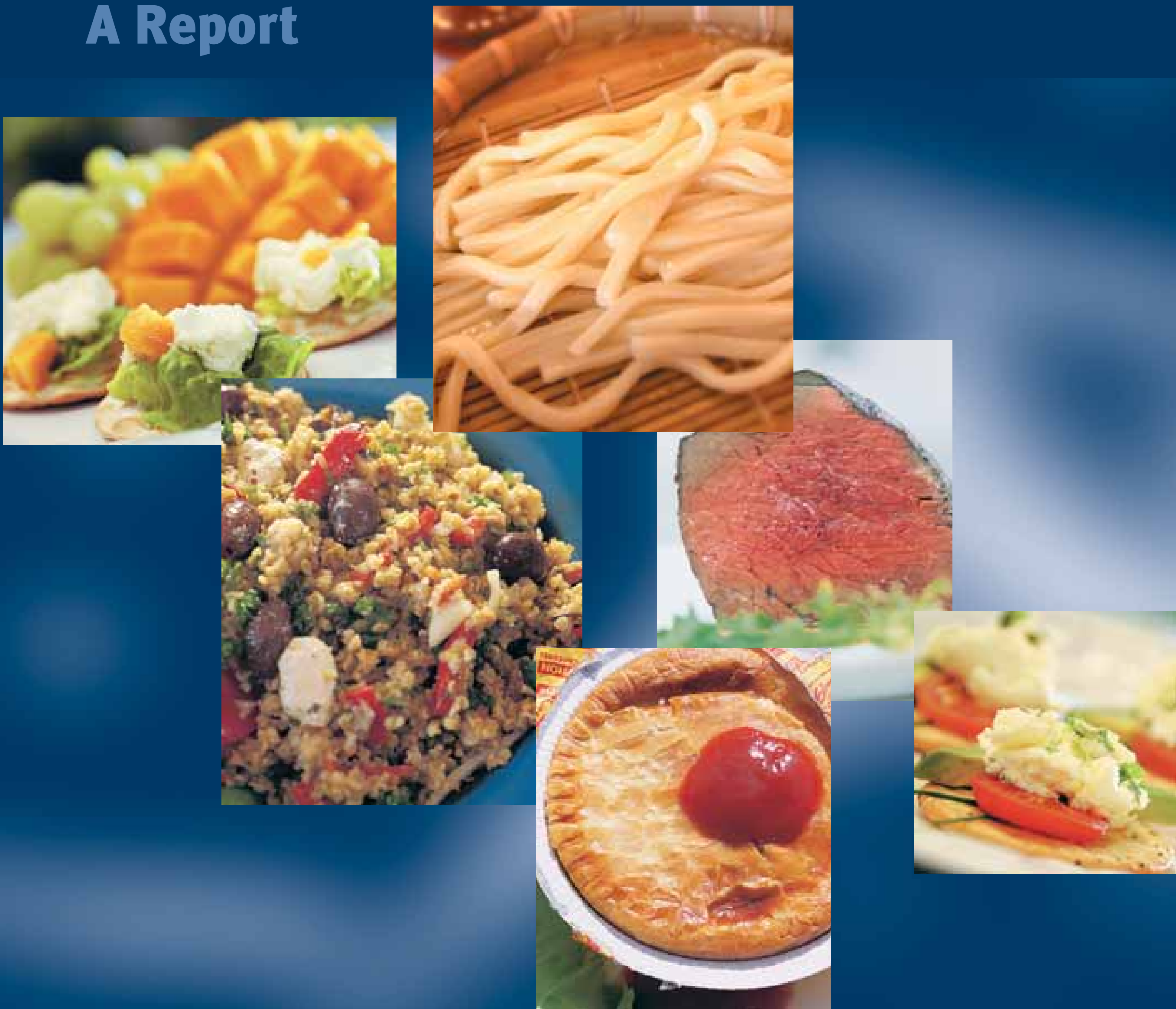
Australian Government

Department of Agriculture, Fisheries and Forestry

Price Determination in the Australian Food Industry

A Report



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Price Determination in the Australian Food Industry

A Report

Prepared for the Australian Government Department of Agriculture, Fisheries and Forestry

by Whitehall Associates

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Food News Bulletin, (published quarterly), produced by the Australian Government Department of Agriculture, Fisheries and Forestry, Canberra.

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The project was conducted by Steve Spencer, Director of Whitehall Associates who wishes to acknowledge the assistance of the following people who provided consulting input and valued insight: Ewan Colquhoun of Macarthur Agribusiness, Rosemary Richards of Bowman Richards & Associates, Martin Kneebone of Retailworks and Professor Gordon MacAulay of the University of Sydney.

Roger Green of Bad Business copy-edited the final report.

FOOD AND AGRICULTURE BUSINESS GROUP

The Australian Government Department of Agriculture Fisheries and Forestry is the Commonwealth agency with portfolio responsibility for food production and processing policy. The Food and Agriculture Business Group facilitates integrated policy development, innovation and stakeholder engagement across the agriculture and food industries.

The Food Policy and Safety Branch of the Group, which includes the Food Policy and Communications Section, develops and implements policy with the aim of facilitating a globally competitive, innovative and export oriented food processing and beverage industry. The section works cooperatively with and has regard to the mandates of the National Food Industry Council (NFIC), National Food Industry Strategy Ltd (NFIS Ltd), the Primary Industries Standing Committee's food sub-committee, and industry.

The section is also responsible for disseminating information to food industry stakeholders on issues of interest and importance including sectoral profiles, international and domestic trends, emerging issues, statistics, developments in food policy and programs, and decisions by government and food agencies.

