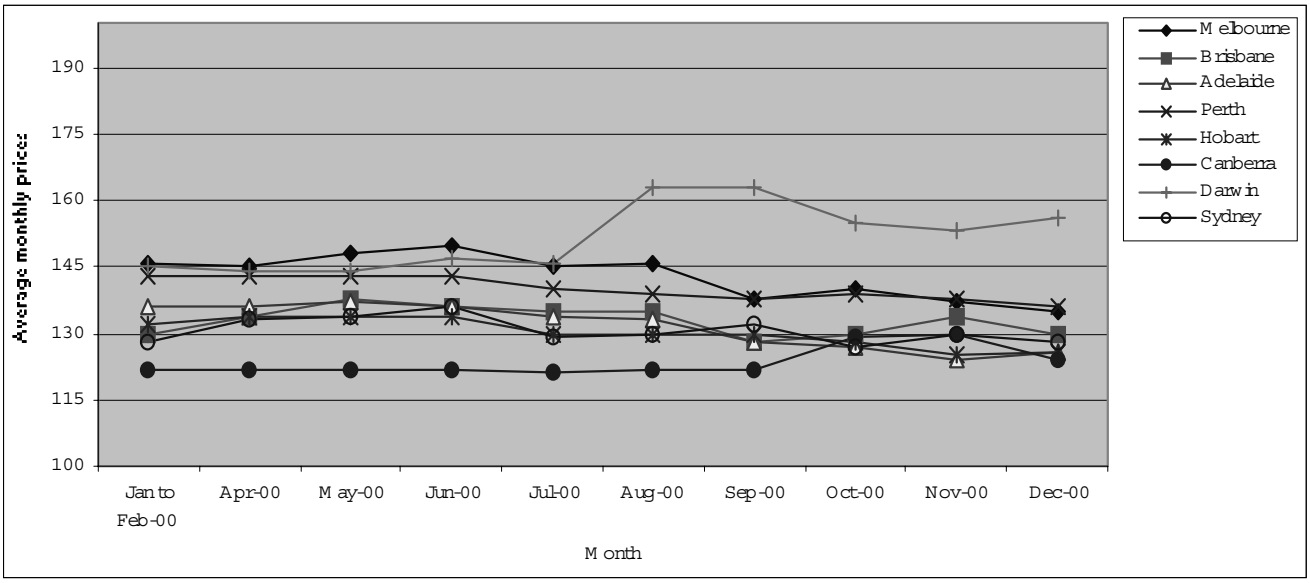
Table 6.5 Average spot prices of plain milk (1-litre) — metropolitan supermarkets

← **Pre-deregulation (farmgate price control in place)**					**Post-deregulation (Dairy Industry Adjustment Levy with no farmgate price controls)** →					
	Av. Jan-Feb price	Av. Apr-00 price	Av. May-00 price	Av. Jun-00 price	Av. Jul-00 price	Av. Aug-00 price	Av. Sep-00 price	Av. Oct-00 price	Av. Nov-00 price	Av. Dec-00 price
	cents	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**
Sydney	128	133	134	136	129	130	132	127	130	128
Melbourne	146	145	148	150	145	146	138	140	137	135
Brisbane	130	134	138	136	135	135	128	130	134	130
Adelaide	136	136	137	136	134	133	128	127	124	126
Perth	143	143	143	143	140	139	138	139	138	136
Hobart	132	134	134	134	130	130	130	128	125	126
Canberra	122	122	122	122	121	122	122	129	130	124
Darwin	145	144	144	147	146	163	163	155	153	156

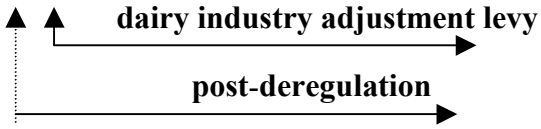
Note: This survey covers predominantly branded milk products which are generally more expensive than generic-labelled products sold in supermarkets.

Source: Retail Facts survey

Figure 6.1 Average spot prices of plain milk (1 litre) sold in metropolitan supermarkets (January to December 2000)



Source: Retail Facts survey



6.3.2 Monthly price trends — regional supermarkets

During the six months to 30 June 2000, prices for 1-litre cartons of plain milk sold in regional supermarkets increased significantly in Queensland (up 10 cents) and Victoria (up 6 cents) and increased slightly in New South Wales (up 2 cents) and Western Australia (up 1 cent) (refer table 6.6 and figure 6.2). Prices in regional South Australia remained steady. In absolute terms, regional supermarket prices for June 2000 were highest in Victoria ($1.50) and Western Australia ($1.44) and lowest in New South Wales ($1.32).

During the second half of 2000, milk prices fell in all States. Price reductions for 1-litre cartons of milk sold in regional supermarkets were greatest in Victoria where reductions averaged 15 cents per litre. Prices also reduced significantly in regional Queensland (down 12 cents) and South Australia (down 11 cents). The spread of average milk prices decreased across States from June to December 2000 in line with metropolitan trends.

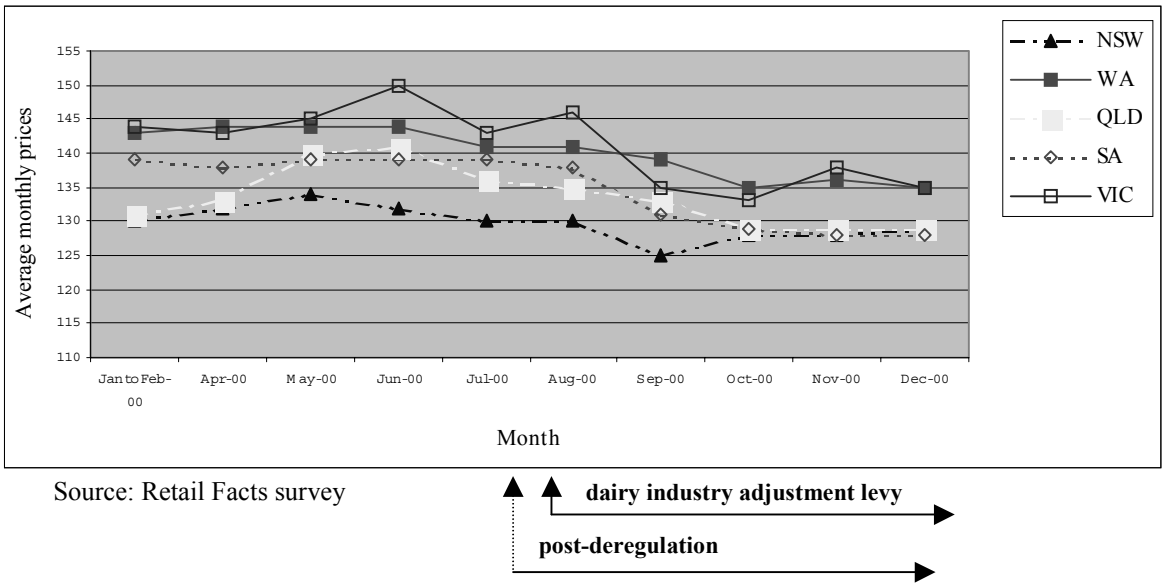
Table 6.6 Average spot prices of plain milk (1 litre) — regional supermarkets

	Pre-deregulation (farmgate price control in place)				Post-deregulation (dairy industry adjustment levy with no farmgate price controls)					
	Av. Jan-Feb price	Av. Apr-00 price	Av. May-00 price	Av. Jun-00 price	Av. Jul-00 price	Av. Aug-00 price	Av. Sep-00 price	Av. Oct-00 price	Av. Nov-00 price	Av. Dec-00 price
	cents	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**	**cents**
NSW	130	132	134	132	130	130	125	128	128	129
QLD	131	133	140	141	136	135	133	129	129	129
SA	139	138	139	139	139	138	131	129	128	128
TAS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VIC	144	143	145	150	143	146	135	133	138	135
WA	143	144	144	144	141	141	139	135	136	136

Note: n/a — data not available

Source: Retail Facts survey

Figure 6.2 Average spot prices of plain milk (1 litre) sold in regional supermarkets (January to December 2000)



Source: Retail Facts survey

6.3.3 Price movements for plain milk (1-litre) in metropolitan and regional supermarkets

Average prices of 1-litre cartons of plain milk sold in supermarkets have fallen in all States since the removal of farmgate price controls on 1 July 2000. This trend applies to both metropolitan and regional supermarkets. However, in the Australian Capital Territory and the Northern Territory, where farmgate prices were not previously regulated, part of the 11 cents per litre dairy industry adjustment levy appears to have been passed on to consumers via increased retail milk prices.

Table 6.7 shows the percentage changes in 1-litre cartons of plain milk sold in metropolitan and regional supermarkets in September and December 2000 respectively relative to June 2000. During these months, average milk prices fell in all metropolitan and regional areas except the Australian Capital Territory and the Northern Territory. As at December 2000, there was little divergence within States between milk prices in metropolitan and regional supermarkets. This contrasted with September 2000 when supermarket milk prices were notably cheaper in regional areas of New South Wales and Victoria and more expensive in regional Queensland, South Australia and Western Australia relative to those States' metropolitan areas. Extensive discounting of milk marketed under processor brands was evident in the latter part of August and September 2000 due to the introduction of lower supermarket prices for generic-labelled milk. This resulted in considerable variations in prices for branded milk across Australia as milk processors attempted to maintain market shares. By December discounting had fallen away and prices became more uniform.

Table 6.7 Post-deregulation changes in supermarket prices of plain milk (1litre)

State	Metropolitan		Regional		**Regional relative to metro-politan**	Metropolitan		Regional		**Regional relative to metro-politan**
	Sept 00 relative to June 00		Sept 00 relative to June 00		Sept 00	Dec 00 relative to June 00	Dec 00 relative to June 00	Dec 00 relative to June 00	Dec 00 relative to June 00	Dec 00
	%	**cents**	**%**	**cents**	**cents**	**%**	**cents**	**%**	**cents**	**cents**
NSW	-2.9	**-4**	-5.3	**-7**	**-7**	-5.9	**-8**	-2.3	**-3**	**+1**
VIC	-8.0	**-12**	-10.0	**-15**	**-3**	-10.0	**-15**	-10.0	**-15**	**0**
QLD	-5.9	**-8**	-5.7	**-8**	**+5**	-4.4	**-6**	-8.5	**-12**	**-1**
WA	-3.6	**-5**	-3.5	**-5**	**+1**	-4.9	**-7**	-5.6	**-8**	**0**
SA	-5.9	**-8**	-5.8	**-8**	**+3**	-7.4	**-10**	-7.9	**-11**	**+2**
TAS	-3.0	**-4**	n/a	n/a	n/a	-6.0	**-8**	n/a	n/a	n/a
ACT	0.0	**0**	n/a	n/a	n/a	+1.6	**+ 2**	n/a	n/a	n/a
NT	+10.9	**+16**	n/a	n/a	n/a	+6.1	**+ 9**	n/a	n/a	n/a

Note: n/a — data not available.

Source: Retail Facts survey

6.4 Pricing trends in convenience stores

Table 6.8 shows trends in some States for average retail prices of 2-litre plain milk sold through convenience stores. During the monitoring period, prices of 2-litre plain white milk decreased in New South Wales, Victoria and Queensland. Milk sales decreased in Victoria and New South Wales but rose in Queensland for September 2000. In the December quarter, sales increased in New South Wales and Queensland but decreased marginally in Victoria. These indexes suggest that sales volumes for 2-litre milk sold in convenience stores are likely to depend partially on the price of those products relative to the price of milk sold in alternative retail outlets such as supermarkets. The fact that the major supermarket chains introduced lower milk prices on a national basis from mid-August 2000 supports this assumption.

Table 6.8 Indexes of volumes of milk sales and average retail milk prices in convenience stores in some States (plain milk — 2-litre)

(April–June 2000 = 100)

Convenience stores	**Index**	June quarter (April – June 00)	September quarter (July – September 00)	December quarter (October – December 00)
NSW	**Average retail price index**	100	98.8	98.3
	Volume of sales index	100	73.8	90.4
VIC	**Average retail price index**	100	98.0	88.2
	Volume of sales index	100	97.9	96.0
QLD	**Average retail price index**	100	92.4	83.9
	Volume of sales index	100	101.5	111.7

Source: Data supplied by the retail sector.

Note: Indexes cover all pack sizes and milk brands presented at the aggregate level. Data for other States not available.

Average retail prices of 1-litre plain milk sold through convenience stores were relatively steady in the six months following industry deregulation in New South Wales, Victoria and Queensland (refer table 6.9). However, sales volumes fell in these States during this period, most notably in New South Wales and Queensland.

Table 6.9 Indexes of volumes of milk sales and average retail milk prices in convenience stores in some States (plain milk —1-litre)

(April–June 2000 = 100)

Convenience stores	**Index**	June quarter (April –June 00)	September quarter (July – September 00)	December quarter (October – December 00)
NSW	**Average retail price index**	100	99.7	100.1
	Volume of sales index	100	69.9	72.9
VIC	**Average retail price index**	100	101.5	101.3
	Volume of sales index	100	94.4	92.9
QLD	**Average retail price index**	100	98.9	98.7
	Volume of sales index	100	75.3	75.3

Source: Data supplied by the retail sector.

Note: Index covers all pack sizes and milk brands presented at the aggregate level. n/a — data not available.

Two-litre packs of plain milk sold in convenience stores decreased by 10 cents from June to December 2000 (refer table 6.10). Retail prices for other milk categories were largely unchanged over the monitoring period. The exception was 2-litre cartons of reduced-fat milk which fell markedly in price from particularly high levels in June 2000. On a state basis, 2-litre packs of plain milk fell appreciably in December in Victoria and Queensland in response to competition from supermarket chains. Although much of the information submitted by convenience stores was not presented at the state level, aggregate data covering States and Territories not represented in tables 6.10 and 6.11 has been incorporated into trends on costs, profits and margins for convenience stores at the national level (refer chapters 7 and 8).

Table 6.10 Quarterly national average prices of various milk categories sold in convenience stores

(June quarter–December quarter 2000)

Quarter (2000)	Standard white		Reduced fat		Low-fat		Flavoured
	2-litre	1-litre	2-litre	1-litre	2-litre	1-litre	600 ml
	$/unit	**$/unit**	**$/unit**	**$/unit**	**$/unit**	**$/unit**	**$/unit**
June	2.79	1.43	3.50	1.71	3.19	1.71	2.11
September	2.75	1.43	3.11	1.67	3.20	1.71	2.10
December	2.69	1.43	3.12	1.67	3.20	1.71	2.09

Source: Data supplied by the retail sector

Note: Figures represent category-leading products.

Table 6.11 Quarterly average prices of plain milk sold in convenience stores for some States

(June quarter–December quarter 2000)

Quarter 00	NSW		VIC		QLD		SA	
	2-litre	1-litre	2-litre	1-litre	2-litre	1-litre	2-litre	1-litre
	$/unit	**$/unit**	**$/unit**	**$/unit**	**$/unit**	**$/unit**	**$/unit**	**$/unit**
June	2.78	1.42	2.85	1.45	2.89	1.49	2.79	1.49
September	2.75	1.42	2.79	1.47	2.67	1.47	2.76	1.48
December	2.74	1.42	2.51	1.47	2.42	1.47	n/a	n/a

Source: Data supplied by the retail sector.

Note: Figures represent category-leading products. Figures unavailable for others States and Territories. n/a — not available.

6.5 Pricing trends in corner stores

6.5.1 Introduction

Corner stores, including milk bars, delicatessens and take-aways, are points of retail distribution for most Australian milk marketed under processor brands. The location of many of these stores close to the home or workplace enables consumers to have ready access to fresh milk products. Milk prices in corner stores are heavily influenced by the wholesale pricing strategies of milk processors, with many corner store proprietors applying standard mark-ups to the wholesale purchase price of milk products. The ACCC commissioned the marketing intelligence company, Inteldata e-access, to

conduct surveys in September and December 2000 of milk products sold in corner stores. Unlike supermarkets and convenience stores, reference data was not available for the period to 30 June 2000 when farmgate price controls applied. However, anecdotal evidence suggests that milk sold in corner stores decreased in price immediately following deregulation. Corner stores were selected in all States and Territories in metropolitan, regional, rural and remote areas based on population demographics and the degree of isolation of the cities and towns in which the stores were located.[59] National averages presented in this chapter have been adjusted to take account of demographic biases in the survey sample.

6.5.2 Average milk prices in Australian corner stores

Table 6.12 shows prices of milk products sold through corner stores across the nation in September and December 2000. The average price of 2-litre packs of plain milk increased by 4 cents per litre to $2.64 in the three months to December 2000. There was little variability in average prices for 1-litre packs of fresh milk across all categories and 2-litre cartons of reduced-fat milk between surveys. However, 2-litre packs of low-fat milk increased on average by 3 cents as did 600 ml packs of flavoured milk. One-litre packs of UHT milk decreased by 2 cents to $1.36 from September to December 2000.

Table 6.12 Average Australian prices for milk sold through corner stores

Milk category and pack size	September 00 $/unit	December 00 $/unit	**Change in retail price**
	retail price	**retail price**	**$/unit**
Plain — 2-litre	2.60	2.64	+0.04
Plain — 1-litre	1.47	1.47	0
Fresh low-fat white — 2-litre	3.12	3.15	+0.03
Fresh low-fat white — 1-litre	1.65	1.65	0
Fresh reduced-fat white — 2-litre	3.14	3.14	0
Fresh reduced-fat white — 1-litre	1.66	1.67	+0.01
600 ml flavoured	2.08	2.11	+0.03
UHT standard milk — 1-litre*	1.38	1.36	-0.02

Note: *Results are based on a relatively small sample.