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GLOSSARY OF TERMS

A set of abbreviated or industry terminology used throughout this report

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
box market	a segment of the egg industry supply chain, wherein egg packers supply products direct to retail outlets
costs of doing business	a key performance indicator for grocery retailers referring to the full cost of maintaining and servicing a retail store chain and supporting logistics activities
co-products	secondary saleable products that are derived from a manufacturing process
cut and pack	a cheese block cutting and packaging operation
EBIT	earnings before interest and tax
every day low prices	a strategy used by grocery retailers to offer consistent, relatively low retail selling prices on a large number of core grocery food lines
HAL	Horticulture Australia Limited, an industry owned company that provides R&D and marketing services to the horticulture industry
MLA	Meat and Livestock Australia, a producer owned company that provides market access and R&D services to the red meat industry
NLRS	National Livestock Reporting Service, a market reporting service operated by MLA for the meat industry
OTH	over the hooks, which is a means of selling a livestock carcass based on dressed weight
private label	retail food products that are branded in supermarket brands – otherwise known as 'no-name' or 'generic' labels
proprietary brand	retail food products that are branded in food company brands
quick service restaurant	fast food outlets including McDonald's, Hungry Jack's, Pizza Hut
ROA	return on assets
ROE	return on equity capital employed
route trade	the grocery food distribution channel that services independent and convenience stores
SKU	stock keeping unit

EXECUTIVE SUMMARY

Purpose

The aim of this paper is to identify and explain the determinants of prices in some key grocery product value chains.

The study has addressed three tasks:

1. provide an analysis of movements over time in retail prices paid by consumers in comparison to those received at the farm level;
2. identify the costs and value-adding factors which are determining food prices over time; and
3. provide an analysis of financial performance for publicly listed companies in food manufacturing, marketing and retailing in Australia and other countries.

This report has undertaken analysis of the prices and costs through a number of food categories. Products have been selected and used in this analysis where there is a relatively strong similarity between the physical farmgate produce and the consumer good that appears on the store shelf.

The food industry environment

The study addresses these three core tasks against a background environment of the Australian food sector. The complexity of issues across food industry sectors and the intensity of competition within the food retail market means that simplistic explanations for the relationships between farmgate and retail prices are not meaningful. Any study must therefore make a case by case assessment of relevant influences and determinants.

It is important to highlight that many factors influence and drive the pricing of food in the Australian domestic food sector. These include:

- The impact of international trade is increasingly having an effect on farmgate prices across primary food sectors regardless of the forces in the domestic retail food sector, with a few important exceptions.
- There is a highly competitive and contested retail food market for the consumer dollar. Whilst overall grocery sales are growing slowly, the intense competition for market share between the grocery retail majors, and between majors and independents and over 30,000 specialty food businesses is a major benefit to Australian consumers in terms of price, convenience, range and choice.
- Australia's geography and urban demographics, relatively small consumer market and low population growth present major chain retailers with significant challenges in offering ongoing growth in shareholder wealth.
- Competition for retail market share between the two majors – Coles and Woolworths – Foodland Associated Ltd and Metcash-supplied independents, and newly arrived international food retailers such as Aldi and Pick n' Pay, is closely linked to competition for investor sentiment – each vying for performance advantage and points of differentiation. Future trends in retail will continue to see extensions of the retail format into new areas where synergies are available, though scope for significant organic revenue growth is limited by competition.
- Food retailers are increasingly using loyalty strategies to shape and entrench buyer shopping habits (store cards, fuel discounts, in-store banking services, loyalty reward schemes and so on). This drives repeat store visitations thereby encouraging high sales turnover.
- There is a gradual commoditisation of basic core grocery lines. Processed food manufacturers are increasingly using the 'every day low price' strategies of each of the major chains. The primary aim of such strategies is to share benefits in cost savings between customers and shareholders – suppliers benefit from reliable market access, economic volumes and large-scale production in core product lines.

- The current focus of retail chains in taking costs out of their supply lines enables greater direct control of product movements and economies in logistics. Major retailers are developing more direct supply relationships to better control the quality and cost of supply in the fresh food segment, a trend that will continue to pressure that value proposition offered by traditional wholesale markets in major centres.
- While fresh horticulture markets retain a vital role in the supply chain, poor visibility of market conditions and an ongoing function as clearers of available produce supply contribute to volatile retail pricing and poor signals to suppliers and retailers.
- Where available, increased focus is being given to the growth opportunities in food service and convenience channels as lifestyles continue to bring changes in consumer preference.

Objective 1: Retail – farmgate price comparisons

In core grocery lines, the work has found that simple comparisons of farmgate and retail prices are often simplistic and misleading. Across the food groups analysed, a range of different factors are behind what is seemingly an increasing gap between farmgate and retail prices, and behind claims of a higher share of prices paid at the checkout flowing to the retailer.

Agricultural goods which are non-perishable, undifferentiated and internationally traded have their prices effectively determined by international markets irrespective of domestic post-farmgate production and competition factors. In such cases, the return to the farmer is essentially governed by the price point at which a domestic manufacturer or processor could attract product away from the export market or compete with an imported item. What happens beyond the farmgate is essentially irrelevant to a farmer's ability to extract price gains.

The services sector typically has relatively high labour and employment costs which usually rise in line with the general productivity growth of an economy, which in turn generally exceeds inflation.

However, the raw costs of goods generally benefit to a greater extent from improvements in technology, which often lead to the substitution of capital for labour. New technologies are often rapidly adopted across an industry with competition eventually lowering the price of those goods. This can lead to a lowering of the original cost of the good as a proportion of the consumer sale price over time, despite sometimes intense competition at all points of the value chain.

Hence the intrinsic costs of goods generally rise at a slower pace than the costs of services (which includes transport, storage, handling, distribution and retailing) which each involve a high component of labour.

This further explains why the value of raw commodities, over time, has tended to represent an increasingly smaller component of the sale price of food products, despite competition at all levels of the chain.

But these core or staple products are not the only story of the food sector. These have been selected for analysis by this study due to their significance to relevant industry output and the availability of data regarding prices and costs.

In product areas where greater unit sales value is extracted from the primary food, scope exists for a greater share of margins to accrue to the manufacturer and producer from value-adding activities. Their respective success in achieving that outcome depends upon individual corporate and industry strategy and the quality of information regarding such an opportunity.

Objective 2: Factors determining prices

Pages 6 and 7 provide a summary of the key determinants of prices at key price points across a range of food product groups.

The detailed document has mapped the value chains of such product groups and explored the factors determining prices under a set of headings. This has taken account of the factors that generally govern price setting and competition, which include:

- supply and demand conditions;

- the influence of trade;
- the nature and extent of integration through the value chain between producer and consumer;
- the use of technology and innovation; and
- product competition from direct and substitute sources.

The study recognises each relevant industry's ultimate end-use or market destination of the primary product and the structure of relationships in the value chains. The study also identifies the drivers of performance of major retail chains, the dynamics of relevant consumer markets and the broad set of strategic and category management considerations that affect retail prices in the food store.

Objective 3: Performance of food companies

While a large number of food manufacturers are small private businesses, with their greatest presence in fresh and chilled grocery products, nearly half the total value of grocery sales in supermarkets is attributable to the top 20 companies. Any analysis of the performance of food companies must recognise that many major food businesses are now fully integrated into global operations of major multinational corporations.

A highly competitive retail sector combined with the strong presence of national and international brands has resulted in a low margin, by world standards, grocery sector operating on less than 4 per cent earnings before interest and tax (EBIT).

In Australia, supermarket costs of doing business represent around 22 per cent, whereas United States and European grocery retail leaders operate in the range of 16–20 per cent. While headline sales revenue essentially tracks economic growth rates of around 3–4 per cent plus inflation, food retailers have been able to generate earnings per share growth in the low double digits in recent years by increasing their share of the retail food market and reducing their costs of doing business through scale and supply chain efficiencies.

The food business retail model has allowed savings to be passed to consumers thus maintaining the price competitiveness of the major chains and increasing turnover, which in turn further lowers the costs of doing business by spreading fixed store and management costs over a broader sales base.

Despite the context of a highly competitive domestic retail sector, the analysis concludes that the financial performance of Australian-based food companies is not substantially out of step with the performance of international firms or comparable businesses in foreign markets.

Consolidation in food manufacturing and brand ownership has enabled local companies to keep pace with key indicators. Yet the small size and maturity of many segments of the domestic market are limitations on sustaining growth.

In the future, the medium-term impact of an 'every day low prices' culture, and implementation of factory gate pricing by retailers may alter this view, as the scope for price increases and economies in logistics may be less abundant for manufacturers and brand managers.

Several industry sectors are dominated by integrated supplier-owned cooperatives – with several different business models apparent in terms of the extent to which they have engaged in consumer brand management as well as product conversion and manufacture.

The limited scope for access to equity capital needed to underpin strategic business development is a concern across several industry sectors and will limit producer participation in gains from value-adding.

Issues arising from the analysis

There are a number of matters that arise from the study of pricing as outlined above. These are outlined in the following pages and section 6 of this report. They deal with:

- the nature and quality of information in the food industry and the scope for greater knowledge management to enhance the understanding of the factors affecting prices;

- assertions as to market power in the food sector;
- the nature and scope of value-adding in the food sector and the impact that such activities are having on food pricing and returns to each part of the industry; and
- adjustment by parts of specific industries to ongoing changes in market conditions.

Information and knowledge

It is not possible to make valid assertions about the nature, cause and real size of the margin between retail and farmgate prices without reliable information and relevant analysis.

In general, whilst the quality of information useful for a study such as this varies across sectors of the food industry, the study has found a poor state of information relevant to a study of prices through value chains. While food and primary agricultural sectors have increased the specialisation and sophistication of their investments in product and market R&D in recent years, there has been limited investment by most industries in knowledge management and intelligence.

The intensity of domestic competition and the consolidation of food supply contribute to this.

The highly contested nature of the food sector, which manifests itself in aggressive buying practices at wholesale level, has created an atmosphere where suppliers are fearful of giving information away that exposes their underlying costs and margins, or gives a competitor an advantage. The push by retail buyers to identify and share in product cost savings creates an equally strong reluctance by food companies to participate in studies such as this or to ensure greater transparency for the sake of enhancing supplier knowledge.

In general terms the state of industry information that is available in the primary food industries relevant to the lines chosen for analysis in this study is of limited decision-making value. It is invariably the case however that those suppliers who make the investment in knowledge and relationships are well aware of market realities – creating premiums over the average.

Visibility

The lack of visibility of market conditions is a key inhibitor in further development of fresh food supply chains where central markets play a key role. Despite the increasing role that direct supply has for major retailers, fresh wholesale markets will continue to play a central role in enabling buyers to manage quality, volume and price risk.

A great deal of attention has been given to the issues of fresh horticulture markets; much of the information is anecdotal. These markets operate with limited visibility which prevents producer, retailer and wholesaler from optimising value from a matching of supply to demand. Poor industry information (as to prices, demand and supply volumes) and a cash-only mentality among many buyers and agents undermine attempts to improve their functionality. Better price signals and educating growers on meeting consumer demand for produce would provide scope to increase the reward for quality and production to market requirement, and the opportunity for several sectors to increase their value.

Such markets will remain dysfunctional and volatile, structured to clear supply rather than match consumer demand. Without change, they will remain places where the ill-informed will continue to be disadvantaged.

Industry must weigh up the pros and cons of investments in better information systems and transaction tracking to overcome these concerns, as there is little role for external intervention beyond mechanisms such as the Retail Grocery Industry Code of Contact and Ombudsman.

Market power

The existence of brand and market power at all levels, but particularly among major manufacturers, distributors and retailers, suggests that one or more sectors or major industry participants may have market power over others. We have analysed the conditions that give rise to market power in a value chain and embellished a list of determinants based on the work done in the study.

These factors may be useful in helping explain and educate suppliers about conditions that give rise to market power and factors that can be used to balance such power.

Value-adding

The retail sector provides tight time windows and highly contestable access to shelf space for new product opportunities. Yet there is significant activity across the food sector focused on innovating for differentiation and extracting better value out of product and proprietary brand extensions. The nature of this domestic marketplace means that food companies must continue to innovate and operate at high efficiency in order to achieve income growth. Fluctuating dynamics of international markets add to that complexity.

Value-adding is a much misused and abused term, meaning many different things to different people. This report has attempted to describe the nature and extent of some of the value-adding activities across the food categories examined in this study. Creating advantage and differentiation in the domestic food sector is difficult – the costs of getting new products on the shelf with sufficient critical mass of market, in the face of tightening margins in commodity lines that have been the backbone of industry development, are the food industry's greatest challenge. The strong 'every day low prices' thrust and the drive for cost reduction in the logistics chain increase the importance of relevant investments in commercialising food industry research, product development and marketing initiatives for our domestically based food companies.