59 Data on demographic bands has been structured to reflect population size of locality and accessibility of locality (i.e. highly accessible, accessible, moderately accessible, remote and very remote). 99 per cent of people live in towns which are defined as highly accessible or accessible based on 1996 census data. A list of cities and towns surveyed with relevant population sizes and accessibility measures is contained in the appendix 5 of this report.

6.5.3 Average corner store prices by State

Tables 6.13 and 6.14 reflect state trends in retail prices of milk products sold nationally through corner stores. Prices for plain milk tended to be highest in the Northern Territory and Western Australia and lowest in the Australian Capital Territory and Tasmania in both September and December 2000. The Australian Capital Territory has traditionally had the lowest prices for plain milk in Australia with retail prices being regulated until 30 June 2000. Milk was bought by the Territory's statutory milk authority on a tender basis with input costs for raw milk not previously subject to regulation. Low-fat and reduced-fat milk was more expensive in New South Wales and Victoria compared to other States while milk prices in Tasmania were lower than other States for most milk categories. In general, there was minimal change in state milk prices between the two surveys across most milk categories. The ACCC also examined trends in price relativities between milk marketed under different processor brands. This analysis indicated that processor brands with only a minor share of a state market tended to be less expensive than brands that were well established in those States. Price relativities between competing brands within States tended to be similar in both September and December 2000.

Table 6.13 Average prices by State for milk sold through corner stores

(September 2000)

Milk category and pack size	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
	$/litre	$/litre	$/litre	$/litre	$/litre	$/litre	$/litre	$/litre
Plain — 2-litre	2.66	2.48	2.48	2.80	2.71	2.42	2.40	3.15
Plain — 1-litre	1.45	1.49	1.46	1.63	1.45	1.30	1.23	1.81
Fresh low-fat white — 2-litre	3.22	3.29	2.92	3.09	2.88	2.80	2.90	2.81
Fresh low-fat white — 1-litre	1.68	1.71	1.56	1.67	1.54	1.43	1.51	1.70
Fresh reduced-fat white – 2-litre	3.23	3.30	3.03	2.90	2.93	2.81	2.79	3.38
Fresh reduced-fat white – 1-litre	1.68	1.73	1.56	1.73	1.54	1.47	1.45	1.81
600 ml flavoured	2.17	2.04	2.05	1.96	2.00	1.92	2.06	2.06
UHT standard milk — 1-litre*	1.50	1.27	1.37	1.50	n/a	1.16	n/a	n/a

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable. *Results are based on a relatively small sample.

Table 6.14 Average prices by State for milk sold through corner stores (December 2000)

Milk category and pack size	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
	$/litre	$/litre	$/litre	$/litre	$/litre	$/litre	$/litre	$/litre
Plain — 2-litre	2.67	2.56	2.58	2.82	2.78	2.45	2.40	3.17
Plain — 1-litre	1.44	1.49	1.46	1.63	1.45	1.30	1.23	1.81
Fresh low-fat white — 2-litre	3.22	3.34	2.98	3.09	2.88	2.80	2.90	2.81
Fresh low-fat white — 1-litre	1.69	1.71	1.56	1.67	1.54	1.42	1.51	1.70
Fresh reduced-fat white – 2-litre	3.23	3.32	3.03	2.90	2.93	2.81	2.79	3.38
Fresh reduced-fat white – 1-litre	1.69	1.74	1.56	1.73	1.54	1.47	1.45	1.81
600 ml flavoured	2.22	2.04	2.12	1.96	2.04	1.91	2.06	2.08
UHT standard milk — 1-litre*	1.48	1.27	1.37	1.50	n/a	1.16	n/a	n/a

Source: Inteldata e-access, 2001and ACCC.

Note: *Results are based on a relatively small sample. n/a– data unavailable.

6.5.4 Analysis of corner store pricing in regional areas

Tables 6.15 and 6.16 show price trends for September and December 2000 for 2-litre cartons of plain milk sold through corner stores on a state basis according to the size of the city or town in which the store was located. Appendix 5 contains a list of cities and towns that were surveyed in each demographic band. In both surveys, milk prices were generally more expensive in metropolitan areas (population 100 000+) and small towns (population 200<500). Given that most consumers in metropolitan areas have access to cheaper supermarket milk, this may suggest that metropolitan consumers are on average more time-poor and value convenience over price more than regional and rural consumers. This may be particularly so in dual income families where shopping patterns may be less frequent and purchases made on a just-in-time basis. These types of lifestyle trends allow milk processors and corner store proprietors greater pricing power compared to milk sold in areas where consumers are more price-sensitive and likely to buy milk through supermarkets if price differentials become too large.

The relatively high average price of milk in small towns (population 200<499) may reflect the fact that many of these towns are located in isolated regions where transport costs are relatively high and there is less direct competition from supermarkets. In other instances, low stock turnover may also increase milk prices on a per unit basis, with fixed business overheads having to be spread across a relatively low volume of sales. Some of the small towns in the survey were also heavily dependent on seasonal tourism with holiday-makers likely to be more willing to pay higher prices for milk bought from conveniently located outlets.

In general, milk was more expensive in the Northern Territory, Western Australia and South Australia and cheapest in the Australian Capital Territory and Tasmania.

Following the introduction in August 2000 of lower prices for generic-labelled milk sold in supermarkets, milk processors reduced the wholesale price of 2-litre cartons of branded milk sold in corner stores to preserve market shares for branded product. The extent of this discounting, as shown in the price of milk in September relative to December 2000, appeared more pronounced in regional areas of Australia. This may mean that regional consumers are more price sensitive. Anecdotal evidence also suggests that discounting strategies were used for longer periods in regional areas with discounting of city milk possibly ceasing in many areas before the survey. The Retail Facts survey of milk prices also supports this hypothesis with price relativities between regional and metropolitan supermarkets for 1-litre cartons of milk being greatest in September and October. The Retail Facts survey tracked predominantly branded milk prices. Price relativities between September and December 2000 were greater in Queensland and Victoria than for other States.

Table 6.15 Average prices by State and city/town population size for milk sold in corner stores

(2-litre plain milk — September 2000)

Demographic band (population size of locality)	Aust $	NSW $	VIC $	QLD $	WA $	SA $	TAS $	ACT $	NT $
100 000+	2.73	2.82	2.64	2.60	2.89	2.80	2.33	2.40	n/a
25 000<100,000	2.52	2.60	2.44	2.33	3.09	n/a	2.36	n/a	2.88
10 000<24,999	2.64	2.67	2.44	2.64	2.92	2.68	n/a	n/a	3.26
5 000<9,999	2.53	2.56	2.46	2.38	3.06	2.70	2.53	n/a	3.66
2 500<4,999	2.61	2.73	2.43	2.49	2.55	n/a	2.50	n/a	3.17
1000<2499	2.72	2.77	2.80	2.61	2.80	2.70	2.40	n/a	2.80
500<999	2.68	2.55	2.52	2.59	3.10	3.05	n/a	n/a	3.48
200<499	2.78	2.88	2.46	2.89	2.92	2.72	2.53	n/a	3.30

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

Table 6.16 Average prices by State and city/town population size for milk sold in corner stores

(2-litre plain milk — December 2000)

Demographic band (population size of locality)	Aust $	NSW $	VIC $	QLD $	WA $	SA $	TAS $	ACT $	NT $
100 000+	2.76	2.80	2.72	2.66	2.89	2.84	2.47	2.40	n/a
25 000<100,00000	2.59	2.63	2.46	2.49	3.10	n/a	2.35	n/a	2.88
10 000<24,999	2.68	2.70	2.59	2.59	2.91	2.74	n/a	n/a	3.26
5 000<9,999	2.58	2.57	2.56	2.49	3.06	2.60	2.53	n/a	3.66
2 500<4,999	2.67	2.81	2.50	2.58	2.67	n/a	2.50	n/a	3.17
1000<2499	2.71	2.72	2.81	2.62	2.80	2.67	2.40	n/a	2.80
500<999	2.76	2.60	2.73	2.68	3.10	3.05	n/a	n/a	3.52
200<499	2.84	2.93	2.64	3.00	2.92	2.74	2.39	n/a	3.20

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

Tables 6.17 and 6.18 reflect price trends for September and December 2000 for 1-litre cartons of plain milk sold through corner stores. Again, groupings are on a state basis according to the size of the city or town in which the surveyed store was located. In general, prices of 1-litre cartons of milk showed little fluctuation between survey periods as 1-litre cartons of milk were not subject to discounting during September to the same extent as 2-litre milk packs. One-litre packs of milk were most expensive in the Northern Territory and Western Australia and cheapest in the Australian Capital Territory. Prices were also reasonably consistent across Australia for the various population bands, except for towns of less than 1000 residents where prices were significantly higher on average. Consumers in many of these localities possibly buy most of their food and groceries in nearby regional centres and may only shop locally when there is immediate demand for items.

Table 6.17 Average prices by State and city/town population size for milk sold in corner stores

(1-litre plain milk — September 2000)

Demographic band (population size of locality)	Aust $/litre	NSW $/litre	VIC $/litre	Qld $/litre	WA $/litre	SA $/litre	Tas $/litre	ACT $/litre	NT $/litre
100 000+	1.47	1.45	1.52	1.46	1.52	1.46	1.26	1.23	n/a
25 000<100,000	1.48	1.44	1.46	1.49	1.75	n/a	1.27	n/a	1.78
10 000<24,999	1.48	1.42	1.52	1.44	1.64	1.45	n/a	n/a	1.84
5 000<9,999	1.48	1.50	1.38	1.53	1.84	1.45	1.32	n/a	1.61
2 500<4,999	1.49	1.49	1.47	1.43	1.66	n/a	1.40	n/a	1.65
1000<2499	1.51	1.45	1.54	1.61	1.60	1.43	1.35	n/a	1.55
500<999	1.57	1.48	1.51	1.60	1.66	1.70	n/a	n/a	2.06
200<499	1.62	1.68	1.45	1.82	1.64	1.46	1.31	n/a	2.13

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

Table 6.18 Average prices by State and city/town population size for milk sold in corner stores

(1-litre plain milk — December 2000)

Demographic band (population size of locality)	Aust $/litre	NSW $/litre	Vic $/litre	Qld $/litre	WA $/litre	SA $/litre	Tas $/litre	ACT $/litre	NT $/litre
100 000+	1.47	1.43	1.53	1.46	1.52	1.46	1.27	1.23	n/a
25 000<100,000	1.49	1.43	1.47	1.49	1.75	n/a	1.27	n/a	1.78
10 ,000<24,999	1.50	1.50	1.52	1.44	1.64	1.45	n/a	n/a	1.84
5 000<9,999	1.49	1.50	1.40	1.53	1.84	1.45	1.32	n/a	1.61
2 500<4,999	1.49	1.50	1.47	1.43	1.66	n/a	1.40	n/a	1.65
1000<2499	1.52	1.47	1.54	1.61	1.60	1.43	1.35	n/a	1.55
500<999	1.57	1.48	1.51	1.60	1.66	1.70	n/a	n/a	2.06
200<499	1.63	1.69	1.45	1.82	1.64	1.46	1.31	n/a	2.13

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

When milk prices were grouped according to the accessibility of the town in which the surveyed store was located,[60] milk prices were significantly higher in areas classified as remote or very remote (refer tables 6.19 to 6.22). This trend was consistent for both 1 and 2-litre cartons of plain milk and across the September and December 2000 survey periods. Prices of 2-litre cartons of milk were noticeably cheaper in September across all accessibility bands compared to December 2000 (refer tables 6.19 and 6.20). However for 1-litre packs of milk, there was little variation in price across the two survey periods (refer tables 6.21 and 6.22). Across Australia, prices of both 1 and 2-litre cartons of milk showed minimal variation in each survey period for corner stores located in cities and towns classified as highly accessible, accessible and moderately accessible. Higher milk prices in remote and very remote areas are likely to reflect higher transport costs, lower stock turnover and less direct competition from other retail outlets including supermarkets.

Table 6.19 Average prices by State and city/town accessibility for milk sold in corner stores

(2-litre plain milk — September 2000)

Demographic band (accessibility of locality)	Aust $	NSW $	Vic $	Qld $	WA $	SA $	Tas $	ACT $	NT $
Highly accessible	2.59	2.66	2.48	2.49	2.78	2.72	2.40	2.40	n/a
Accessible	2.59	2.66	2.56	2.38	2.98	2.69	n/a	n/a	2.98
Moderately accessible	2.55	2.67	2.76	2.47	2.70	2.40	2.52	n/a	3.20
Remote	2.92	2.66	n/a	2.81	2.85	2.81	n/a	n/a	3.38
Very remote	3.11	3.27	n/a	2.96	3.15	n/a	n/a	n/a	3.35

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

Table 6.20 Average prices by State and city/town accessibility for milk sold in corner stores

(2-litre plain milk — December 2000)

Demographic band (accessibility of locality)	**Aust** $	**NSW** $	**Vic** $	**Qld** $	**WA** $	**SA** $	**Tas** $	**ACT** $	**NT** $
Highly accessible	2.64	2.67	2.55	2.59	2.81	2.78	2.44	2.40	n/a
Accessible	2.65	2.69	2.68	2.47	3.00	2.79	n/a	n/a	2.98
Moderately accessible	2.60	2.73	2.97	2.50	2.70	2.55	2.48	n/a	3.17
Remote	2.95	2.70	n/a	2.88	2.85	2.88	n/a	n/a	3.38
Very remote	3.16	3.15	n/a	3.02	3.16	n/a	n/a	n/a	3.48

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

60 Description of remoteness measure.

Table 6.21 Average prices by State and city/town accessibility for milk sold in corner stores

(1-litre plain milk — September 2000)

Demographic band (accessibility of locality)	Aust $/litre	NSW $/litre	Vic $/litre	Qld $/litre	WA $/litre	SA $/litre	Tas $/litre	ACT $/litre	NT $/litre
Highly accessible	1.47	1.45	1.49	1.45	1.61	1.45	1.29	1.23	n/a
Accessible	1.47	1.44	1.44	1.48	1.58	1.45	n/a	n/a	1.73
Moderately accessible	1.49	1.49	1.57	1.44	1.72	1.41	1.34	n/a	1.87
Remote	1.76	1.39	n/a	1.71	1.90	1.51	n/a	n/a	1.87
Very remote	1.81	1.72	n/a	1.86	1.76	n/a	n/a	n/a	1.97

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a – data unavailable or category does not exist.

Table 6.22 Average prices by State and city/town accessibility for milk sold in corner stores

(1-litre plain milk — December 2000)

Demographic band (accessibility of locality)	Aust $/litre	NSW $/litre	Vic $/litre	Qld $/litre	WA $/litre	SA $/litre	Tas $/litre	ACT $/litre	NT $/litre
Highly accessible	1.46	1.44	1.49	1.45	1.61	1.45	1.29	1.23	n/a
Accessible	1.48	1.47	1.44	1.49	1.58	1.45	n/a	n/a	1.73
Moderately accessible	1.50	1.51	1.57	1.45	1.72	1.41	1.34	n/a	1.87
Remote	1.76	1.43	n/a	1.71	1.90	1.51	n/a	n/a	1.87
Very remote	1.81	1.71	n/a	1.86	1.76	n/a	n/a	n/a	1.97

Source: Inteldata e-access, 2001 and ACCC.

Note: n/a — data unavailable or category does not exist.

6.6 Summary of retail sector price trends

6.6.1 Average Australian retail prices

Across all milk products, generic-labelled milk sold in supermarkets is less expensive on average than branded milk products. The difference between these prices broadly reflects the brand premiums for milk sold under processor labels. Milk sold in convenience stores and corner stores is also more expensive than similar branded milk sold in supermarkets, broadly reflecting the convenience premium of milk products sold in non-supermarket outlets. In the September 2000 quarter, prices in most milk categories decreased, except for UHT milk. Prices for more differentiated products such as flavoured and fat-modified milks tended to fall the least while prices for plain milk fell the most. Price reductions were more pronounced for generic-labelled milk, however branded milk prices also fell in both the September and December 2000

quarters, particularly for plain milk. While prices for 2-litre packs of plain milk fluctuated in convenience stores and corner stores over the monitoring period, prices for differentiated milk products were broadly similar in these outlets and displayed less variability.

Table 6.23 Average Australian retail milk prices — pre-deregulation

Milk category and pack size	**Pre-deregulation**		**Pre-deregulation**		
	Quarter ending March 2000		Quarter ending June 2000		
	Supermarket generic price	Supermarket branded price	Supermarket generic price	Supermarket branded price	Convenience store price
	$/Unit*	**$/Unit***	**$/Unit***	**$/Unit***	**$/Unit**
2-litre plain	2.50	2.68	2.54	2.72	2.79
1-litre plain	1.34	1.36	1.34	1.39	1.43
2-litre fresh low-fat white	2.82	3.00	2.78	3.08	3.19
1-litre fresh low-fat white	1.44	1.56	1.44	1.58	1.71
2-litre fresh reduced-fat white	2.60	3.32	2.62	3.36	3.50
1-litre fresh reduced-fat white	1.34	1.51	1.33	1.55	1.71
600ml flavoured	n/a	1.88	n/a	1.93	2.11
1-litre UHT	0.94	1.07	0.95	1.09	n/a

Source: Inteldata e-access, 2001, ADC 2001 and data supplied by the retail sector.

Note: Data on Corner stores span the period September to December 2000. n/a — data unavailable. *Supermarket scanned data cover the quarter ending 26 March 2000 and quarter ending 25 June 2000 respectively.