It is not possible to disclose the sharing of the costs and benefits of value-adding that puts new and innovative products on the shelf. Commercial sensitivity prevents disclosure of the returns in the way that has been possible for core grocery lines.

Gains are being shared by those who add the value and who can ensure that differentiation has lasting effect.

In primary industry sectors where supplier integration takes the form of cooperatives or similar corporate models, the producer price shares in those gains only through an ability for the returns from value-adding to offset or partially offset the reduced terms of trade in commodity lines.

Adjustment

The study highlights some key areas where industry adjustment is going on and where pricing through the value chain has gained added complexity in recent times. Primary producers perceive that the cost of adjustment is not being recognised in an adequate return. The report has sought to explain apparent inconsistencies between returns to suppliers and the final retail value.

Examples of these forces are as follows, with a full summary of drivers of prices on the following pages:

- The coincidence of poor world markets and severe drought has recently eroded returns to the total dairy industry. The world market for dairy products remains a driver of returns to the sector in the long term. In recent years, the share of margins in fresh whole milk products has changed substantially, reflecting the role of such products in the domestic retail market.
- In the egg industry, animal welfare requirements for cage egg production drive significant re-investment. Uncertainty as to adoption of requirements by 2008 will cause volatility in pricing. The industry is experiencing a reduction in returns from the supermarket sector as it competes more effectively with the box market whilst cost factors increase with new regulation and feed security.
- With greater fresh produce volumes being purchased by retailers directly, greater pressure will be placed on sectors of industry which do not enhance their product and varietal, differentiation, information and supply management systems.
- Whilst strong export factors drive farmgate prices in beef and lamb sectors, the pork industry faces pressure from the effect of strong import competition in commodity use of meat and from the cost of feed grain. Pork faces a challenge to reposition its value proposition to the consumer and to develop more integrated value chains that enable maximisation of carcass returns.

Overview – main drivers of prices in the chain

	Farmgate price	Wholesale price	Retail price
Packaged milk	Varies with location. Strongly influenced by average industry returns to major production regions of the industry; performance of dairy cooperatives in overall business activities; and suitable margins to encourage stable year-round supplies.	Competitive bargaining for share of chain retail market (private label and branded) – range, brands, volume costs. In less competitive channels and products, suitable margin over costs, with reference to competing products.	Average target margin over cost remaining competitive with alternate retail channels. Retail prices constrained by competition between major chains, independents and new international entrants.
Cheddar cheese	Average returns to major production regions from the mix of domestic and export sales overlaid by the ability of cooperatives to achieve an efficient return on their overall activities.	Competitive bargaining for share of chain retail market (private label and branded), strongly influenced by import parity price of cheese. In less competitive areas and products, suitable margin over costs.	Target margin over cost balanced across the cheese category between bulk and specialist products. Regular discounting sustains turnover volumes. Retail prices constrained by competition between major chains, independents and new international entrants.
Dairy spreads	Average returns to major production regions from the mix of domestic and export sales, over-laid by the ability of cooperatives to achieve an efficient return on their overall activities.	Competitive bargaining for share of chain retail market (private label and branded) strongly influenced by import parity price of butter.	Competitive pricing with alternate vegetable oil-based spreads. Retail prices constrained by competition between major chains, independents and new international entrants.
Beef products	Prevailing average return to industry based on mix of export and domestic market returns.	Competitive pricing against other white and red meat categories, with differentiation according to eating quality. Integrated supply chains with retailers reduce price volatility and stabilise returns to growers.	Competitive pricing to position cuts in the category against other white and red meat lines. Significant differentiation through different grades of eating quality, packaging, product branding and service (butcher).
Lamb products	Prevailing average return to industry based on mix of export and domestic market returns.	Competitive pricing against other white and red meat categories, with differentiation according to eating quality. Integrated supply chains with retailers reduce price volatility and stabilise returns to growers.	Competitive pricing to position cuts in the category against other white and red meat lines. Differentiation through different cuts, eating quality and packaging.
Pork products	Prevailing average return to industry based on mix of export and domestic market returns. Strong influence by seasonal returns which are affected by prevalence of imported product into lower end of processed meat market.	Strongly influenced by end use of cut and its retail positioning. Increasing effect on carcass returns from divergent needs of export and domestic markets in terms of carcass size and quality.	Competitive pricing to position cuts in the category against other white and red meat lines.
Fresh fruit and vegetables	Prevailing balance of supply and demand of fresh produce at the time of marketing. Returns variable depending on use of direct supply to major purchasers or dependence on wholesale markets.	Prevailing balance of supply and demand of fresh produce at the time of marketing enhanced by ineffective transparency at certain stages (including packing and wholesaling). Integrated supply chains with retailers reduce price volatility and increase returns to growers.	Prices set to provide target margin over full costs of produce category. Strong influence of perceived price-sensitive points to consumers, with periodic fluctuation according to fruit availability and quality.

	Farmgate price	Wholesale price	Retail price
Processed frozen potatoes and vegetables	Affordable price to the processor, influenced by contractual incentives for season, quality, consistency and variety.	Competitive pricing from other sources of supply including generic imported products.	Target margin over costs influenced by prices of competing meal choices, existing competition and new international entrants.
Fresh citrus products	Prevailing balance of supply and demand of fresh produce at the time of marketing and, in turn, the absorption of fruit by export and processing markets.	Prevailing balance of supply and demand of fresh produce at the time of marketing enhanced by ineffective transparency at certain stages (including packing and wholesaling).	Strong influence of perceived price-sensitive points to consumers, with periodic fluctuation according to fruit availability and quality.
Fresh citrus juices	Available fresh supplies of fruit and prevailing frozen orange juice concentrate prices to processors.	Margin over processing costs influenced by input pricing available to frozen orange juice concentrate processors (that is, world price of frozen orange juice concentrate).	Strong influence of perceived price-sensitive points to consumers, taking strong account of competitive pricing of other fresh beverages, waters and carbonated drinks.
Flour products	Prevailing world commodity prices for grains.	Suitable margin over cost.	Target margin over cost with retail prices constrained by competition between major chains, independents and new international entrants.
Margarine and cooking oils	Prevailing world commodity prices for oilseeds and alternate grain commodities.	Suitable margin over cost influenced by import parity prices for oils.	Pricing sensitive to changing consumer tastes. Influenced by pricing of competing spreads with suitable margin over costs.
Eggs	Prevailing balance of supply and demand of fresh produce at the time of marketing.	Prevailing balance of supply and demand of fresh produce at the time of marketing strongly influenced by price competition in alternate market channels.	Target margin over costs with a strong watch on competitive pricing against other retail outlets, including box market channels and international entrants.
Refined sugar	Prevailing world price for sugar – effectively set by prevailing European Union and United States subsidies and production levels in Brazil, the major exporting industry.	Import parity price for raw and processed sugars.	Target margin over costs – little direct product competition in a static market, but prices restrained by competition for majors from international entrants.
Packet rice	Average returns to major production regions from the mix of domestic and export sales, overlaid by the ability of the major cooperative to achieve an efficient return on its overall activities.	Suitable margin over cost influenced by import parity price for finished product.	Target margin over costs with a strong watch on competitive pricing of other substitute products including pastas.