Table 6.24 Average Australian retail milk prices — post-deregulation

Category and pack size	Post-deregulation				Post-deregulation			
	Quarter ending September 2000				Quarter ending December 2000			
	Super-market generic price	Super-market branded price	Conven-ience store price	Corner store price	Super-market generic price	Super-market branded price	Conve-nience store price	Corner store price
	$/unit*	**$/unit***	**$/unit**	**$/unit**	**$/unit***	**$/unit***	**$/unit**	**$/unit**
2-litre plain	2.30	2.60	2.75	2.60	2.16	2.38	2.69	2.64
1-litre plain	1.25	1.36	1.43	1.47	1.19	1.32	1.43	1.47
2-litre fresh low-fat white	2.56	3.06	3.20	3.12	2.38	3.02	3.20	3.15
1-litre fresh low-fat white	1.39	1.56	1.71	1.65	1.35	1.55	1.71	1.65
2-litre fresh reduced-fat white	2.42	3.30	3.11	3.14	2.36	3.26	3.12	3.14
1-litre fresh reduced-fat white	1.30	1.54	1.67	1.66	1.27	1.53	1.67	1.66
600ml flavoured	n/a	1.88	2.10	2.08	n/a	1.90	2.09	2.11
1-litre UHT	1.04	1.21	n/a	1.38**	1.06	1.20	n/a	1.36**

Source: Inteldata e-access, 2001 and ADC and data supplied by the retail sector.

Note: n/a — data unavailable. *Supermarket scanned data cover the quarter ending 24 September 2000 and quarter ending 24 December 2000 respectively. **Results are based on a relatively small sample.

6.6.2 Interstate comparison of plain white milk prices across retail outlets

Prices for generic-labelled milk were broadly consistent across States in the December 2000 quarter following the introduction of national milk prices for these products by the major supermarket chains in August 2000. Plain milk sold in supermarkets under processor brands decreased significantly in the December 2000 quarter, particularly in Victoria where prices were previously high. This trend reflects the inclusion of three months of lower milk prices for generic-labelled product in December. Movements in the price of 1-litre cartons of milk were less pronounced in all States. It seems that the introduction of national prices for generic-labelled milk products has lowered the price of branded milk products across all retail outlets with lower pricing being most significant for 2-litre packs of standard white milk. Accordingly, interstate variability in milk pricing decreased over the monitoring period.

Table 6.25 Interstate comparison of plain white milk prices across retail outlets

Pack size		Quarter ending September 2000				Quarter ending December 2000			
		Super-market generic price	Super-market branded price	Conve-nience store price	Corner store price	Super-market generic price	Super-market branded price	Conve-nience store price	Corner store price
		$/unit*	**$/unit***	**$/unit**	**$/unit**	**$/litre***	**$/litre***	**$/unit**	**$/unit**
NSW	2-litre	2.28	2.46	2.75	2.66	2.14	2.40	2.74	2.67
	1-litre	1.22	1.28	1.42	1.45	1.19	1.28	1.42	1.44
VIC	2-litre	2.36	2.76	2.79	2.48	2.16	2.34	2.51	2.56
	1 litre	1.30	1.45	1.47	1.49	1.19	1.41	1.47	1.49
QLD	2-litre	2.32	2.58	2.67	2.48	2.14	2.32	2.42	2.58
	1 litre	1.22	1.35	1.47	1.46	1.19	1.31	1.47	1.46
WA	2-litre	2.26	2.58	n/a	2.80	2.14	2.40	n/a	2.82
	1 litre	1.28	1.40	n/a	1.63	1.18	1.36	n/a	1.63
SA	2-litre	2.32	2.66	2.76	2.71	2.20	2.48	n/a	2.78
	1 litre	1.25	1.36	1.48	1.45	1.20	1.30	n/a	1.45
TAS	2-litre	2.26	2.58	n/a	2.42	2.14	2.40	n/a	2.45
	1 litre	1.28	1.40	n/a	1.30	1.18	1.36	n/a	1.30

Source: Inteldata e-access, 2001, ADC 2001 and data supplied by the retail sector.

Note: n/a — data unavailable. *Supermarket scanned data cover the quarter ending 24 September 2000 and 24 December 2000 respectively. Figures for NSW include the ACT while figures for the NT are included in SA.

6.7 Conclusion

Savings from sales of supermarket milk to Australian consumers are expected to conservatively realise around $118 million on a full year basis (refer appendix 6). This estimate is based on supermarket savings for the December quarter — the first to fully reflect changes resulting from the supermarkets introducing lower milk prices for generic-labelled products in mid-August 2000. Supermarket chains have indicated that these lower prices will apply indefinitely. When savings estimates for milk sold in non-supermarket outlets are included, total consumer savings since dairy deregulation would far exceed the estimated $118 million savings made by supermarket shoppers. However, while average milk prices in non-supermarket outlets have decreased since deregulation, the absence of reference prices for milk sold in corner stores before 30 June 2000 means that only savings on supermarket sales of milk can be accurately quantified.

7. Trends in milk retailing

7.1 Introduction

Information provided by supermarkets was aggregated to examine costs, revenue and profit trends. Information from convenience stores has been similarly treated.[61] However, retail cost and profit information was not available for milk sold through corner stores.

Milk is one of many items sold by food and grocery retailers and it is not possible to attribute common costs specifically to the sale of milk. Instead movements in the difference between the **purchase costs** of milk products and their **sale prices** (gross profit margins) were used to assess changes in profitability for the supermarket and convenience store sub-sectors as a result of the deregulation of the milk industry from 1 July 2000.

7.2 Costs, revenues and profits — supermarkets

Table 7.1 shows that average milk-specific costs (i.e., the costs of purchasing packaged milk products at wholesale) decreased for Australian supermarkets during the September quarter for all milk other than UHT products. Over the December quarter, wholesale milk prices continued to fall, except flavoured and UHT milk products. With the 11 cents per litre milk levy from 8 July 2000, UHT milk products were expected to rise in price. Under regulation, raw milk used for UHT milk products was typically bought from dairy farmers at about three-quarters of the prescribed market milk price in most States. The additional cost of the milk levy could therefore only be partially offset by lower input prices for UHT milk when the dairy market was deregulated. Average sales revenue for milk products sold in supermarkets decreased in both the September and December quarters except UHT products which increased in price over both quarters and flavoured milk which fell in the September quarter before rising in the December quarter.

61 While the ACCC sought to collect information from all sources on a comparable basis, variations in company structures, methods of cost allocation, and internal accounting procedures led to minor reporting differences between companies. However, as individual companies were largely consistent in their reporting procedures over the monitoring period, quarterly trends in volumes, revenues, costs and margins should not be affected to any significant degree by inter-company variations in reporting.

Table 7.1 Retail sector — national aggregate costs and revenues and changes in aggregate profit margins for milk categories sold in supermarkets

Product category	June quarter (April–June 00) $/litre		September quarter (July–September 00) $/litre			December quarter (October–December 00) $/litre		
	Whole-sale purchase cost	**Retail sales revenue**	**Whole-sale purchase cost**	**Retail sales revenue**	**Change in profit margin relative to June quarter**	**Whole-sale purchase cost**	**Retail sales revenue**	**Change in profit margin relative to Sept quarter**
Plain milk	0.95	1.32	0.93	1.21	-0.10	0.85	1.11	-0.02
Fresh modified white milk*	1.13	1.52	1.11	1.48	-0.02	1.11	1.46	-0.02
UHT standard white milk	0.79	0.99	0.92	1.11	-0.01	1.11	1.31	+0.01
UHT modified milk	0.85	1.11	0.97	1.19	-0.04	1.02	1.21	-0.03
Flavoured milk**	1.82	2.38	1.70	2.27	+0.01	1.76	2.35	+0.02

Note: Information on all pack sizes and brand types are presented at the aggregate level. *Other pasteurised milk includes some information on plain milk due to the form in which data was supplied by the retail sector. **Includes flavoured UHT milk. From 1 July 2000, a 12% Wholesale Sales Tax was replaced with a 10% Goods and Services Tax.

Source: Data supplied by retail sector.

The volume of supermarket sales of all milk products, except UHT milk, increased slightly in the September and December quarters relative to volumes recorded in the three months to June 2000. Aggregate sales revenue across all milk products sold in supermarkets fell during the monitoring period as shown in table 7.2. Gross profit margins decreased across supermarkets for all milk types in the September and December quarters except for UHT standard white milk and flavoured milk.

Table 7.2[62] shows falls in average milk-specific costs and sales revenues for supermarkets and a fall in gross profit margins on milk during the September and December quarters relative to the base period (April–June 2000).

Table 7.2 Retail sector — indexes of volume of sales, costs, revenues and profit margins for aggregate milk sales in supermarkets

(April–June 2000 = 100)

Supermarket performance indicator	June quarter (April–June 00)	September quarter (July–September 00)	December quarter (October–December 00)
Volume of sales (litres)*	100	103.2	106.3
Aggregate retail sales revenue*	100	99.2	97.8
Retail sales revenue (per litre)*	100	96.2	91.9
Wholesale purchase cost (per litre)**	100	99.9	97.1
Gross profit margin (per litre)**	100	84.1	81.0

Note: Information on all pack sizes and branded types are presented at the aggregate level.

Source: *Information based on scanned data for supermarket milk sales. **Data supplied by retail sector.

7.3 Drinking yoghurts

Drinking yoghurt represents a relatively recent product innovation in the dairy goods market. Within this category an extensive array of products is available on supermarket shelves. One leading retailer indicated that over the monitoring period, more than 150 different product types of drinking yoghurt were stocked. Both fermented and non-fermented drinking yoghurts attract the 11 cents per litre milk levy. Table 7.3 shows the trend in costs, revenues and gross profit margins for a leading brand of 1-litre drinking yoghurt sold in supermarkets. Average retail sales revenue increased in the September quarter but fell in the December quarter to levels commensurate with the April–June reference period. Average wholesale purchasing costs for drinking yoghurt sold in supermarkets decreased in the September quarter before stabilising in the December quarter. The average gross profit margin on supermarket sales of drinking yoghurt in

62 Volume, cost and revenue indices used in table 7.2 are based on scan data for supermarket milk sales and information supplied by the retail sector. While cost and profit trends were derived from information pro formas submitted by supermarkets and convenience stores, scan data provided a more comprehensive coverage of the volume of milk sales and associated revenues for the supermarket subsector during the monitoring period. Scanned data covered the following 13-week periods:

- June quarter — from 27 March 2000 to 25 June 2000;
- September quarter — from 26 June 2000 to 25 September 2000; and
- December quarter — 26 September 2000 to 24 December 2000.

both the September and December quarters was higher than in the reference period. In general, the supermarket price of 1-litre packs of drinking yoghurts increased in the September quarter before returning to pre-deregulation levels in the December quarter.

Table 7.3 Retail sector — indexes of costs, revenues and profit margins for drinking yoghurt sold in supermarkets (1-litre leading brand of drinking yoghurt)

(April–June 2000 = 100)

Supermarket performance indicator	June quarter (April–June 00)	September quarter (July–September 00)	December quarter (October–December 00)
Retail sales revenue (per litre)	100	107.5	100.8
Purchase cost from wholesale (per litre)	100	96.4	96.4
Profit margin (per litre)	100	131.9	110.4

Source: Data supplied by retail sector.

7.4 Costs, revenues and profits — convenience stores

Table 7.4 represents aggregate costs, revenues and gross profit margins for milk products sold in convenience stores. During the monitoring period, except modified milk, average wholesale prices of milk sold in convenience stores decreased or remained steady across Australia. Similarly, average revenue for milk (all pack sizes) sold in convenience stores decreased marginally or remained steady except 2-litre low-fat and reduced-fat milk. Prices of flavoured milk decreased very slightly over the monitoring period.

There were no national brands in flavoured milk for which direct price comparisons could be made between States. Hence, the prices of 600 ml containers of the most common brand of flavoured milk in each State were compared. Unlike UHT milk, the raw milk channelled into flavoured milk lines was generally sourced at market milk prices under regulated farmgate price controls. The notable exception was in Western Australia where flavoured milk was previously bought at the lower manufacturing milk price. While this led to Western Australia traditionally having relatively low retail prices and high per capita consumption of flavoured milk, it also meant that the 11 cents per litre milk levy in Western Australia could not be offset by lower input prices following industry deregulation.

Flavoured milk competes directly with substitutes such as soft drinks, sports drinks and fruit juice with its pricing partially dependent on their prices. Most flavoured milk products are sold through traditional corner stores and convenience stores with supermarkets accounting for only about 20 per cent of total sales. Flavoured milk is also subject to GST with the New Tax System being introduced at the same time as farmgate price controls on milk were removed. As retail price mark-ups on flavoured

milk products are typically high, the effect of the GST often outweighed the savings from removing the 12 per cent Wholesale Sales Tax which applied before 1 July 2000.

Table 7.4 Retail sector — aggregate costs, revenues and profit margins for various milk categories sold in convenience stores

Product category and pack size	June quarter (April–June 00) $/unit		September quarter (July–September 00) $/unit			December quarter (October–December 00) $/unit		
	Wholesale purchase cost	**Retail sales revenue**	**Wholesale purchase cost**	**Retail sales revenue**	**Change in profit margin relative to June quarter**	**Wholesale purchase cost**	**Retail sales revenue**	**Change in profit margin relative to September quarter**
2-litre plain	2.21	2.79	2.16	2.75	+0.01	2.06	2.69	+0.04
1-litre plain	1.12	1.43	1.11	1.43	+0.01	1.11	1.43	0
2-litre low-fat	2.64	3.19	2.64	3.20	+0.01	2.63	3.20	+0.01
1-litre low-fat	1.34	1.71	1.34	1.71	0	1.34	1.71	0
2-litre reduced-fat	2.56	3.50	2.50	3.11	-0.33	2.51	3.12	0
1-litre reduced-fat	1.36	1.71	1.32	1.67	0	1.33	1.67	-0.01
600 ml Flavoured	1.27	2.11	1.21	2.10	+0.05	1.20	2.09	+0.01

Source: Data supplied by retail sector.

In convenience stores, average wholesale costs across all milk categories fell in the September quarter but increased slightly in the December quarter. Similarly, average sales revenues fell in the September quarter but increased slightly in the December quarter. The revenue and cost trends shown in table 7.5 resulted in a marginal increase in the average gross profit margin across all milk products sold in convenience stores during the September and December quarters relative to the reference period of April to June 2000. However, considerably lower sales volumes resulted in a 17 per cent drop in aggregate revenues on milk sales for convenience stores in the December 2000 quarter relative to the June 2000 quarter.

Table 7.5 Retail sector — indexes of volumes of sales, costs, revenues and profit margins for aggregate milk sales in convenience stores

(April–June 2000 = 100)

Convenience store performance indicator	June quarter (April–June 00)	September quarter (July–September 00)	December quarter (October–December 00)
Volume of sales (litres)	100	76.2	82.7
Aggregate retail sales revenue	100	75.8	82.9
Aggregate wholesale purchase cost	100	75.4	82.2
Retail sales revenue (per litre)	100	99.4	100.4
Wholesale purchase cost (per litre)	100	98.9	99.5
Gross profit margin (per litre)	100	100.8	103.6

Note: Information on all pack sizes and branded types are presented at the aggregate level.

Source: Data supplied by retail sector.

Wholesale prices of 2-litre plain milk decreased in all States where there was available data during the monitoring period (refer to table 7.6). Similarly, average revenues for 2-litre standard white milk also decreased in those States. These trends resulted in average gross profit margins decreasing in Queensland and Victoria and increasing in New South Wales. Given that average revenues across all milk categories sold in convenience stores were relatively steady on a per litre basis during the monitoring period, it seems that 2-litre containers of fresh white standard milk represented some of the more significant savings to convenience-store shoppers following deregulation. Separate data was not available for Western Australia, Tasmania, the Australian Capital Territory, the Northern Territory and South Australia during the December quarter.

Table 7.6 Retail sector — typical costs, revenues and profit margins in some States for aggregate milk sales in convenience stores (2-litre plain milk)

State	June quarter (April–June 00) $/unit		September quarter (July–September 00) $/unit			December quarter (October–December 00) $/unit		
	Retail sales revenue	**Wholesale purchase cost**	**Retail sales revenue**	**Wholesale purchase cost**	**Change in profit margin relative to June quarter**	**Retail sales revenue**	**Wholesale purchase cost**	**Change in profit margin relative to September quarter**
NSW	2.78	2.23	2.75	2.19	+0.01	2.74	2.11	+0.07
VIC	2.85	2.12	2.79	2.06	0	2.51	1.86	-0.08
QLD	2.89	2.15	2.67	1.98	-0.05	2.42	1.83	-0.10
SA	2.79	2.25	2.76	2.21	+0.01	n/a	n/a	n/a

Note: n/a — data not available.

Source: Data supplied by retail sector.

Wholesale and retail prices for 1-litre plain milk sold in convenience stores were relatively stable during the monitoring period in Victoria, New South Wales and Queensland (refer table 7.7). Hence, gross profit margins on these milk products were also relatively unchanged in those States. One-litre cartons of plain milk are often purchased from convenience stores for consumption within the next 24 hours. Accordingly, consumers are likely to be more concerned with convenience and availability than price. Volumes of milk sold in this pack size through convenience outlets are likely to be less sensitive to discounting by supermarkets. This gives wholesalers supplying this market and convenience store proprietors better pricing power for these products compared to larger pack sizes of milk.