1. Introduction

THE TERMS OF REFERENCE

The proposed project

The Australian Government Department of Agriculture, Fisheries and Forestry has sought to undertake research and analysis of price movements in food and farm produce prices over time and of factors determining price formation (including identification of costs and margins through the chain) and a comparison of financial profitability of listed retail and food manufacturing companies in Australia and other selected countries.

The scope of the review

The terms of reference for the project require that the research and analysis should focus on three broad areas:

1. **analysis of movements over time in retail prices paid by consumers in comparison to prices received at the farm level.** This analysis should consider, explore and detail supply and demand factors and the impact of these on price movements and prices received by farmers and chain intermediaries. The time period should be of sufficient scope to ensure that a reasonable and reliable assessment is established;
2. **determination of value-adding factors contributing to food prices** using qualitative and quantitative data (including ABS input–output data) in respect of key commodity lines. It will be important to isolate the key components affecting the final price and associated trends and drivers for this. Current research into these factors in Australia, New Zealand and other countries should be included where appropriate and feasible; and
3. **analysis of financial performance for publicly listed companies** in food manufacturing, marketing and retailing in Australia and other countries as appropriate, focusing on key indicators from publicly available information. This should take account of the diversity of business activities and markets, relative industry concentration and other factors. It should also include assessment of relative profitability and financial and business risk over time for Australian companies compared with companies in other developed economies.

Time frame

The analysis should provide an historical dimension, outlining the information over the past decade, where possible.

Influences

These activities should be analysed and brought together with reference to identified key trends and drivers within the industry including:

- significant **supply and demand influences** relating to a changing global marketplace, as well as how changes in these factors have been reflected in price transmissions through the chain, resource mobility, supply and demand responsiveness and price variability, and the manifestation of productivity improvements in inputs and outputs;
- **structural changes** including the impacts of, and drivers for, changing market influence and vertical integration (through ownership and contractual relationships); changes due to technology in consumer and production sectors, consumer preferences and changes in underlying economic drivers; and
- differences and changes in the **nature of competition** through the value chain with reference to different **business strategies** that are adopted by participants through the chain.

Food lines

The analysis of food product pricing has been undertaken for a number of product lines which:

- ensure coverage of significant grocery items;
- ensure coverage of a range of key industry sectors;
- are capable of analysis, in view of the availability of data and the identity of a farmgate sector in the value chain; and
- provide examples of the differing extent of product transformation.

The predominant focus of the study is on grocery items which make up the major share of retail food sales to the consumer.

PURPOSE AND SCOPE

Purpose

The aim of this paper is to identify and explain the determinants of prices in some key grocery product value chains.

This report has been compiled as a result of analysis of the prices and costs through a number of food categories. Products have been selected for use in this analysis where there is a relatively strong similarity between the physical farmgate produce and the consumer product that appears on the supermarket shelf.

The selection of products has been made to provide adequate coverage across the following:

- fresh and processed products;
- products supplied by integrated and disaggregated industry value chains; and
- products that display varying influence from export and import trade.

The purpose of the work has been to provide an objective analysis of:

- comparisons of farmgate and retail prices over time;
- the apparent share of the retail sales dollar;
- factors contributing to changing costs over time;
- implications drawn from the study of prices for the performance of the key companies engaged in manufacturing and retail sectors; and
- the nature and role of value-adding being undertaken in each product category.

The approach and project workplan were based upon available resources and collaboration from subject industries.

The opportunity brought by this balanced and objective analysis is to provide the food industry – in particular, primary production – with a greater appreciation of the drivers of prices and costs in each of the product categories examined.

Scope

A project with the purpose outlined is potentially a mammoth exercise. Our approach has been to work with known sources of information, including extensive literature that addresses the issues of food pricing and cost structures across the sectors selected in this work.

We have also worked closely with industry sectors, including commercial participants in food production, processing, marketing and retail.

The products selected in this work are within the following categories:

- dairy products (milk, cheese, butter and spreads);
- meat (pork, beef, lamb);

- fresh horticulture (various product lines);
- orange juice;
- processed fruit;
- frozen processed vegetables (beans, peas, potatoes);
- rice;
- eggs;
- flour;
- vegetable oil; and
- sugar.

Each sector has been analysed in terms of the big picture determinants of prices and costs, drilling down to specific products used in the analysis.

The work has been performed within a relatively tight time frame and a finite project budget, forcing a focus on major issues only within these food categories.

The study has not covered foods where the primary product represents a very small component of the finished product cost or where products have been elaborately transformed – such as bread, cereals or snack foods. The study has also chosen not to examine industries where the value chain is fully integrated – such as chicken meat, where there is no equivalent of an autonomous farm sector.

OVERVIEW OF THE APPROACH

Overview

Our work has followed a number of key stages:

1. Mapping the chains and scanning data

The work has mapped the value chains and undertaken a data scan for a list of product groups and items. This included a range of products that provide the project with representative coverage of product categories.

2. Accessing data and intelligence on prices and margins

The study identified available data and intelligence from food industry sources, including industry statistics, existing research studies and from consultation with organisations and participants.

3. Mapping and analysing product value chains

The work has collated and analysed pricing data and relevant pricing dynamics for the product groups.

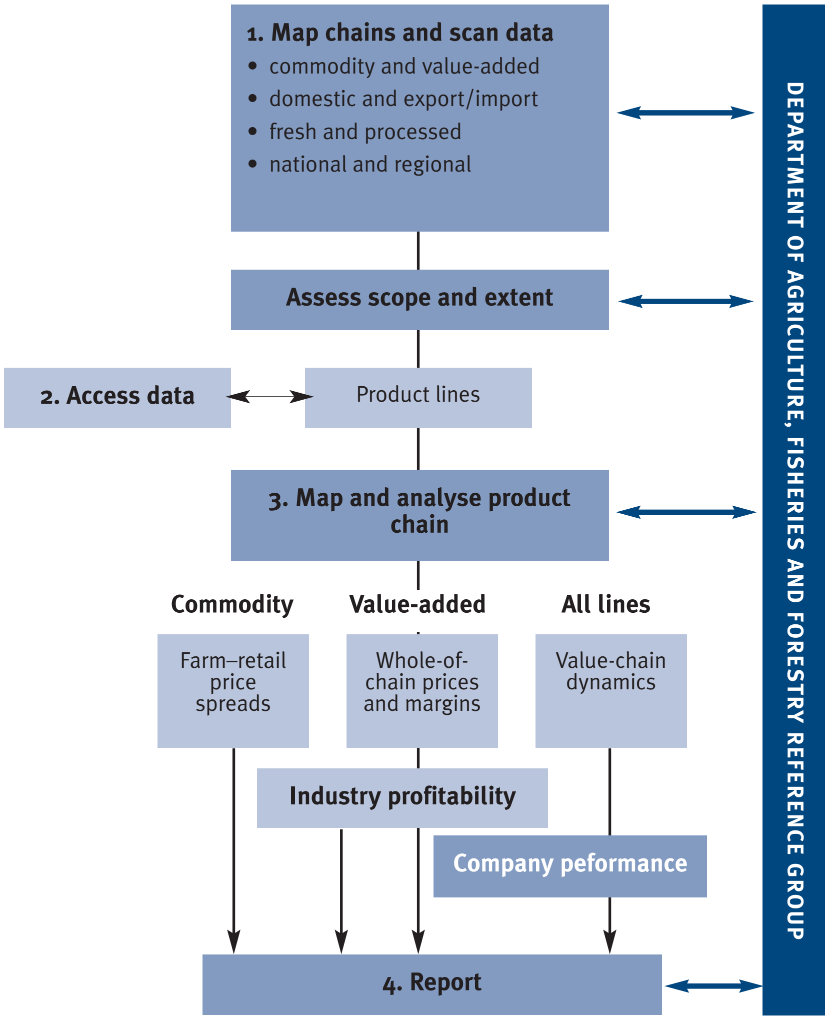
Assessments of corporate profitability and dynamics have been undertaken at industry/product level with necessary assessment of the linkage between product pricing and the outcomes achieved by food companies.

4. Reporting

The work has drawn on the outcomes of consultation with industry participants, together with a review of considerable literature relevant to contemporary issues in food pricing.

This document is a summary of the findings and conclusions addressing key policy issues that have relevance for the Department of Agriculture, Fisheries and Forestry; as well as providing credible food industry insight.

Figure 1. **Overview of the approach**



Pricing and cost information

The information contained in this section of the report has been compiled and analysed by Whitehall, based on its own investigations and in consultation with a number of industry organisations and participants, as well as a review of available published material.

This is not an economic study of food pricing – it has been based on significant commercial analysis and consultation with food industry decision-makers. It therefore contains a significant number of assertions that have been based on the consultant's analysis of factors influencing pricing and cost relationships. These assertions are not always backed by empirical data but result from confidential discussions with industry.

One of the significant challenges in undertaking an exercise of this nature is accessing reliable and accurate data. In general, the study found that food industries are currently making a low level of investment at industry level in industry-wide data. As the food industry becomes more concentrated and integrated, there is a high risk that the transparency of information and intelligence will be reduced.

Literature reviews

A comprehensive review has been undertaken of available literature published in recent years. This has relevance to the analysis of food pricing and the factors affecting prices and costs through major grocery food value chains.

This has included:

- industry outlook and analysis papers;
- reviews and inquiries into market structures, including a number of reviews into the structure of food retailing;
- Productivity Commission reviews; and
- international papers on innovation in food value-chain management and market innovation.

These sources are listed in the bibliography.

Value-adding

Our work has recognised the areas where industries and enterprises are striving for value-adding in the relevant product areas.

The aim in exploring value-adding is to establish what is driving the initiatives and what sort of gains are flowing to the food industry and its participants from such endeavours.

There is substantial investment in value-adding across the food sector and a full study of value-adding itself is beyond the scope of this study.

Our work identifies the primary ways in which food industries and enterprises are striving to add value to their products and services to customers and the factors that are driving those endeavours.

As identified in the report, there is little willingness to disclose, in a public document such as this, the sharing of gains from involvement in value-adding. The analysis of the performance of companies will discuss the implications of the pursuit of value-adding at a corporate level.

ASSESSING CORPORATE PROFITABILITY

Industry analysis

A key part of the study requires us to undertake an assessment of the implications of food pricing and the relative profitability of food companies.

There is not necessarily a direct and causal link between the pricing of key food lines and the profitability of major food companies.