Table 7.7 Retail sector — aggregate costs, revenues and profit margins in some States for milk sold in convenience stores (1-litre plain milk)

State	June quarter (April–June 00) $/Unit		September quarter (July–September 00) $/Unit			December quarter (October–December 00) $/Unit		
	Retail sales revenue	**Wholesale purchase cost**	**Retail sales revenue**	**Wholesale purchase cost**	**Change in profit margin relative to June quarter**	**Retail sales revenue**	**Wholesale purchase cost**	**Change in profit margin relative to September quarter**
NSW	1.42	1.13	1.42	1.12	+0.01	1.42	1.13	-0.01
VIC	1.45	1.06	1.47	1.06	+0.02	1.47	1.05	+0.01
QLD	1.49	1.10	1.47	1.08	0	1.47	1.08	0
SA	1.49	1.14	1.48	1.12	+0.01	n/a	n/a	n/a

Source: Data supplied by retail sector.

7.5 Conclusion

From the June to December 2000 quarter, the gross margin on aggregate milk sales in supermarkets declined by 19 per cent with retail prices falling at a greater rate than wholesale prices. Despite sales volumes increasing by around six per cent, substantial reductions in per litre revenue led to an overall decrease in aggregate milk sales revenue for Australian supermarkets during this period. In convenience stores, sales volumes declined by around 24 per cent in the September quarter. With the per litre cost of milk remaining relatively constant in convenience stores, aggregate revenue decreased by around 24 per cent as consumers bought more of their milk from supermarkets. Although prices and margins in convenience stores were largely unchanged when averaged across all milk categories following dairy deregulation, reduced sales volumes resulted in lower overall revenue.

8. Trends in milk processing

8.1 Introduction

Information provided by companies in the milk processing sector has been aggregated to examine cost, revenue and profit trends. The results presented in this chapter reflect average trends in the milk processing sector over the monitoring period. For some companies, the processing and sale of market milk is only a minor component of their business activities. Other activities can include fruit juice processing, the manufacture of soft dairy products such as yoghurt as well as the distribution of other non-dairy products. Therefore care needs to be taken in interpreting cost data. However, the data provided by these companies are estimates of those costs directly attributable to milk processing over the monitoring period. As indicated earlier, when aggregating company financial information it is important to recognise the varying methods of cost allocation and different internal accounting procedures.

8.2 Milk processing costs

Tables 8.1 and 8.2 and figure 8.1 show changes in milk processing costs over the monitoring period. The removal of farmgate price controls from 1 July 2000 resulted in a significant fall in the cost of raw milk bought by milk processing companies from dairy farmers. Dairy deregulation coincided with the end of the Commonwealth Government's dairy market support scheme for manufacturing milk producers and the removal of the associated market milk levy of around 1.9 cents per litre. A number of state levies for the administration of regulated market milk entitlements were also abolished from 1 July 2000. The average cost of raw milk measured across the milk processing sector fell by around one-third following deregulation (refer table 8.1). The cost of raw milk constituted just over one-third of total milk processing costs in the final six months of 2000 compared to nearly half of total costs before deregulation (refer table 8.2).

Growth in supermarket sales of generic-labelled milk has increased the reliance of milk processors on promotion and advertising to retain brand premiums for products marketed under processor labels. Therefore costs relating to media and promotional activities increased by around a third over the six months to December 2000. Factory overheads also increased by around one quarter in the six months to December 2000. New plant and equipment to produce UHT milk products contributed to an increase in factory overheads over this period. Also, some milk processing sites were closed during the three months to 30 June 2000, either permanently as part of company rationalisation programs or temporarily to replace obsolete plant. This resulted in a low reference base for factory overheads in the June quarter. Plant closures and upgrades should help milk processing companies improve the long-term efficiency of their operations and enable companies to capture economies of scale and scope. Indirect costs also increased following deregulation mainly due to the increase in management expenses and sundry charges including damaged stock, royalties and costs relating to milk procurement.

Labour costs represent less than 3 per cent of total milk processing costs and were largely unchanged following deregulation. Packaging costs, representing slightly more than 10 per cent of total expenditures by milk processors, rose by around 3 per cent. However, the cost of distribution, freight and warehousing rose by nearly one-third in the six months to December 2000 across the sector. Aggregate expenditures for this cost category are second only to costs for purchases of raw milk and represented around 17 per cent of total sector expenditures for the December 2000 quarter. Average costs for the milk processing sector across all milk categories on a per litre basis were approximately 99 and 96 cents in the September and December quarters respectively. Average processing costs varied slightly between individual companies with most processors having costs just below the sector averages in these two quarters. Cost variability between processors was greatest in the September quarter of the monitoring period. Overall, processing costs across all milk categories decreased on a per litre basis following deregulation. This is set out later in table 8.5.[63]

Table 8.1 Indexes of milk processing costs (April–June 2000 = 100)

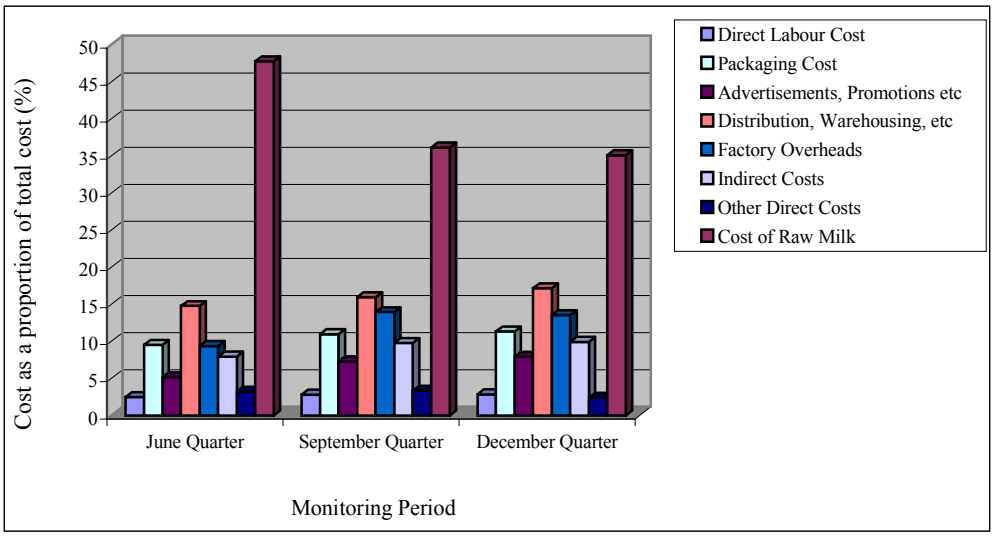
Cost component	June quarter (April–June 00)	September quarter (July–September 00)	December quarter (October–December 00)
Direct labour cost per litre	100	101.6	99.3
Packaging cost per litre	100	102.9	103.2
Advertisements, discounts, promotions and public relations expenditure per litre	100	126.5	132.6
Distribution, freight, warehousing expenditure per litre	100	96.5	100.5
Factory overheads per litre	100	132.9	124.8
Cost per litre of raw milk	100	67.5	63.5
Other direct cost per litre*	100	92.9	64.6
Indirect cost per litre	100	110.2	108.3
Total cost per litre	100	100	100

Note: * This includes cost of processed milk traded between processing companies.

Source: Data supplied by milk processing companies.

63 Cost data supplied by the processing sector reflect aggregate processing cost for all milk types. However, it must be noted that the unit cost ($/litre) for processing a litre of milk varies with the form of product mix.

Figure 8.1 Average cost categories for milk processors as a proportion of total costs



Note: Other direct cost includes cost of processed milk traded between processing companies.

Source: Data supplied by milk processing sector.

Table 8.2 Average cost categories for milk processors as a proportion of total costs

Cost component	June quarter (April–June 00) **(%)**	September quarter (July–September 00) **(%)**	December quarter (October–December 00) **(%)**
Direct labour cost	2.5	2.8	2.8
Packaging cost	9.5	10.9	11.3
Advertisements, discounts, promotions and public relations expenditure	5.1	7.3	7.9
Distribution, freight, warehousing expenditure	14.7	15.9	17.1
Factory overheads	9.4	13.9	13.5
Cost of raw milk	47.7	36.1	35.1
Other direct cost*	3.2	3.3	2.4
Indirect cost	7.9	9.8	9.9
Total cost	100	100	100

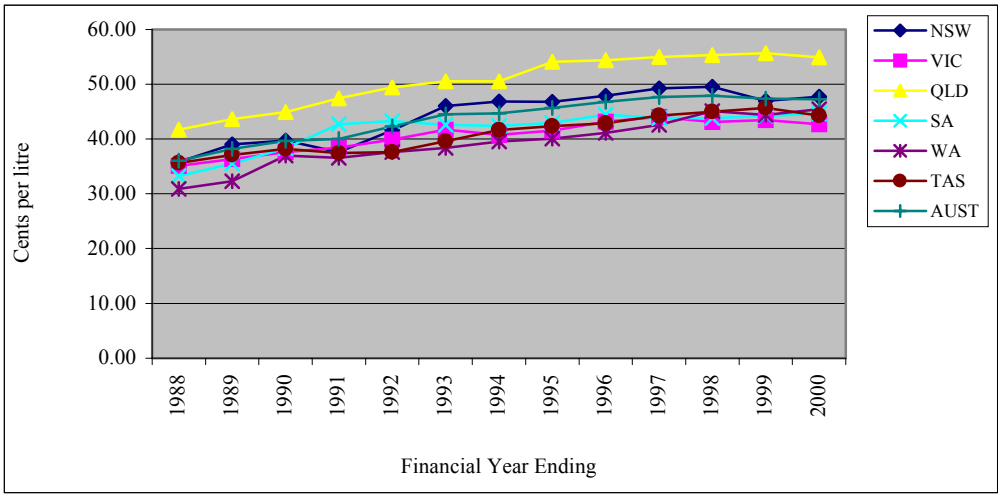
Note: *This includes cost of processed milk traded between processing companies.

Source: Data supplied by milk processing companies.

8.3 Input cost from the farm sector

Figure 8.2 and table 8.3 show trends in farmgate prices of market milk under regulated farmgate price controls from 1988 to 2000. In the six months to 30 June 2000 average farmgate prices decreased in Victoria, Queensland and Tasmania but increased in other States. The national average farmgate price of market milk also decreased marginally to 47.25 cents per litre during this period. In absolute terms, average farmgate prices for market milk were highest in Queensland (54.90 cents) and lowest in Victoria (42.70 cents) at 30 June 2000. These prices have been adjusted for freight and contributions paid by farmers to state dairy authorities but exclude payment of Commonwealth levies.[64]

Figure 8.2 Average farmgate prices paid for market milk by State



Note: Indicative prices paid for milk received before deduction of levies. Market milk prices adjusted for freight charges and farmer contributions to state dairy authorities. Series is consistent across States from 1995 to 1999, Queensland and South Australian figures are not adjusted for freight and farmer contribution to state milk authority margins before 1994.

Source: Australian Dairy Corporation, 2001.

64 The role of these levies is discussed in chapter 2. See specifically table 2.1.

Table 8.3 Average farmgate prices paid for market milk by State (1988–2000)

Financial year ending	NSW	VIC	QLD	SA	WA	TAS	AUST
1988	35.80	35.10	41.70	33.20	30.90	35.59	36.00
1989	39.00	36.30	43.60	35.50	32.30	37.05	38.20
1990	39.70	37.60	44.90	38.30	36.98	38.16	39.64
1991	37.61	38.40	47.40	42.70	36.55	37.45	39.99
1992	41.57	39.90	49.40	43.30	37.62	37.62	42.27
1993	46.02	41.70	50.50	42.60	38.39	39.57	44.51
1994	46.82	40.78	50.51	42.40	39.56	41.64	44.68
1995	46.80	41.53	54.10*	42.90	40.07	42.35	45.69
1996	47.90	43.14	54.39*	44.43	41.10	42.88	46.79
1997	49.26	44.01	54.96*	43.77	42.55	44.29	47.69
1998	49.56	43.10	55.30	43.79	45.09	44.97	47.90
1999	46.96	43.44	55.70	44.21	44.41	45.69	47.38
2000	47.70	42.70	54.90	44.61	45.46	44.29	47.25

Note: Indicative prices paid for milk received before deduction of levies. Market milk prices adjusted for freight charges and farmer contributions to state dairy authorities. Series is consistent across States from 1995 to 1999, Queensland and South Australian figures are not adjusted for freight and farmer contribution to state milk authorities' margins before 1994. *Queensland market milk price includes drought levy, January 1995–July 1997.

Source: Australian Dairy Corporation, 2001.

8.4 Wholesale revenue from milk processing activities

Table 8.4 shows average sales revenue for various milk categories across the milk processing sector during the monitoring period. Average sales revenue decreased for all milk categories in the September 2000 quarter except for UHT modified milk and the category other leviable milk products. Sales revenue for plain milk and UHT standard white milk decreased significantly during this period. The declining trend in sales revenue generally continued into the December 2000 quarter, however revenue for UHT standard white milk increased.

Average sales revenue for the milk processing sector across all milk categories on a per litre basis was $1.06 and $1.02 in the September and December 2000 quarters respectively. Less than half of companies in the sector had revenues above the sector average in the six months to December 2000. Average sales revenues on a per litre basis for individual companies varied across the monitoring period with variability being most pronounced in the September quarter. Aggregate sales revenue for the milk

processing sector across all milk categories decreased by around 14 per cent in the six months to December 2000 (refer table 8.5).

Table 8.4 Processing sector — changes in aggregate sales revenue at the wholesale level for various milk categories

Milk category	June quarter (April–June 00) $/litre	September quarter (July–September 00) $/litre		December quarter (October–December 00) $/litre	
	Sales revenue	**Sales revenue**	**Change in revenue relative to June quarter**	**Sales revenue**	**Change in revenue relative to September quarter**
Plain	1.05	0.88	-0.17	0.82	-0.06
Fresh modified white	1.17	1.06	-0.11	1.04	-0.02
UHT standard white	1.06	0.96	-0.10	1.00	+0.04
UHT modified white	1.01	1.05	+0.04	0.98	-0.07
Flavoured milk*	1.77	1.69	-0.08	1.66	-0.03
Other leviable milk products**	2.75	3.80	+1.05	4.21	+0.41

Note: Purchase cost from wholesaler represents cost of leviable milk products ex factory. Information on all pack sizes and both generic and branded milk products are presented at the aggregate level. *Includes Flavoured UHT milk. From 1 July 2000 the 12% Wholesale Sales Tax, which applied up to 30 June 2000, was replaced with a 10% Goods and Services Tax. **This includes soy milk, butter milk, cappuccino choice, and cream milk.

Source: Data supplied by milk processing sector.

8.5 Volume of sales and net profit margins

The aggregate volume of sales for the milk processing sector was marginally higher by 0.6 and 0.5 per cent respectively in the September and December 2000 quarters compared to levels before deregulation. This shows that milk volumes did not significantly increase over the monitoring period despite lower wholesale and retail prices. Average net profit margins for all categories of milk processed across the sector in the September and December 2000 quarters were about 7 and 6 cents per litre respectively. More than half of companies in the sector had net profit margins above the sector average for the September and December 2000 quarters. However processing costs exceeded milk revenues for a small number of companies in the six months to December 2000. Net profit margins across the sector were about 12 and 18 per cent lower on a per litre basis in the September and December 2000 quarters compared to the base period (April to June 2000).

Table 8.5: Indexes of aggregate volumes of sales, revenues, costs and profits of Australian milk processors (April–June 2000 = 100)

Cost component	June quarter (April–June 2000)	September quarter (July–Sept 2000)	December quarter (Oct–Dec 2000)
Volume of sales (litres)	100	100.6	100.5
Direct cost per litre	100	87.5	84.6
Indirect cost per litre	100	110.2	108.3
Total cost per litre	100	89.3	86.5
Sales revenue per litre	100	89.2	86.1
Net profit margin per litre	100	88.2	81.5

Source: Data supplied by milk processing sector.

8.6 Conclusion

The average net profit margins of Australian milk processors decreased by around 12 and 18 per cent respectively on a per litre basis for the September and December 2000 quarters relative to the June 2000 quarter. As the total volume of milk sold in Australia was relatively constant over this period, the overall profitability of milk processors decreased following deregulation. Although price discounting of branded milk products fell away in the December 2000 quarter, net profit margins remain considerably lower than for periods before deregulation.

9. The demand response to changes in retail prices

This chapter looks at consumer demand responses to price changes over the nine months to the end of 2000. This period covered the removal of farmgate price controls for milk on 1 July 2000 and the introduction of the Dairy Industry Adjustment Levy from 8 July 2000. Price changes in supermarkets, convenience stores and corner stores have been outlined in chapter 6. This chapter examines aggregate consumer responses to those changes.

Consumers often alter their consumption patterns in response to price changes of certain goods, sometimes switching to substitute products. When the extent of price movement varies between competing types of retail outlets, consumers may revisit their buying habits in accordance with their individual preferences for trading-off factors such as price and convenience. This chapter uses data provided by the Australian Dairy Corporation to show how consumers have changed their buying patterns over the monitoring period.

9.1 Shift in demand to supermarkets

Total volume of milk sold through all outlets varied only minimally during 2000 as shown in table 9.1. There was however, some switching between different retail outlets. The proportion of milk sold through supermarkets increased slightly compared to convenience stores and corner stores during 2000. This trend to supermarkets is probably because of the significant discounting of supermarket milk prices after deregulation. The volume of milk sales through supermarkets across all categories as a percentage of total national milk sales increased from 48.1 per cent to 51.2 per cent from the March quarter to the December quarter 2000. However, despite the increased volume of sales by supermarkets the effect of price discounting resulted in a fall in the value of total milk sales in supermarkets.