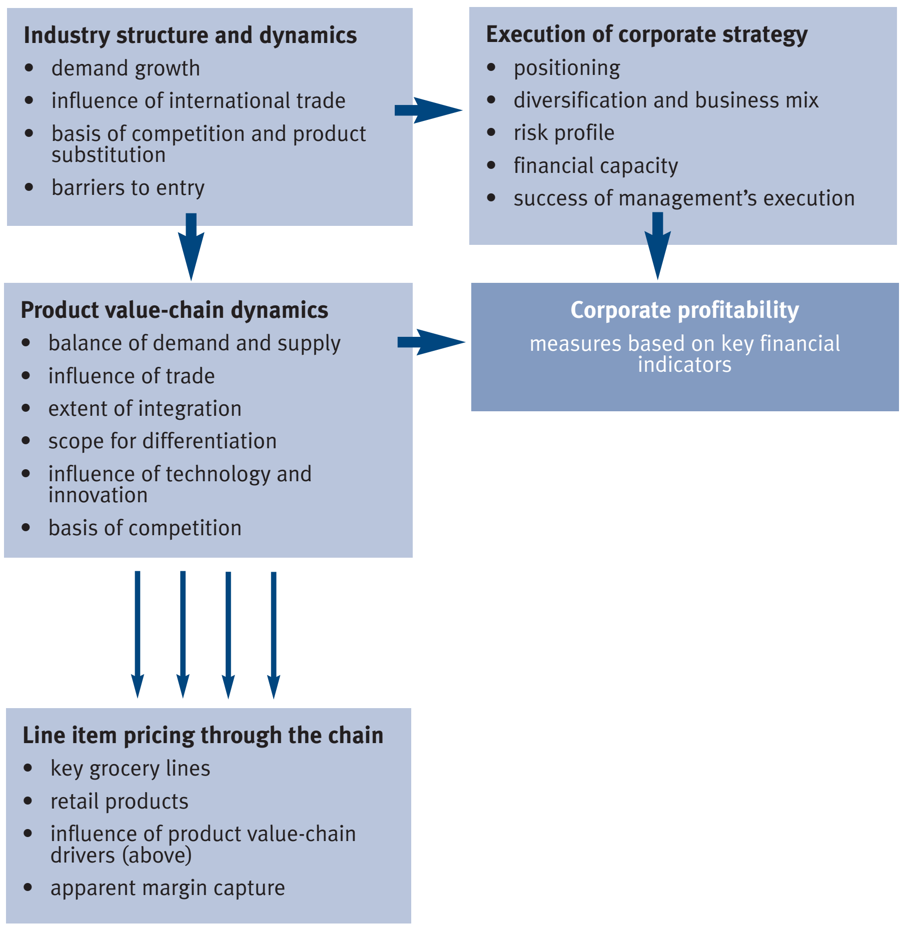
As the chart on the right shows, corporate profits are driven by a convergence of issues which include:

- industry dynamics and the competitive environment;
- dynamics in the product value chain which largely determine the influences on product group returns; and
- the appropriateness of corporate strategy and the quality of management's execution of that strategy.

Corporate sector

Relatively few Australian food companies are locally listed firms where full financial analysis is readily available. Limited data is available on Australian subsidiaries of overseas-based parent companies.

Figure 2. **Corporate profitability**



2. Principal determinants of prices and costs in agrifood products

DETERMINANTS OF FOOD PRICES

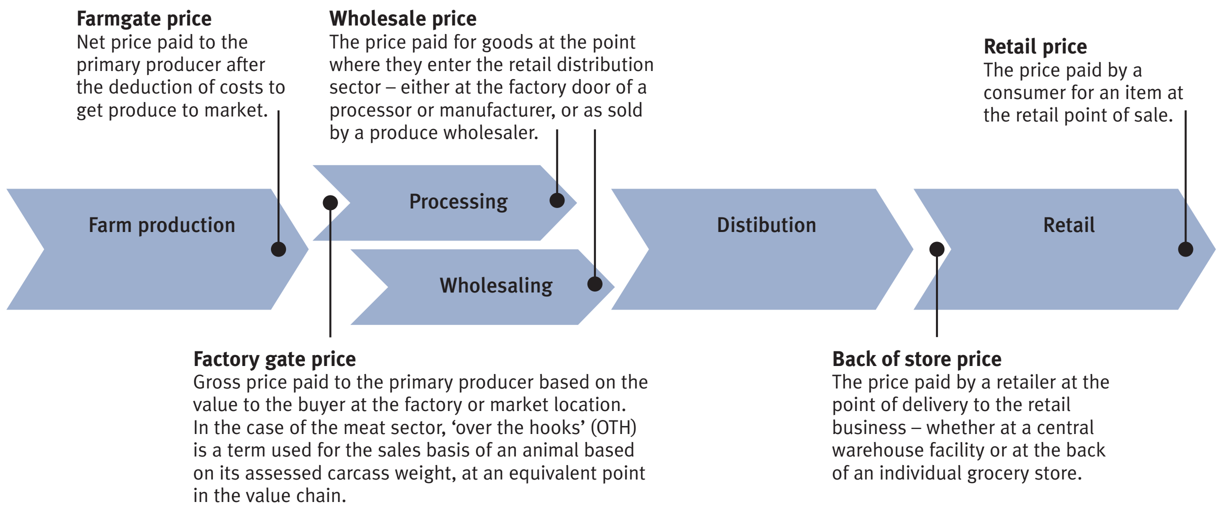
What is price?

The following page provides a summary of the respective price concepts that apply through the food value chain.

Whilst the concepts of price are reasonably straightforward closer to the farmgate, at the wholesale points of sale into the retail sector, price becomes more complex. The net price received by a fresh food supplier is at times net of selling commissions when a wholesaler assumes a role as agent.

The relevant price points at which a supplier makes a sale to a large retailer may vary between 'back of store', 'delivered into central store' or – in line with more recent innovations that are being rolled out at present – 'factory gate'. Different treatments will apply to the costs of logistics which will see different cost recovery and net returns to the manufacturer.

Figure 3. **Food prices: Key concepts**



In addition to this, the wholesale price is rarely ever a list price which is offered by a supplier to a retailer. The price is adjusted by settlement terms, discounts or plans for specials, promotional plans and other price adjustments. Some of these apply to the individual product line, others apply across the supplier's product range. In recent times, most suppliers have opted to accept rolled-up terms in dealing with supermarket buyers, whereby all price and terms adjustments are combined into a single percentage adjustment to list or gross price. This is preferred as it offers simplified administration for retailer and supplier in terms of accounting for transactions and volume or promotional adjustments.

The analysis that has been done in this report when assessing the sharing of retail selling price of individual products has been based upon a supplier's estimate of **net** selling price after an allocation of appropriate adjustments to price.