Table 9.1 Quarterly national volumes of total milk sales by outlet

(March quarter–December quarter 2000)

Quarter	Supermarket*			Other		National
	Volume of sales	Volume as a percentage of total milk sales	Total value of milk sales	Volume of sales	Volume as a percentage of total milk sales	Total milk sales
	(litres)	(%)	($)	(litres)	(%)	(litres)
March (3 months to 26/03)	227 145 400	**48.1**	318 980 700	245 093 140	**51.9**	472 238 540
June (3 months to 25/06)	232 431 300	**48.4**	329 411 500	248 248 290	**51.6**	480 679 590
September (3 months to 24/09)	239 769 400	**49.3**	326 747 800	246 449 220	**50.7**	486 218 620
December (3 months to 24/12)	247 112 300	**51.2**	322 075 200	235 229 690	**48.8**	482 341 990

Note: Other sales include traditional corner stores and convenience stores. Figures include all pack sizes. *Includes both generic and branded products.

Source: ADC, 2001.

9.2 Shift in demand between supermarkets

While there was a shift in the proportion of milk sold by supermarkets over this period some fared better than others in securing the increased sales. As table 9.2 indicates, Woolworths increased its share of milk sales at the expense of Franklins, mainly, but also the independents and smaller regional chains classified as other supermarkets. The volume of milk sold through Coles Supermarkets increased following deregulation but this only translated to an increase in market share of Australian supermarket milk sales for the December quarter.

Table 9.2 Quarterly national sales of total milk sold in supermarkets by chain (March quarter–December quarter 2000)

Quarter	Woolworths	Percentage of national sales	Coles	Percentage of national sales	Franklins	Percentage of national sales	Other	Percentage of national sales
	('000 litres)	(%)	('000 litres)	(%)	('000 litres)	(%)	('000 litres)	(%)
March (3 months to 26/03)	87 394	**46.8**	61 191	**32.7**	25 096	**13.4**	13 198	**7.1**
June (3 months to 25/06)	90 052	**47.1**	61 398	**32.1**	25 973	**13.6**	13 789	**7.2**
September (3 months to 24/09)	94 649	**48.0**	63 224	**32.1**	25 355	**12.9**	14 013	**7.1**
December (3 months to 24/12)	97 666	**48.1**	66 267	**32.6**	25 732	**12.7**	13 502	**6.6**

Note: Figures include all pack sizes.

Source: ADC, 2001.

9.3 Increase in demand for plain milk

Analysis of supermarket sales during the monitoring period shows an increase in the sale of plain milk since deregulation. Plain milk accounted for over half of all supermarket sales by the end of 2000. As explained in chapter 6, following deregulation the price of UHT milk increased and therefore the differential between fresh and UHT milk prices decreased. UHT milk seems, therefore, to have become less popular as a substitute for fresh milk leading to a fall in the volume of UHT milk sales as reflected in the market share data. Some substitution seems to have occurred of low-fat milk for reduced-fat milk. Both low-fat and reduced-fat milk experienced price reductions (as chapter 6 indicates) but price reductions for low-fat milk were greater.

Table 9.3 Quarterly percentage volumes of different milk types sold nationally in supermarkets

(March quarter–December quarter 2000)

Quarter	Plain milk	Reduced -fat milk	Low-fat milk	UHT milk	Flavoured milk	Specialty milk	Total milk sales
	(%)	(%)	(%)	(%)	(%)	(%)	('000 litres)
March (3 months to 26/03)	49.8	16.8	12.1	15.5	4.2	1.7	227 145.60
June (3 months to 25/06)	50.0	16.9	11.8	16.1	3.6	1.7	232 431.30
September (3 months to 24/09)	51.8	16.4	12.1	14.7	3.3	1.6	239 769.50
December (3 months to 24/12)	52.5	15.8	12.7	13.6	3.7	1.6	247 112.40

Note: Figures include all pack sizes.

Source: ADC, 2001.

9.4 Increase in demand for generic milk

Lower prices for generic-labelled milk sold in supermarkets were introduced from mid-August 2000. As a result, sales of generic-labelled plain milk increased substantially at the expense of branded products. Sales of generic-labelled plain milk as a percentage of the national volume of total milk sales in this milk category increased from 37.2 per cent to nearly 62 per cent (refer to table 9.4). This trend occurred at the expense of processor brands and resulted in a very dramatic change in the composition of supermarket milk sales by the end of 2000. Milk processors with branded products increasingly relied on convenience and corner stores to benefit from brand promotion and advertising.

Table 9.4 Quarterly national sales of generic and branded plain milk sold in supermarkets

(March quarter–December quarter 2000)

Quarter	Generic milk	Percen-tage of national sales	Branded milk	Percentage of national sales	National sales
	('000 litres)	(%)	('000 litres)	(%)	('000 litres)
March (3 months to 26/03)	35 846	**31.7**	77 174	**68.3**	113 020
June (3 months to 25/06)	43 144	**37.2**	72 930	**62.8**	116 074
September (3 months to 24/09)	62 364	**50.2**	61 823	**49.8**	124 187
December (3 months to 24/12)	79 923	**61.6**	49 872	**38.4**	129 795

Note: Figures include all pack sizes.

Source: ADC, 2001.

The shift to generic-labelled milk was less dramatic for other milk products. Sales of generic-labelled UHT milk increased marginally representing about half of all UHT milk sold in supermarkets (see table 9.5). The increase in the price of both branded and generic-labelled UHT milk may have encouraged the market shift to the cheaper generic product.

Table 9.5 Quarterly national sales of generic and branded UHT milk sold in supermarkets

(March quarter–December quarter 2000)

Quarter	Generic milk	Percen-tage of national sales	Branded UHT milk	Percentage of national sales	Total sales
	('000 litres)	(%)	('000 litres)	(%)	('000 litres)
March (3 months to 26/03)	17 189	**48.9**	17 967	**51.1**	35 157
June (3 months to 25/06)	18 264	**48.8**	19 123	**51.2**	37 388
September (3 months to 24/09)	18 118	**51.3**	17 232	**48.7**	35 350
December (3 months to 24/12)	17 247	**51.1**	16 478	**48.9**	33 724

Note: Figure includes all pack sizes.

Source: ADC, 2001.

The shift to generic-labelled low-fat milk was more pronounced. Price discounting by supermarkets across all pack sizes led to lower prices of generic low-fat milk relative to branded low-fat milk. As table 9.6 shows, sales of low-fat milk increased from around 20 per cent of supermarket low-fat milk sales to around 31 per cent in the December quarter. Favourable product positioning of generic-labelled low-fat milk on supermarket shelves possibly contributed to increased sales. The proportion of low-fat milk to total milk sales also increased in absolute terms.

Table 9.6 Quarterly national sales of generic and branded low-fat milk in supermarkets

(March quarter–December quarter 2000)

Quarter	Generic low-fat milk	Generic Milk as a percentage of national sales	Branded low-fat milk	Branded Milk as a percentage of national sales	National sales
	('000 litres)	(%)	('000 litres)	(%)	('000 litres)
March (3 months to 26/03)	5372	**19.6**	22 008	**80.4**	27 380
June (3 months to 25/06)	6121	**22.3**	21 373	**77.7**	27 495
September (3 months to 24/09)	7824	**26.9**	21 266	**73.1**	29 090
December (3 months to 24/12)	9671	**30.7**	21 792	**69.3**	31 462

Note: Figures include all pack sizes.

Source: ADC, 2001.

9.5 Increase in demand for larger pack sizes

Supermarket pricing strategies introduced since deregulation have led to a significant reduction in the price of 3-litre cartons of plain milk, as table 9.7 shows. On a per litre basis a 3-litre carton of plain milk was much cheaper than other pack sizes and this margin of difference increased in the December quarter relative to the June quarter. In response to these price changes the 3-litre packs of milk increased from a little over one quarter of the total volume of supermarket sales of standard white milk to over 36 per cent of supermarket sales. The increase was by 5 per cent in the September quarter and by 6.6 per cent in the December quarter. Most of this increase was at the expense of 2-litre pack sales.

Table 9.7 Quarterly national percentage sales and average prices of plain milk in supermarkets by pack size

(March quarter–December quarter 2000)

Quarter	3-litre		2-litre		1-litre		Other	
	Share of sales	Average price	Share of sales	Average price	Share of sales	Average price	Share of sales	Average price
	(% vol)	($/litre)	(% vol)	($/litre)	(% vol)	($/litre)	(% vol)	($/litre)
March (3 months to 26/03)	23.8	1.28	57.3	1.31	14.8	1.35	4.0	1.49
June (3 months to 25/06)	25.2	1.30	56.2	1.33	14.3	1.38	4.4	1.52
September (3 months to 24/09)	30.2	1.15	52.6	1.23	13.3	1.32	3.9	1.47
December (3 months to 24/12)	36.5	1.03	47.7	1.12	12.4	1.27	3.4	1.42

Note: Figures include both generic and processor brands of milk.

Source: ADC, 2001.

9.6 Role of marketing strategy in changing demand for milk

This chapter illustrates the response of consumers to changes in pricing signals. Significant changes in milk prices following deregulation were led by the supermarkets in what appears to be a broader retail strategy. The adoption of a new pricing policy for supermarkets, initiated by Woolworths on 15 August 2000, established standard **national** milk prices for generic-labelled milk and effectively created a floor in the Australian price of plain milk. From the perspective of Australian supermarket chains, the reduction of milk prices has attracted greater store traffic and brought consumers into supermarkets to buy a basic good with the prospect of also buying higher-margin items.

Traditionally, advertising and promotional expenditure has been used to develop brands and create a premium price between the generic product and the branded product. However, the changing demand patterns apparent in the first six months of deregulation indicate that consumer attraction to branded milk was not enough to withstand the substantial discounting of generic-labelled products. Sales volumes of generic-labelled milk sold in supermarkets relative to supermarket sales of branded milk rose from 37.2 per cent to 61.6 per cent of total supermarket sales over the six months to December 2000.

In fact, the generic milk pricing strategy of supermarkets had implications for the sale of milk across the whole retail sector. The discounting of generic-labelled milk following deregulation also had a considerable impact on branded milk products sold in non-supermarket outlets.

Milk sold in non-supermarket outlets has traditionally been priced above comparative generic-labelled products because of embedded brand and convenience premiums. Lower stock turnover in convenience and corner stores often means a relatively high proportion of the costs of business overheads is factored into individual product prices. However, despite higher prices for milk sold in non-supermarket outlets, increased convenience means milk will continue to be sold in this way. That is, consumers have traditionally been prepared to pay an added margin for convenience.

However, the average convenience premium for plain milk sold in non-supermarket outlets in effect increased substantially following price reductions for milk sold in supermarkets. Consequently, there was a significant decline in the aggregate volume of milk sold in non-supermarket outlets over the final six months of 2000. By the December 2000 quarter, supermarkets accounted for around 51.2 per cent of total milk sales by volume, up from 48.4 per cent in the three months to June 2000.

These changes in demand patterns have been particularly difficult for milk processors relying on developing brand names as a competitive strategy. Consumers have generally shown greater brand loyalty to milk products such as flavoured and specialty milks that are more highly differentiated than plain milk. In response to changing market dynamics, milk processors may resort to pursuing revenue growth from highly differentiated milk products that have limited direct substitutes.

9.7 Conclusion

As described in chapter 6, substantial price discounting of retail milk products occurred in the six months following deregulation. While price reductions have had a very limited impact on the overall demand for milk, patterns of demand have been affected. Milk demand has followed price and therefore milk sales in supermarkets have shifted in favour of products with the greatest discounting. These products have been essentially plain milk (at the expense of UHT milk), generic products (at the expense of branded products) and larger pack sizes (such as 3-litre containers). Of these shifts in demand, the movement in supermarket sales away from branded to generic-labelled plain milk was the most dramatic and highlights the vulnerability of processors competing to sell an essentially homogeneous product on the basis of brand differentiation rather than price.

10. Conclusion

The pressure for deregulation of the dairy industry has come from the domestic sphere, more recently with the implementation of national competition policy, and from changing international circumstances. Currently about half the milk supply in one form or another ends up being exported. This proportion is expected to rise.

Historically in Australia, State Governments had regulatory control over most elements of the fresh milk supply chain, but over the last decade this control has gradually diminished. In the long-term process of deregulation, an important step was the abolition of the regulated milk prices at the retail level.

However, this reform which began over a decade ago led to higher retail prices for fresh milk. This was perhaps not surprising because the objective of regulation had been to keep retail margins tight. Understandably, however, the community was concerned that the deregulation of farmgate prices would unfavourably affect consumer pricing. The fear was that both farmers and consumers would be worse off while retailers and processors would capture all the benefits of deregulation.

To help government and the community better understand the impact of dairy deregulation, the ACCC was directed under the Prices Surveillance Act to monitor costs, prices and profits along the milk supply chain for leviable milk products. The monitoring brief focused on the first six months after deregulation although data was also collected for the three months before deregulation. A key goal of the ACCC's monitoring has been to determine the impact on consumer prices of dairy industry deregulation.

Six months would normally be considered a relatively short period to fully assess the impact of such a substantial change in the regulatory environment. However, significant change has occurred over this period and the dynamics of the industry have undoubtedly been altered although the impact of these changes is yet to be fully played out.

Before July 2000 farmer prices for market milk were protected. After July 2000 the bargaining position of dairy farmers became subject to a set of new circumstances. Nevertheless, as chapter 4 concludes, the structure of the industry is such that not all bargaining power of farmer groups was lost with deregulation. Ultimately, as consumers are prepared to pay a premium for fresh milk, processors need a reliable supply of market milk. They will have to pay farmers a sufficient return to guarantee supplies or risk dairy farmers exiting into other areas of agricultural production.

A new dynamic has also evolved in the relative competitive position between processors and the retail sector. Processor bargaining power, and therefore ability to influence price, has been found to be relatively weak, partly due to pressure to lower excess processing capacity and firm up market shares in the newly deregulated environment. However, it is at the retail level that the most complex dynamic has developed. Specifically, this has been the result of supermarkets discounting generic products.

On 15 August 2000 Woolworths announced standard national milk prices for its generic-labelled milk that effectively created a new floor in the Australian price of plain milk. The new prices became effective immediately and signalled the first time that a retail chain had set national prices for 1, 2 and 3-litre packs of milk. These new prices followed the offer to tender of two-year supply contracts, which attracted aggressive bidding from the major milk processors. Following Woolworths' announcement of its new milk pricing structure, Coles, Franklins and IGA each stated they would match Woolworths' lower prices for their own private labels.

Before these announcements there had been significant state-based differences in retail milk prices. Thus a national retail market for milk coincided with the first few months of full deregulation.

This strategy of the supermarkets, based on driving more store traffic rather than higher revenue from milk, meant that convenience and corner stores, which provided branded products as well as that intangible commodity called convenience, came under considerable competitive pressure. Convenience store and corner store segments of the retail market found this supermarket strategy particularly difficult to compete against as market share shifted to the supermarket sector.

Given these changes in the competitive dynamics of the dairy industry the report highlights the following key trends in prices, revenue, margins and patterns of demand for milk.

Price changes

Australian supermarket prices for plain, reduced-fat and low-fat milk decreased by an average of 22 cents, 6 cents and 9 cents per litre respectively across all pack sizes and brands from the June to December 2000 quarter. These products make up 81 per cent of total milk products. However, prices for some speciality products rose.

In convenience and corner stores, prices of 2-litre packs of plain milk decreased in response to lower supermarket prices. However, price reductions for 1-litre packs of plain milk and other milk categories were generally less pronounced.

Price reductions for milk were greatest in Victoria where plain milk fell by an average of 32 cents per litre in supermarkets. Price decreases in States, which previously had low retail prices for milk such as New South Wales, declined to a lesser extent.

Impact on margins and sales revenues

From the June to December 2000 quarter, the gross margin on aggregate milk sales in supermarkets declined by 19 per cent with retail prices falling at a greater rate than wholesale prices. Despite sales volumes increasing by around six per cent, substantial reductions in per litre revenue led to an overall decrease in aggregate milk sales revenue for supermarkets.

In convenience stores, sales volumes declined by around 24 per cent in the September quarter. With the per litre cost of milk remaining relatively constant in convenience stores, aggregate revenue decreased by around 24 per cent as consumers bought more of their milk from supermarkets. Therefore, although prices and margins in convenience stores were largely unchanged when averaged across all milk categories following dairy deregulation, reduced sales volumes resulted in lower overall revenue.

The average net profit margins of Australian milk processors decreased by around 12 and 18 per cent respectively on a per litre basis for the September and December 2000 quarters relative to the June 2000 quarter. As the total volume of milk sold in Australia was relatively constant over this period, the overall profitability of milk processors decreased following deregulation. Although price discounting of branded milk products fell away in the December 2000 quarter, net profit margins remain considerably lower than for periods before deregulation.

The demand response to price changes

Demand followed price and subsequently there was a shift in milk sales to the supermarket sector, to plain milk (away from UHT milk), for generic products (away from branded products) and towards the largest pack size (3-litre) where discounting has been greatest. Of these, the movement in supermarket sales away from branded plain milk to generic-labelled plain milk was the most dramatic.

Prices for milk sold in traditional corner stores were found to be highest in metropolitan areas and small towns. This suggests that consumers who buy their milk from non-supermarket outlets in metropolitan cities may be less price-sensitive than regional and rural milk consumers and more willing to pay a premium for convenience. For small towns, higher distribution costs and a lack of direct competition from supermarkets are likely to contribute to higher milk prices. As expected, milk prices in remote and very remote localities tended to be more expensive than milk sold in more accessible areas due to higher transport costs.

The report broadly concludes that Australian milk consumers are better off. Australian processors and retailers therefore have not captured the benefits of deregulation to the exclusion of consumers. Alternatively, as a recent ABARE report noted, many dairy farmers in Western Australia, Queensland and New South Wales have been badly affected by the removal of farmgate price controls for drinking milk. However, farmers in the other States that have traditionally had a high reliance on milk directed to manufactured dairy products, have seen reductions in market milk premiums largely offset by recent increases in prices for internationally traded dairy commodities.

Of course this new dynamic emerging in the first six months of deregulation may be challenged. Farmers' groups are seeking new ways to lift their bargaining power including approaching the ACCC to authorise collective bargaining. Processors are unlikely to accept reduced margins in the longer term affecting their relatively favourable historic profit levels. And the supermarkets may well assess their overall competitive strategy of attracting store traffic with low prices for generic milk products.

However, for all categories of milk stocked by Australian supermarkets, the average price decrease in the six months to December 2000 was 12 cents per litre. Assuming retail price levels remain largely unchanged in the medium term, the reduction in the average price of milk sold in supermarkets would represent a saving to Australian milk consumers of around $118 million on a full year basis. Also additional savings, which cannot be quantified from the available data, are likely from milk sold through non-supermarket outlets.

Appendix 1. Ministerial brief

COMMONWEALTH OF AUSTRALIA

Prices Surveillance Act 1983

MONITORING OF THE PRICES OF LEVIABLE MILK PRODUCTS

I, JOE HOCKEY, Minister of State for Financial Services and Regulation, in pursuance of Section 27A (1) (a) of the *Prices Surveillance Act 1983*, hereby direct the Australian Competition and Consumer Commission to monitor prices, costs and profits relating to the supply of leviable milk products by persons involved in the production and supply of dairy products.

2. In this direction, "leviable milk products" means a dairy product that is:

(a) marketed principally as:

(i) a beverage for human consumption; or

(ii) an ingredient for use in making a beverage for human consumption; or

(b) for use principally as:

(i) a beverage for human consumption; or

(ii) an ingredient for use in making a beverage for human consumption;

but does not include a product declared by the regulations to be exempt from the levy.

3. Monitoring will be completed 6 months after the imposition of the dairy adjustment levy, by the *Dairy Adjustment Levy (Excise) Act 2000*, *Dairy Adjustment Levy (Customs) Act 2000* or *Dairy Adjustment Levy (General) Act 2000*. A report will be provided to the Minister within three months after the completion of the monitoring period.

Dated this 10th day of April 2000.

JOE HOCKEY
Minister of State for Financial Services and Regulation
Acting for and on behalf of the Treasurer

Appendix 2 . Prices Surveillance Act 1983, sections 27A, 27B

Directions to monitor prices, cost and profits of an industry or business

s. 27A

(1) The Minister may give the Commission a written direction:

a) to monitor prices, costs and profits relating to the supply of goods and services by persons in a specified industry and to report to the Minister on the monitoring at a specified time or at specified intervals within a specified period; or

b) to monitor prices, costs and profits relating to the supply of goods and services by a specified person and to report to the Minister on the monitoring at a specified time or at specified intervals within a specified period.

(2) The Minister must not direct the Commission to monitor prices, costs and profits of a State or Territory authority that supplies goods and services unless the State or Territory concerned has agreed to the direction being given.

Report on monitoring

s. 27B

(1) The Commission must make copies of a report under paragraph 27A(1)(a) available for inspection by the public as soon as practicable after the Commission has given the report to the Minister.

(2) In the case of a report under paragraph 27A(1)(b) relating to a person, the Commission must:

a) send the person a copy of the report on the day the Commission gives the report to the Minister; and

b) make copies of the report available for inspection by the public as soon as practicable after the person has received a copy of the report.

Appendix 3. Background to profitability analysis

This appendix provides a description of the ratios used in the profitability analysis for both the processing sector and the retailing sector, as well as a description of the data used in the study. Problems that occurred with the availability of data have been highlighted. The ACCC commissioned PricewaterhouseCoopers to undertake the profitability analysis.

3.1 Explanation of the ratios

Three standard measures of profitability were used in the analysis.

3.1.1 Operating profit to sales ratio

The operating profit to sales ratio is calculated as follows:

$$\text{Return on sales} = \frac{\text{operating profit}}{\text{sales}}$$

The operating profit to sales ratio is an indicator of the level of operating profit for every dollar of sales made. It shows the operating margin for the company. However, it may be influenced by the cost efficiency of the company or industry.

3.1.2 Operating profit to total assets ratio

The operating profit to total assets ratio is calculated as follows:

$$\text{Return on total assets} = \frac{\text{operating profit}}{\text{total assets}}$$

The operating profit to total assets ratio is an indicator of how efficiently a company uses its assets. In measuring total assets for the companies assessed, intangible assets such as goodwill and brand names have been removed from the base.

The value of brand names is based on its ability to achieve greater earnings than those achieved by similar unbranded products. These values cannot be assessed accurately due to the difficulty in estimating future cash flows and the choice of an appropriate

discount rate. The removal of these valuations from the analysis allows the ratio to reflect more accurately the profitability of the business.

It is also appropriate to remove goodwill from the asset base. Goodwill often reflects the difference between the price paid for assets and their assessed value to the business. It may reflect the higher earning potential of assets arising from the market power of the owner. In this sense, goodwill may represent the capitalised value of excess profits over and above a normal rate of return on the assets. As such, goodwill appears to be similar in character to the valuation of brand names.

3.1.3 Operating profit to total shareholders' equity ratio

The operating profit to total shareholders' equity ratio is calculated as follows:

$$\text{Return on equity} = \frac{\text{operating profit}}{\text{shareholders' equity}}$$

Operating profit to total shareholders' equity ratio is an indicator of how efficiently shareholders' equity has been used. It measures the return to shareholders during the course of a company's operations for the period assessed.

The operating profit to sales ratio is an indicator of the level of operating profit for every dollar of sales made. It shows the operating margin for the company. However, it may be expected to be influenced by the cost efficiency of the company or industry.

3.2 Definition of categories used in the analysis

When the text refers to specific groupings, i.e. Australian milk processors or international retailers, they are based on information from the following companies.

3.2.1 Australian milk processors

Australian Co-operative Foods Limited (Division of Dairy Farmers Group)

National Foods Limited

Pauls Limited/Parmalat Australia Pty Limited (Pauls Limited)

3.2.2 International milk processors

Kiwi Co-operative Dairies Limited (NZ)

New Zealand Dairy Group (NZ)

Dean Foods Company (USA)

Suiza Foods Corporation (USA)

Dairy Crest Group plc (UK)

Express Dairies plc (UK)

Golden Vale plc (Ireland)

Campina Ag (Germany)

Morinaga Milk Industry Co Ltd (Japan)

3.2.3 Australian retailers

Coles Myer Ltd

Franklins Limited

Woolworths Limited

3.2.4 International retailers

Albertson's Inc (USA)

Delhaize America Inc (USA)

Safeway Inc (USA)

Safeway plc (UK)

J Sainsbury plc (UK)

3.2.5 Australian juice processors

Berri Limited

Golden Circle Limited

3.3 International comparisons

The following companies were used in the international comparison.

3.3.1 New Zealand (NZ)

Kiwi Co-operative Dairies Limited — collection, manufacture and distribution of milk and dairy products. Kiwi Co-operative Dairies Limited is the leading dairy ingredients marketer in NZ. The company is also involved in the processing, sales and distribution of processed meats.

New Zealand Dairy Group of Companies — collection and processing of milk into dairy-based products for the domestic and international markets and the marketing and distribution of dairy based consumer products in NZ.

3.3.2 United States of America (USA)

Suiza Foods Corporation (USA) — production, distribution and marketing of fresh milk and related dairy products. Suiza Foods Corporation is the leading manufacturer and distributor of dairy products in the USA. Suiza Foods Corporation is the only fluid dairy company in the USA with the ability to deliver milk to customers across the entire nation.

Dean Foods Company — production, distribution and sale of dairy products including fluid milk. Dean Foods Company is a major participant in the USA dairy foods market. The company is also involved in the manufacture of pickles and specialty products.

3.3.3 United Kingdom (UK)

Dairy Crest Group plc — production and trading of milk and dairy products. Dairy Crest Group plc is a broadly based UK dairy food company with a significant presence in the UK dairy market, serving both the retail grocery trade and major food manufacturers. The Dairy Crest Group plc is one of the UK's largest buyers of raw milk and a major supplier of liquid milk to multiple retailers.

Express Dairies plc — production of liquid milk and cream. Express Dairies plc is UK's largest supplier of liquid milk by volume and has the largest share of doorstep milk sales in the UK.

3.3.4 Ireland

Golden Vale plc — production and distribution of consumer products, butter and milk powders. Golden Vale plc is the second largest milk processor in Northern Ireland. The company is also involved in agricultural trading.

3.3.5 Germany

Campina Ag — production and marketing of milk, butter, yoghurt, desserts, cheeses and other dairy based foods. Campina Ag is the market leader in natural yoghurts in Germany.

3.3.6 Japan

Morinaga Milk Industry Company Limited — manufacture, processing, sale, export and import of milk and other dairy products. The company also manufactures and sells a range of health and agricultural products.

3.4 Limitations of the profitability comparisons

The profitability comparisons between companies and countries are indicative only as accounting practices, differences and changes to relevant reporting periods and the timing of asset valuations and other accounting practices can vary. The following indicates the information constraints that occurred during this analysis.

Pauls Limited changed its financial year end to 31 December after 30 June 1998, thus 1999 is expressed as the period six months to 31 December 1998 and 2000 is 12 months to 31 December 1999. Pauls Limited was called QUF Industries Limited before 31 March 1998.

The 1998 figures for Express Dairies plc are for six months only.

The 2000 figures for Golden Vale plc are based on preliminary results only.

The 1999 figures for Campina Ag are based on incomplete financial statements thus only the operating profit ratio has been identified.

The 2000 figures for Franklins Limited and Safeway Inc are based on incomplete financial statements therefore only the operating profit ratio has been identified.

The Coles Myer Limited business includes general merchandise stores.

The Woolworths Limited business includes general merchandise and petrol outlets.

The J Sainsbury plc business includes a banking division as well.

3.5 Information sources used

Albertson's Inc Annual Reports 1997, 1998 and 1999

Australian Co-operative Foods Limited Annual Reports 1996, 1997, 1998, 1999 and 2000

Australian Dairy Corporation Statistics website

Berri Limited Annual Reports 1998 and 1999

Berri Limited Financial Report 1997

C2121 Milk and Cream Processing Vol 13, Jan 01, IBIS Business Information Pty Ltd 2001

Coles Myer Annual Reports 1997, 1998, 1999 and 2000

Dairy Farm International Holdings Limited 2000 Preliminary Announcement of Results

Dean Foods Company 75th Anniversary Annual Report 1925–2000

Delhaize America Annual Report 1999

Express Dairies plc Introduction to the Official List 1998

Express Dairies plc Annual Report 2000

Franklins Limited Financial Reports 1996, 1997, 1998 and 1999

Golden Circle Limited Annual Reports 1997, 1998 and 1999

Golden Vale plc Preliminary Results Announcement for the year ended 31 December 2000

Ibisworld Company Profile: Golden Circle Limited

J Sainsbury plc Annual Reports 1998, 1999 and 2000

Kiwi Co-operative Dairies Limited Annual Reports 1997, 1998, 1999 and 2000

National Foods Limited Annual Reports 1997, 1998, 1999 and 2000

Nestle SA Annual Report 2000

New Zealand Dairy Group of Companies Annual Reports 1997, 1998, 1999 and 2000

Northern Ireland Top 100 Companies

Pauls Limited Financial Report 30 June 1998, 31 December 1998 and 31 December 1999

Primark Extel Company Report: Campina Ag

Primark Extel Company Report: Dairy Crest Group plc

Primark Extel Company Report: Dean Foods Co

Primark Extel Company Report: Golden Vale plc

Primark Extel Company Report: Morinaga Milk Industry Co Ltd

Safeway Inc Annual Reports 1997, 1998 and 1999

Safeway Inc Announces Fourth Quarter 2000 Operating Results, 25 January 2001

Safeway plc Annual Reports 1999 and 2000

Suiza Foods Corporation Annual Report 1999

Suiza Foods Corporation Announces Fourth Quarter Sales and Diluted Earnings Per Share of $1.08, 15 February 2001

Q.U.F. Industries Limited Financial Report 1996 and 1997

Unilever Financial Report 2000

Woolworths Limited Annual Reports 1997, 1998, 1999 and 2000

Appendix 4. Informed sources survey

The following are results of the surveys commissioned by the ACCC covering UHT standard white milk and fresh flavoured milk. These surveys were conducted by Informed Sources, a data collection agency.

4.1 UHT milk sold in supermarkets and food stores

The Informed Sources survey of 1-litre cartons of branded UHT standard white milk showed price increases in all States and Territories, except the Northern Territory, for the period May to October 2000 (refer table A4.1). The small sample size of price collections may have been responsible for the price trend evident in the Northern Territory. Price increases were most pronounced in Victoria and Western Australia. With the 11 cents per litre milk levy from 8 July 2000, UHT milk products were expected to rise in price. This was because raw milk used for UHT products was typically sourced at farmgate prices that were much lower than those paid to suppliers of market milk. Hence, the additional cost of the retail milk levy was not offset by lower input prices for milk used in UHT products.

Table A4.1 Average spot prices for UHT standard white milk (1-litre) (January–October 2000)

State	Jan.	Mar.	May	Aug.	Oct.	October relative to May	Sample size
	$/litre	**$/litre**	**$/litre**	**$/litre**	**$/litre**	**% change**	
NSW	1.13	1.14	1.15	1.23	1.24	+7.8%	128
VIC	1.19	1.18	1.20	1.27	1.32	+10.0%	96
WA	1.28	1.26	1.33	1.42	1.44	+8.3%	49
TAS	1.26	1.25	1.28	1.42	1.31	+2.3%	9
SA	1.12	1.15	1.16	1.24	1.24	+6.9%	40
QLD	1.21	1.30	1.28	1.35	1.36	+6.3%	40
NT	1.44	1.31	1.41	1.43	1.29	-8.5%	3
ACT	1.17	1.22	1.25	1.27	1.34	+7.2%	6

Notes: (a) Average state prices of a leading brand of UHT standard white milk (1-litre).

Source: Informed Sources survey, 2000.

4.2 Flavoured milk sold in supermarkets and food stores

The Informed Sources survey of 600 ml cartons of branded fresh flavoured milk showed that prices for this milk category decreased in all States and Territories from May to October 2000, except in Western Australia and Victoria (refer table A4.2). Raw milk channelled into flavoured milk lines was previously sourced at prices in line with

regulated market milk prices. The notable exception was in Western Australia where flavoured milk was previously bought at the lower manufacturing milk price. While this led to Western Australia traditionally having lower retail prices and higher per capita consumption of flavoured milk, it also meant that the 11 cents per litre milk levy in Western Australia could not be offset by lower input prices following industry deregulation.

Table A4.2 Average spot prices for fresh flavoured milk (600 ml)

(January–October 2000)

State	Jan.	Mar.	May	Aug.	Oct.	October relative to May	Sample size	Product (a)
	$/litre	**$/litre**	**$/litre**	**$/litre**	**$/litre**	**% change**		
NSW	2.13	2.11	2.12	2.09	2.10	-0.9%	83	Chocolate 600 ml
VIC	1.92	1.94	2.00	2.06	2.08	+4.0%	20	Chocolate 600 ml
WA	1.52	1.64	1.64	1.71	1.73	+5.5%	4	Chocolate 600 ml
TAS	1.81	1.84	1.87	1.83	1.85	-1.1%	5	Chocolate 600 ml
SA	1.69	1.71	1.74	1.74	1.70	-2.3%	23	Iced coffee 600 ml
QLD	1.75	1.76	1.76	1.77	1.77	+0.6%	59	Chocolate 600 ml
NT	1.65	1.70	1.80	1.91	1.91	+6.1%	3	Iced coffee 600 ml
ACT	2.06	2.04	2.04	2.12	2.05	+0.5%	7	Chocolate 600 ml

Notes: (a) In the flavoured milk category there are no national brands for which direct price comparisons can be made between States. Hence, the prices of 600 ml containers of the most common flavoured milk brand within each State have been chosen for comparative purposes.

Source: Informed Sources survey, 2000.

Appendix 5. Survey of traditional corner stores

To understand the range of price variability across traditional corner stores (including milk bars, delicatessens and take-aways) in different localities, two price surveys were commissioned in September 2000 and December 2000. These surveys were conducted by Inteldata e-access and covered milk sold in corner stores located in a range of demographic bands throughout all States and the Northern Territory and Australian Capital Territory.

Prices of liquid milk products were collected from corner stores in areas classified as highly accessible, moderately accessible, accessible, remote and very remote based on an index used by the Bureau of Rural Sciences.[65] Survey locations were also selected to provide coverage of towns and cities populated by varying numbers of residents.

Table A5.1 Survey of highly accessible localities by State and population size

State	Locality	Demographic band (population size of locality)	Total population 1996
	Melbourne	100 000+	2 865 329
	Geelong	100 000+	125 382
	Ballarat	25 000<100 000	64 831
	Bendigo	25 000<100 000	59 936
VIC	Warrnambool	25 000<100 000	26 052
	Wangaratta	10 000<24 999	15 527
	Echuca	10 000<24 999	10 014
	Colac	5000<9999	9793
	Warragul	5000<9999	9011
	Kyneton	2500<4999	3757
	Trafalgar	1000<2499	2239
	Clunes	500<999	846
	Yinnar	200<499	477

(continued)

65 The Bureau of Rural Sciences (BRS) is a scientific agency within the Department of Agriculture, Fisheries and Forestry — Australia (AFFA)

Table A5.1 Survey of highly accessible localities by State and population size (continued)

	Sydney	100 000+	3 276 207
	Newcastle	100 000+	270 324
	Central Coast	100 000+	227 657
	Wollongong	100 000+	219 761
	Wagga Wagga	25 000<100 000	42 848
	Albury-Wodonga	25 000<100 000	41 491
NSW	Tamworth	25 000<100 000	31 865
	Katoomba-Wentworth Falls	10 000<24 999	17 700
	Casino	5000<9999	9990
	Mullumbimby	2500<4999	2870
	Berry	1000<2499	1604
	Yerrinbool	500<999	834
	Spring Hill	200<499	304
	Brisbane	100 000+	1 291 117
	Gold Coast	100 000+	274 157
QLD	Rockhampton	25 000<100 000	57 770
	Gympie	10 000<24 999	10 813
	Dalby	5000<9999	9517
	Adelaide	100 000+	978 100
	Murray Bridge	10 000<24 999	12 831
	Victor Harbor	5000<9999	7343
SA	Strathalbyn	2500<4999	2962
	Willunga	1000<2499	1622
	Two Wells	500<999	624
	Springton	200<499	238
	Perth	100 000+	1 096 829
	Rockingham	25 000<100 000	49 917
	Bunbury	10 000<24 999	24 945
	Kwinana	10 000<24 999	15 674
WA	Northam	5000<9999	6300
	Harvey	2500<4999	2570
	York	1000<2499	1923
	Boyanup	500<999	575
	Wooroloo	200<499	244

Table A5.1 Survey of highly accessible localities by State and population size (continued)

	Hobart	100 000+	126 118
	Launceston	25 000<100 000	67 701
	Kingston Blackmans Bay	10 000<24 999	13 746
TAS	New Norfolk	5000<9999	5286
	Pontville	1000<2499	1424
	Richmond	500<999	768
	Dilston	200<499	323
ACT	Canberra	100 000+	297 034

Source: Inteldata e-access, 2001

Table A5.2 Survey of accessible localities by State and population size

State	Locality	Demographic band (population size of locality)	Total population 1996
	Mildura	10 000<24 999	24 142
	Portland	5000<9999	9664
	Kerang	2500<4999	3883
VIC	Bright	1000<2499	1898
	Eildon	500<999	703
	Port Campbell	200<499	281
	Port Macquarie	25 000<100 000	33 709
	Dubbo	25 000<100 000	30 102
	Broken Hill	10 000<24 999	20 963
NSW	Parkes	10 000<24 999	10 094
	Forbes	5000<9999	7467
	Scone	2500<4999	3468
	Tocumwal	1000<2499	1453
	Mathoura	500<999	653
	Ariah Park	200<499	288
	Townsville-Thuringowa	100 000+	109 914
	Cairns	25 000<100 000	92 273
	Bundaberg	25 000<100 000	41 025
QLD	Kingaroy	5000<9999	7013
	Stanthorpe	2500<4999	4154
	Wondai	1000<2499	1330
	Biggenden	500<999	686
	Miriam Vale	200<499	421
	Mount Gambier	10 000<24 999	22 037
	Port Augusta	10 000<24 999	13 914
	Port Pirie	10 000<24 999	13 633
SA	Kadina	2500<4999	3589
	Jamestown	1000<2499	1430
	Nangwarry	500<999	563
	Tantanoola	200<499	260
NT	Darwin	25 000<100 000	70 251
	Palmerston	10 000<24 999	12 233

(continued)

Table A5.2 Survey of accessible localities by State and population size (continued)

	Geraldton	25 000<100 000	25 243
	Albany	10 000<24 999	20 493
	Busselton	10 000<24 999	10 642
WA	Margaret River	2500<4999	2846
	Bridgetown	1000<2499	2123
	Lancelin	500<999	597
	Quindalup	200<499	365
	Devonport	10 000<24 999	22 299
	Burnie-Somerset	10 000<24 999	19 134
	Ulverstone	5000<9999	9792
TAS	Wynyard	2500<4999	4509
	Cressy	500<999	637
	Dover	200<499	481

Source: Inteldata e-access, 2001.

Table A5.3 Survey of moderately accessible localities by State and population size

State	Locality	Demographic band (population size of locality)	Total population 1996
	Robinvale	1000<2499	1758
	Bruthen	500<999	601
VIC	Jeparit	200<499	403
	Omeo	200<499	298
	Narrabri	5000<9999	6419
	West Wyalong	2500<4999	3419
NSW	Tathra	1000<2499	1684
	Binnaway	500<999	500
	Moulamein	200<499	459
	Mackay	25 000<100 000	44 880
	Maryborough	10 000<24 999	21 286
	Charters Towers	5000<9999	8893
QLD	Port Douglas	2500<4999	3641
	Cardwell	1000<2499	1421
	Brandon	500<999	883
	Millaa Millaa	200<499	324
	Renmark	2500<4999	4366
	Keith	1000<2499	1089
SA	Yorketown	500<999	692
	Hawker	200<499	319
NT	Batchelor	500<999	645
	Adelaide River	200<499	279
	Merredin	2500<4999	2911
	Coolgardie	1000<2499	1258
WA	Kellerberrin	500<999	855
	Cervantes	200<499	480
	Queenstown	2500<4999	2631
	St Helens-Stieglitz	1000<2499	1776
	Zeehan	1000<2499	1116
TAS	Strahan	500<999	701
	Swansea	200<499	495
	Tullah	200<499	268

Source: Inteldata e-access, 2001.

Table A5.4 Survey of remote localities by State and population size

State	Locality	Demographic band (population size of locality)	Total population 1996
	Coonamble	2500<4999	2754
	Hillston	1000<2499	1099
NSW	Collarenebri	500<999	544
	Ivanhoe	200<499	322
	Mount Isa	10 000<24 999	21 751
	Emerald	5000<9999	9345
	Dysart	2500<4999	3444
QLD	Cloncurry	1000<2499	2459
	Cooktown	1000<2499	1411
	Sapphire	500<999	614
	Dajarra	200<499	203
	Port Lincoln	10 000<24 999	11 678
	Tumby Bay	1000<2499	1151
SA	Cummins	500<999	695
	Elliston	200<499	217
	Alice Springs	10 000<24 999	22 488
	Katherine	5000<9999	7979
	Jabiru	1000<2499	1696
NT	Pine Creek	500<999	521
	Hermannsburg	200<499	462
	Santa Teresa	200<499	458
	Daly River	200<499	349
	Esperance	5000<9999	8647
	Newman	2500<4999	4790
WA	Kalbarri	1000<2499	1788
	Northampton	500<999	842
	Ravensthorpe	200<499	354

Source: Inteldata e-access, 2001.

Table A5.5 Survey of very remote localities by State and population size

State	Locality	Demographic band (population size of locality)	Total population 1996
	Bourke	2500<4999	2775
NSW	Brewarrina	1000<2499	1113
	Tibooburra	200<499	214
	Longreach	2500<4999	3766
	Weipa	1000<2499	2200
QLD	Richmond	500<999	733
	Burketown	200<499	220
	Coober Pedy	2500<4999	2762
SA	Ceduna	2500<4999	2599
	Woomera	1000<2499	1349
	Tennant Creek	2500<4999	3856
	Nhulunbuy	2500<4999	3695
	Maningrida	1000<2499	1328
NT	Port Keats	1000<2499	1290
	Timber Creek	500<999	566
	Kalkaringi	200<499	259
	Kalgoorlie-Boulder	25 000<100 000	28 087
	Port Hedland	10 000<24 999	12 846
	Broome	10 000<24 999	11 368
	Karratha	10 000<24 999	10 057
WA	Carnarvon	5000<9999	6357
	Kununurra	2500<4999	4884
	Fitzroy Crossing	1000<2499	1147
	Roebourne	500<999	958
	Warburton	200<499	457
	Kalumburu	200<499	368

Source: Inteldata e-access, 2001.

Table A5.6 Sample sizes of surveyed localities by population size and State (1-litre plain white milk)

Demographic band (population size of locality)	AUST	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
100 000+	73	17	9	16	7	8	10	6	n/a
25 000<100 000	49	11	4	10	9	n/a	11	n/a	4
10 000<24 999	73	7	8	9	20	23	n/a*	n/a	6
5000<9999	36	6	5	8	6	2	7	n/a	2
2500<4999	38	11	3	8	13	n/a*	1	n/a	2
1000<2499	30	5	5	7	6	4	2	n/a	1
500<999	24	3	4	7	5	1	n/a*	n/a	4
200<499	32	4	4	3	7	7	5	n/a	2
All corner stores	355	64	42	68	73	45	36	6	21

Note: The sample numbers include corner stores reporting prices for one litre plain white milk.
n/a — category does not exist. *n/a — data unavailable

Source: Inteldata e-access, 2001 and ACCC, 2001.

Table A5.7 Sample sizes of surveyed localities by State and degree of accessibility (1-litre plain white milk)

Demographic band (accessibility of locality)	Aust	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Highly accessible	166	33	31	20	29	16	31	6	n/a
Accessible	81	13	6	18	20	18	n/a*	n/a	6
Moderately accessible	46	8	5	17	6	2	5	n/a	3
Remote	39	5	n/a*	10	6	9	n/a	n/a	9
Very remote	23	5	n/a	3	12	n/a	n/a*	n/a	3
All corner stores	355	64	42	68	73	45	36	6	21

Note: The sample numbers include corner stores reporting prices for 1-litre plain white milk.
n/a — category does not exist. n/a* — data unavailable

Source: Inteldata e-access, 2001 and ACCC, 2001.

Table A5.8 Population weights by State and population size used in the analysis

Demographic band (population size of locality)	AUST	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
> 100 000	0.7048	0.2523	0.1889	0.1058	0.0693	0.0618	0.0080	0.0188	n/a
25 000 – 100 000	0.0861	0.0199	0.0151	0.0320	0.0088	n/a	0.0043	0.0016	0.0044
10 000 – 25 000	0.0676	0.0201	0.0151	0.0120	0.0067	0.0080	0.0035	n/a	0.0022
5000 – 10 000	0.0397	0.0152	0.0105	0.0094	0.0017	0.0010	0.0014	n/a	0.0005
2500 – 5000	0.0358	0.0137	0.0065	0.0068	0.0033	0.0034	0.0015	n/a	0.0007
1000 – 2500	0.0376	0.0125	0.0073	0.0071	0.0043	0.0036	0.0022	n/a	0.0005
500 – 999	0.0175	0.0056	0.0028	0.0043	0.0018	0.0016	0.0008	n/a	0.0006
200 – 499	0.0109	0.0034	0.0020	0.0020	0.0011	0.0011	0.0009	n/a	0.0004
Total	1.0000	0.3427	0.2482	0.1794	0.0970	0.0804	0.0226	0.0204	0.0093

Note: The sample numbers include corner stores reporting prices for 1-litre plain white milk. n/a — category does not exist.

Source: Inteldata e-access, 2001 and ACCC, 2001.

Table A5.9 Population weights by state and degree of accessibility used in the analysis

Demographic band (accessibility of locality)	Aust	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Highly accessible	0.8670	0.3069	0.2362	0.1355	0.0821	0.0692	0.0166	0.0204	n/a
Accessible	0.0854	0.0290	0.0107	0.0245	0.0042	0.0068	0.0049	n/a	0.0053
Moderately accessible	0.0289	0.0055	0.0012	0.0143	0.0045	0.0025	0.0009	n/a	0.0001
Remote	0.0115	0.0009	0.0001	0.0030	0.0040	0.0013	0.0001	n/a	0.0022
Very remote	0.0073	0.0003	n/a	0.0021	0.0023	0.0006	0.0002	n/a	0.0018
Total	1.0000	0.3427	0.2482	0.1794	0.0970	0.0804	0.0226	0.0204	0.0093

Note: n/a — category does not exist.

Source: Inteldata e-access, 2001and ACCC, 2001.

Measuring accessibility

The accessibility/remoteness index of Australia (ARIA), developed by the Department of Health and Aged Care in collaboration with the National Key Centre for Social Applications of Geographical Information Systems, is a generic measure of remoteness across Australia. ARIA interprets remoteness based on the level of accessibility to 201 service centres. Remoteness values for 11 338 populated localities are derived from the road distance to service centres in four categories (a weighting is applied for islands).

For each locality, distances are converted to ratios to the mean, a threshold of 3.0 is applied and they are then summed. This produces a continuous variable from 0 (high accessibility) to 12 (remoteness). Values for populated localities are then interpolated to a one kilometre grid, and averages are calculated for larger areas. These values are then grouped into five different categories, ranging from highly accessible (1) to very remote (5).

Appendix 6. Analysis of consumer savings

This section analyses potential consumer savings from lower milk prices following deregulation. Savings to consumers have arisen from reductions in average milk prices for three categories of consumers: supermarket shoppers, non-supermarket shoppers, and those consumers who previously bought milk from non-supermarket outlets and have now switched to supermarkets. While lower prices for generic-labelled milk have resulted in considerable price reductions for many branded milk products, the absence of reference prices for milk sold in corner stores before 30 June 2000 means that only savings on supermarket sales of milk can be accurately quantified.

In the September quarter, Australian consumers bought nearly 240 million litres of milk from supermarkets. This was across all categories, brands and pack sizes. Consumers paid an average of $1.36 per litre for this milk which was considerably lower than the $1.42 average price of milk sold in supermarkets during the June quarter. The three months ending 30 June 2000 was the final quarter in which regulated farmgate price controls applied to milk. Based on sales volumes for the September quarter, the 6 cents per litre reduction in the average price of supermarket milk represented a saving for Australian milk consumers of $14.4 million. Average prices fell by a further 6 cents per litre in the December quarter producing a total quarterly saving of $29.7 million relative to the aggregate retail cost of a similar volume of milk bought from supermarkets in the June quarter (refer table A6.1).

The December quarter was the first to fully reflect changes resulting from the supermarkets introducing lower milk prices for generic-labelled products in mid-August 2000. Lower prices for generic-labelled milk reduced average prices of branded milk products sold across all food outlets, especially for plain milk products. In the last six months of 2000, Australian milk sold through supermarkets increased from 48.4 to 51.2 per cent of total Australian milk sales. However, the total volume of milk sold across all outlets remained largely unchanged. This suggests that the savings represented here most likely underestimate actual consumer savings from sales of milk in supermarkets as additional milk volumes were probably bought by consumers who previously shopped in non-supermarket outlets. Evidence suggests that these consumers would have paid a higher average price for milk in the June quarter than the $1.42 average price paid in supermarkets.

Supermarket chains have indicated that their lower prices for generic-labelled milk products introduced in mid-August 2000 will apply indefinitely, effectively creating a floor in the Australian retail price of milk. Assuming these prices remain in place and price differentials between branded milk products sold in supermarkets are maintained, consumer savings from sales of supermarket milk are likely to conservatively realise around $118.6 million on a full year basis (refer table A6.1). Additional growth in supermarket sales of milk at the expense of sales in the route trade, further consumer switching to generic-labelled products, increased sales of larger pack sizes and further reductions in prices for branded milk products could potentially push up this annualised savings estimate. Furthermore, when savings estimates for milk sold in non-supermarket outlets are included, total consumer savings since dairy deregulation would far exceed the estimated $118.6 million savings made by supermarket shoppers.

Table A6.1 Estimates of consumer savings supermarkets from supermarket sales of milk

Performance indicator	June quarter 00*	September quarter 00*	December quarter 00*
Volume of sales** (litres)	232 431 300	239 769 400	247 112 300
Average price of milk ($/litre)**	1.42	1.36	1.30
Consumer spending using June quarter average milk price ($)		340 472 548	350 899 466
Consumer spending using September quarter average milk price ($)		326 086 384	336 072 728
Consumer spending using December quarter average milk price ($)			321 245 990
Consumer savings (Sept relative to June 00) ($)		14 386 164	
Consumer savings (Dec relative to Sept 00) ($)			14 826 738
Consumer savings (Dec relative to June 00) ($)			29 653 476
Annualised consumer savings*** ($)			118 613 904

Note: Figures are based on scanned data for supermarket milk sales. *Supermarket scanned data cover the quarters ending 25 June 2000, 24 September 2000 and 24 December 2000 respectively. **Includes all pack sizes and both generic and branded milk products. ***Based on December quarter sales volumes and average prices of milk.

Source: ACCC and ADC, 2001.

Appendix 7. Analysis of margin transfer between sectors

7.1 Background

Empirical research into agricultural 'marketing' margins has shown that differences between the retail, wholesale and/or farmgate prices of commodities can often be explained by variations in purchase costs, production levels, product values, product prices and/or the inventory behaviour of retailers (Tomek and Robinson 1972, Lyon and Thompson 1993, Griffith and Moore 1991).

This appendix examines the extent to which the processing and retail sectors captured benefits resulting from falls in farmgate prices over the monitoring period. It provides further insight by drawing on results presented in chapter 6 through to chapter 9 to assess relationships between changes in farmgate and/or processor prices and changes in retail prices. It also highlights the impact of these changes on profit margins. Issues considered include the following.

- What price changes have occurred since 1 July 2000?
- Who captured the largest share of benefits resulting from any price increase or decrease?

a. Data limitation

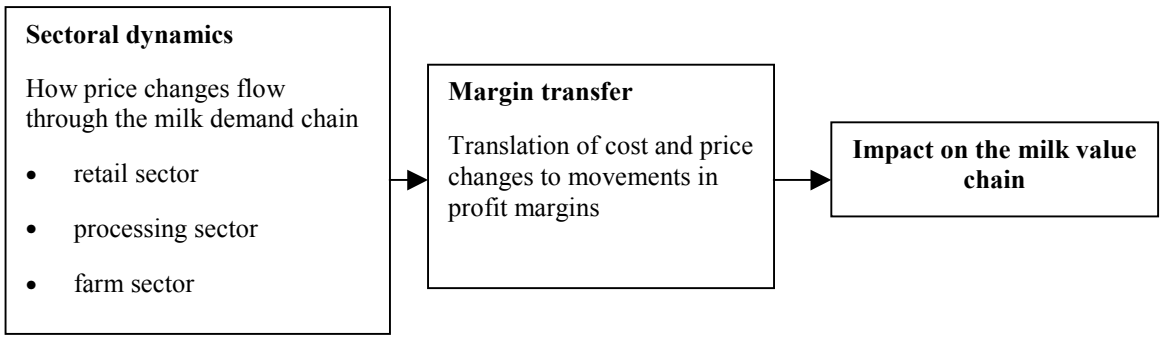
Individual companies differ in the scope of business activities undertaken, methods of cost allocation and internal accounting periods and procedures. This may impact on the results in this appendix, which analyses the retail, milk processing and farm sectors at the aggregate level. Consequently, care needs to be taken in interpreting the analysis presented.

b. Approach to assessing impact of movements in wholesale and farmgate prices

The impact of changes in farmgate and wholesale prices has been used in this appendix to provide a quantitative analysis of the transfer of margins between the processing and retail sectors over the last six months of 2000. To maintain a consistent approach across these sectors, the analysis assesses impacts of 10 cents per litre changes in farmgate, wholesale and retail prices as a benchmark for tracking movements in profit margins. [66] These movements are based on pricing interactions observed through data provided by milk processors, supermarkets and convenience stores via the ACCC's information pro formas for its milk monitoring activities.

66 The directions of the benchmark movements are determined by **actual directional movements** in farmgate, wholesale and retail prices during the monitoring period.

Figure A7.1 Framework for the analysis of margin transfer



7.2 Supermarket prices and gross profit margins

Table A7.1 shows the trends in prices at both the wholesale and retail levels and profit margins for milk sold in supermarkets during the monitoring period. Across all pack sizes and both generic and branded products, Australian supermarket prices for pasteurised white (plain, reduced-fat and low-fat) milk decreased by 8 cents and 7 cents per litre in the September and December quarters respectively while prices of UHT milk increased by 10 cents and 8 cents per litre over the same period. Prices of flavoured milk products decreased by 11 cents in the June quarter before increasing by 8 cents over the three months to December 2000. Increases in prices of some milk products resulted in a fall in demand for those products while demand for substitute milk products increased marginally. Demand for pasteurised milk increased marginally from June to December 2000 due largely to the increases in average prices of UHT milk products.

Table A7.1 Retail sector — trends in costs, price and profit margins for total milk sold in supermarkets

Product category	June quarter (April–June 00) $/litre			September quarter (July–September 00) $/litre			December quarter (October–December 00) $/litre		
	Retail price	**Wholesale price**	**Profit margin**	**Retail price**	**Wholesale price**	**Profit margin**	**Retail price**	**Wholesale price**	**Profit margin**
Pasteurised white milk	1.39	1.02	0.37	1.31	0.99	0.32	1.24	0.94	0.30
UHT milk*	1.06	0.83	0.23	1.16	0.95	0.21	1.24	1.05	0.19
Flavoured milk**	2.38	1.82	0.56	2.27	1.70	0.57	2.35	1.76	0.59

Note: Figures include all pack sizes and both generic and branded products. *Excludes flavoured UHT milk. **Includes flavoured UHT milk.

Source: Data supplied by retail sector.

Table A7.2 Retail sector — changes in costs, price and profit margins for total milk sold in supermarkets

Product category	September quarter (July–September 00) $/litre			December quarter (October–December 00) $/litre		
	Change in retail price	**Change in wholesale price**	**Change in profit margin**	**Change in retail price**	**Change in wholesale price**	**Change in profit margin**
Pasteurised white milk	-0.08	-0.03	-0.05	-0.07	-0.05	-0.02
UHT milk*	+0.10	+0.12	-0.02	+0.08	+0.10	-0.02
Flavoured milk**	-0.11	-0.12	+0.01	+0.08	+0.06	+0.02

Note: Figures include all pack sizes and both generic and branded products. *Excludes flavoured UHT milk. **Includes flavoured UHT milk.

Source: Data supplied by retail sector.

7.2.1 Impact of changes in wholesale prices[67]

Savings captured as a result of falls in wholesale prices may be passed on to consumers through reduced retail prices. This section draws on results presented in tables A7.1 and A7.2 and chapter 6 through to chapter 9 to examine the impact of 10 cents per litre changes in wholesale prices of milk sold on supermarkets. In the September and December quarters, a 10 cents per litre decrease in the wholesale price of pasteurised white (plain, reduced-fat and low-fat) milk would have led to supermarket prices falling

67 Impact analysis of movements in prices considers as constant the effect of all other factors that might affect profit margins.

by an average of 27 cents and 14 cents per litre respectively and profit margins falling by 17 cents and 4 cents per litre. Similarly, a 10 cents per litre increase in the wholesale price of UHT milk would have resulted in retail prices increasing by an average of 8 cents per litre and profit margins falling by 2 cents per litre on average in the same period.

Wholesale prices of flavoured milk, which includes flavoured UHT milk, fell in the September quarter but increased in the December quarter. Flavoured milk is mostly sold in convenience and corner stores and typically attracts higher margins than for other categories of milk. From 1 July 2000 a 10 per cent Goods and Services Tax was levied on flavoured milk replacing the Wholesale Sales Tax of 12 per cent. A 10 cents per litre fall in the wholesale price of flavoured milk would have resulted in a 9 cents per litre fall in average retail prices in the September quarter. Similarly, a 10 cents per litre increase in the wholesale price would have led to a 13 cents per litre increase in average retail prices in the December quarter. The effect on supermarket profit margins would have been minimal during this period.

Table A7.3 Retail sector — impact of a 10 cents/litre movement in wholesale prices of various milk products following deregulation

Product category	September quarter (July–September 00)			December quarter (October–December 00)		
	Wholesale price	**Change in retail price**	**Change in profit margin**	**Wholesale price**	**Change in retail price**	**Change in profit margin**
	cents/litre	cents /litre	cents/litre	cents/litre	cents/litre	Cents/litre
Pasteurised white milk	⇩10 Cents	-27	-17	⇩10 Cents	-14	-4
UHT milk*	⇧10 Cents	+8	-2	⇧10 Cents	+8	-2
Flavoured milk**	⇩10 Cents	-9	+1	⇩10 Cents	+13	+3

Note: Figures include all pack sizes and both generic and branded products. *Excludes flavoured UHT milk. **Includes flavoured UHT milk.

Source: Data supplied by retail sector.

7.3 Convenience stores' prices and gross profit margins

Table A7.4 shows the trends in prices at both wholesale and retail levels and associated profit margins for different milk products sold in convenience stores. During the monitoring period, with the exception of reduced-fat milk, average wholesale prices of different pack sizes of milk sold in convenience stores decreased or remained steady across Australia. Similarly, retail prices of different pack sizes of milk sold in convenience stores decreased marginally or remained steady across Australia except for 2-litre reduced-fat and 2-litre light (low-fat) milk. Retail prices of flavoured milk decreased very slightly over the monitoring period.

Table A7.4 Retail sector — trends in costs, prices and profit margins for total milk sold in convenience stores

Product category and pack size	June quarter (April –June 00) $/unit			September quarter (July – September 00) $/unit			December quarter (October –December 00) $/unit		
	Retail price	**Wholesale price**	**Profit margin**	**Retail price**	**Wholesale price**	**Profit margin**	**Retail price**	**Wholesale price**	**Profit margin**
2-litre white milk	2.79	2.21	0.58	2.75	2.16	0.59	2.69	2.06	0.63
1-litre white milk	1.43	1.12	0.31	1.43	1.11	0.32	1.43	1.11	0.32
2 litre lite milk	3.19	2.64	0.55	3.20	2.64	0.56	3.19	2.63	0.56
1 -itre lite milk	1.71	1.34	0.37	1.71	1.34	0.37	1.71	1.34	0.37
2-litre reduced-fat milk	3.50	2.56	0.94	3.11	2.50	0.61	3.12	2.51	0.61
1-litre reduced-fat milk	1.71	1.36	0.35	1.67	1.32	0.35	1.67	1.33	0.34
Flavoured milk 600 ml	2.11	1.27	0.84	2.10	1.21	0.89	2.10	1.20	0.90

Source: Data supplied by retail sector.

Table A7.5 Retail sector — changes in costs, prices and profit margins for total milk sold in convenience stores

Product category and pack size	September quarter (July–September 00)			December quarter (October–December 00)		
	Change in retail price relative to June	**Change in wholesale price relative to June**	**Change in profit margin relative to June**	**Change in retail price relative to September**	**Change in wholesale price relative to September**	**Change in profit margin relative to September**
	(%)	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
2-litre white milk	-1.4	-2.3	+1.7	-2.2	-4.6	+6.8
1-litre white milk	0	-0.9	+3.2	0	0	0
2-litre lite milk	+0.3	0	+1.8	-0.3	-0.4	0
1-litre lite milk	0	0	0	0	0	0
2-litre reduced-fat milk	-11.1	-2.3	-35.1	+0.3	+0.4	0
1-litre reduced-fat milk	-2.3	-2.9	0	0	+0.8	-2.9
Flavoured milk 600 ml	-0.4	-4.7	+5.9	0	-0.8	+1.1

Source: Data supplied by retail sector.

7.3.1 Impact of changes in wholesale prices

Following deregulation, wholesale prices of milk sold to convenience stores fell across all pack sizes except for reduced-fat milk. This section draws on results presented in tables A7.4 and A7.5 and chapter 6 through to chapter 9 to examine the impact of 10 cents per unit changes in wholesale price of milk on convenience stores. A 10 cents fall in the wholesale price of milk sold in convenience stores, except 2-litre reduced-fat milk, would have resulted in either retail prices remaining steady or falling in the September and December quarters (refer to table A7.6). A similar fall in the wholesale price of 2-litre reduced-fat milk would have led to a 65 cents decrease in retail prices in the September quarter while in the December quarter, a 10 cents increase in wholesale prices would have led to a 10 cents increase in retail prices. Price discounting of branded milk products in convenience stores led to a decline in demand for reduced-fat milk while demand for low-fat milk as a substitute milk product increased. Profit margins for milk sold through convenience stores, except reduced-fat milk, either remained steady or would have increased as a result of a 10 cents fall in the wholesale price of milk in these categories.

Table A7.6 Retail sector — impact of a 10 cents/unit movement in wholesale price

Product category and pack size	September quarter (July–September 00)			December quarter (October–December 00)		
	Wholesale price	**Change in retail price**	**Change in profit margin**	**Wholesale price**	**Change in retail price**	**Change in profit margin**
	cents/unit	cents/unit	cents/unit		cents/unit	cents/unit
2-litre white milk	⇩10 cents	-8	+2	⇩10 cents	-6	+4
1-litre white milk	⇩10 cents	0	+10	⇩10 cents	0	0
2-litre lite milk	⇩10 cents	0	0	⇩10 cents	-10	0
1-litre lite milk	⇩10 cents	0	0	⇩10 cents	0	0
2-litre reduced-fat milk	⇩10 cents	-65	-55	⇧10 cents	+10	0
1-litre reduced-fat milk	⇩10 cents	-10	0	⇧10 cents	0	-10
Flavoured milk 600 ml	⇩10 cents	-2	+8	⇩10 cents	0	+10

Source: Data supplied by retail sector.

7.4 Processing sector prices and net profit margins

Table A7.7 shows the trends in average revenues, costs and profit margins across the sector for milk processed during the monitoring period. The cost of raw milk constituted just over one-third of total milk processing costs in the final six months of 2000 compared to nearly half of total costs before deregulation (refer table 8.2). Following deregulation, average costs of raw milk fell from 53 cents per litre in the June quarter to 36 cents and 34 cents per litre respectively in the September and December quarters. This resulted in lower input costs to processors and lower wholesale prices for all milk sold to the retail sector (refer to table A7.7).

The average net profit margins of Australian milk processors decreased by 2 cents on a per litre basis from June to December 2000. As the total volume of milk sold in Australia was relatively stable over this period, the overall profitability of milk processors decreased following deregulation. Although prices of branded milk products across all retail outlets showed less variability in the December 2000 quarter, net profit margins continued to decline and were considerably lower than for periods before deregulation (refer table A7.8).

Table A7.7 Processing sector — trends in revenues, costs, and net profit margins for milk processed

(June quarter–December quarter 2000)

Performance indicator	June quarter (April–June 00)	September quarter (July–September 00)	December quarter (October–December 00)
	$/litre	**$/litre**	**$/litre**
Cost of raw milk	0.53	0.36	0.34
Total cost	1.11	0.99	0.96
Sales revenue	1.19	1.06	1.02
Net profit margin	0.08	0.07	0.06

Source: Data supplied by retail sector.

Table A7.8 Processing sector — changes in costs, revenue and net profit margins for total milk processed

(September quarter–December quarter 2000)

Performance indicator	September quarter (July–September 00)	December quarter (October–December 00)
	$/litre	**$/litre**
Cost of raw milk	-0.17	-0.02
Total cost	-0.12	-0.03
Sales revenue	-0.13	-0.04
Net profit margin	-0.01	-0.01

Source: Data supplied by retail sector.

7.4.1 Impact of changes in the costs of raw milk

Savings captured as a result of falls in farmgate prices may be passed on to the retail sector in lower wholesale prices and/or product innovations. This section draws on results presented in tables A7.7 and A7.8 and chapter 6 through to chapter 9 to examine the impact of 10 cents per litre change in farmgate prices on Australian milk processors. Table A7.9 shows that following deregulation, a 10 cents decrease in the average costs of raw milk would have resulted in wholesale prices falling by an average of 8 cents and 13 cents per litre respectively in the September and December quarters. This fall in the average costs of raw milk would have reduced average net profit margins of Australian milk processors by 1 cent and 2 cents per litre respectively in each of these quarters relative to the June quarter. Similarly, total costs of processing milk fell by 7 cents and 11 cents per litre respectively in the same period. The impact of falls in farmgate prices was offset by increases in other cost categories such as factory

overheads, promotion and advertising expenses and cost of processed milk traded between processing companies during this period.

Table A7.9 Processing sector — impact of a 10 cents/litre decrease in the cost of raw milk

(June quarter–December quarter 2000)

Performance indicator	September quarter (July–September 00)		December quarter (October–December 00)	
	cents /litre	**cents/litre**	**cents/litre**	**cents/litre**
Cost of raw milk	⇩ 10 cents		⇩ 10 cents	
Wholesale price		-8		-13
Total cost		-7		-11
Net profit margin		-1		-2

Source: Data supplied by retail sector.

7.5 Cross sectional analysis of prices and profit margins

Removal of farmgate price controls for milk resulted in a fall in the costs of raw milk, lower wholesale milk prices and lower retail prices for milk products. As noted earlier in this report, Australian consumers now have a greater choice of price and convenience factors when purchasing milk. This reflects different supply and servicing costs for milk sold in various forms of packaging, under different brands and through alternative retail outlets.

Following deregulation, net profit margins for milk processors and gross profit margins on milk sold in supermarkets decreased. The net profit margins of milk processors decreased by 1 and 2 cents per litre respectively in the September and December quarters relative to the June quarter. Supermarket gross profit margins fell by 4 cents and 5 cents per litre respectively during this period. Profit margins in the convenience store sector remained steady in the September quarter but increased by 8 cents per litre in the December quarter (refer table 7.5 and table A7.10) due largely to lower wholesale costs of milk purchases.

Table A7.10 Impact of a 10 cents/litre decrease in the cost of raw milk

(June quarter–December quarter 2000)

Performance indicators	September quarter (July–September 00)		December quarter (October–December 00)	
	cents /litre	**cents/litre**	**cents/litre**	**cents/litre**
Cost of raw milk	⇩ 10 cents		⇩ 10 cents	
Processing sector — net profit margin		-1		-2
Supermarket sector — gross profit margin		-4		-5
Convenience stores — gross profit margin		0		+8

Source: Data supplied by retail sector.

7.6 Conclusion

The analysis reflects a shift in profit margins across different sectors of the milk supply chain following deregulation. Table A7.10 shows that over the monitoring period, the convenience store sector captured a relatively greater share of savings resulting from falls in farmgate prices following deregulation. However, this was offset by a loss in volume turnover in these outlets. Profit margins on milk sales decreased in both the processing and retail sectors when measured on a per unit basis[68].

Competitive tendering by the processing sector for supermarket contracts to supply generic-labelled milk and subsequent lower wholesale prices for milk marketed under processor brands have seen average wholesale prices across all milk fall following deregulation. It appears from the margin analysis that the processing sector has passed on savings resulting from lower farmgate prices to the retail sector.

The supermarket sector appears to have passed on savings generated from lower wholesale milk prices to consumers. Changes in profit margins resulting from falls in the costs of raw milk show a contraction in supermarket margins relative to the convenience store sector. This highlights some degree of pressure on supermarkets following deregulation to reduce margins in order to attract and retain new customers, and overcome the consumer advantages of purchasing milk through more convenient outlets. Supermarkets have been successful in partially diverting customers away from convenience stores by offering attractive price discounts.

The margin analysis also shows that moderate increases in profit margins for the convenience stores have been driven partly by increases in margins on flavoured milk products (refer to table A7.6). Flavoured milk is predominantly sold in convenience and corner stores and typically attracts higher margins than other categories of milk.

68 The processing sector captured a lesser share of savings resulting from falls in farmgate prices following deregulation, while the supermarket sector captured the least.

Retail prices of flavoured milk fell slightly following deregulation against larger falls in wholesale prices contributing to a moderate increase in profit margins (refer to table A7.6).

Overall, the trends suggest savings have been passed on to consumers by the processing and retail sector. Consumers now have a greater choice of price and convenience factors to consider when purchasing milk as a result of lower farmgate prices.

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