Figure 4. **Major drivers of prices and costs in agrifood products**

Our analysis has identified seven groups of factors and influences that generically affect food pricing and costs across industries, regardless of the industry or product classification. The analysis of value chains in section 3 of this document will explain the specific impact of these items on each relevant food product sector.

1. Farm production factors

1.1 The volume and volatility of production.

1.2 Seasonality of production – where highly seasonal production creates variation in available supply and prices through the chain.

1.3 The perishability or shelf life of the product in raw material form strongly affects its value through the chain and the negotiability of returns.

2. Value-chain integration

2.1 The increasing vertical integration of activities through the chain.

2.2 Increasing scale efficiency of processing and manufacturing facilities.

2.3 Greater concentration of processing, manufacturing and brand ownership beyond the farmgate.

2.4 The changing and diverse nature of competition and concentration at points along the value chain.

3. The marketing approach

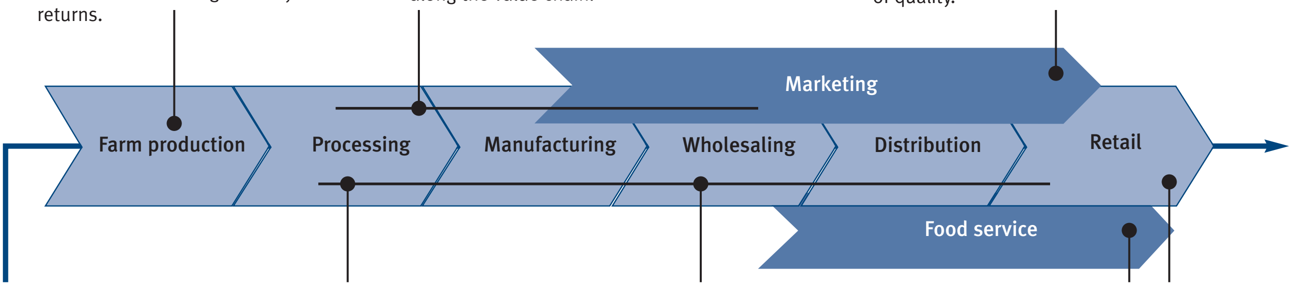
3.1 Increasing pressures on food manufacturers and marketers to provide differentiation in products across a variety of factors.

3.2 Globalisation of consumer brands.

3.3 The increasing strength of convenience markets.

3.4 A greater focus on specialisation and customisation of food products.

3.5 Differentiation of finished product in terms of quality.



4. Regulation and compliance

4.1 The increasing costs of business compliance with regulation.

4.2 The existence of barriers to greater value-chain profitability, generally in the form of restrictions on consolidation.

4.3 The increasing demands on value chains to meet ethical and product integrity demands, including environmental, welfare and food safety integrity.

5. Trade impacts

5.1 The extent to which primary and processed products are exported.

5.2 The extent and timing (including in seasonal terms) of imported products in primary, processed or finished goods form.

5.3 The influence of prevailing world commodity prices on the primary product, or in early stages of processing.

6. Technology and innovation

6.1 The increasing capital intensity in product transformation and manufacture.

6.2 The differing degrees of transparency in market prices and costs.

6.3 Greater investment in innovation to diversify core products and extract value from co-products.

7. Consumer and retail market dynamics

7.1 The growth of the private label in food products.

7.2 Greater demand for convenience and lifestyle solutions in meals and snacks.

7.3 Greater concentration in the retail sector – with increasing imposition of retail costs and margin pressure on suppliers.

MAJOR DRIVERS OF PRICES AND COSTS

These are generic factors that have common effect across industries. Their specific relevance or otherwise to specific products is discussed in section three.

Farm production factors

1.1 **The volume and volatility of farm production** – the year to year or season to season variation in total output from a primary production or supply industry.

1.2 **Seasonality of production within a production year** – highly seasonal production creates potential variation in the matching of available supply and demand and may create fluctuations in prices through the chain.

1.3 **The perishability or shelf life of the product** – in raw material form, this strongly influences the time needed for the product to reach the market or next-stage processing. This will influence the bargaining power of the producer and the value of the product downstream, depending on the extent to which supply matches available demand and whether the product is storable in processed or semi-processed form.

Value-chain integration

2.1 **Different degrees of vertical integration of activities through the chain** – the greater incidence of vertical ownership or alliances through the chain is reducing transaction costs, eliminating margins, increasing transparency to the integrator and providing for better matching of demand and supply.

2.2 **Increasing scale efficiency of processing and manufacturing facilities** – this is lowering the unit cost of production through better recovery of overhead costs and improved capacity to afford innovation and automation.

2.3 **Greater concentration of processing, manufacturing and brand ownership** – this improves the bargaining power of the owner, partly through a reduction in potential price competition in addition to the benefits in 2.2.

2.4 **The changing and diverse nature of competition at points along the value chain** – where, through changing innovation, globalisation of trade and shifting consumer preferences, the traditional forms of competition are replaced by new and emerging substitutes and pose direct threats to products in raw or processed form.

Marketing approach

3.1 **Increasing pressures on food manufacturers and marketers to provide differentiation in products across a variety of factors relevant to specific consumer market segments** – this reduces the commoditisation of products which offers diminishing real returns over time and reduces exposure to imported or substitute products.

3.2 **Globalisation of consumer brands** – this is seeing greater concentration of brands in the hands of fewer global brand managers, providing larger players with better ability to manage brand strategies and more leverage in dealings with retailers.

3.3 **The increasing strength of convenience markets** – the changing lifestyles and eating preferences of consumers is seeing a greater share of the stomach move away from home cooking to prepared foods in food service establishments, convenience formats in pre-prepared meals and products with a wider variety of retail points of sale.

3.4 **A greater focus on specialisation and customisation of food products** – eating preferences (specific food and cooking styles, tastes and health benefits) are influencing what is offered.

3.5 **Differentiation of finished product in terms of quality** – the scope for marketers to promote superior product quality to the end user.

Regulation and compliance

4.1 **The increasing costs of business compliance with regulation** – the greater cost burdens being placed on businesses to be accountable for their impacts on society.

4.2 **The existence of barriers to greater value-chain profitability** – generally in the form of restrictions on consolidation or other regulatory or commercial barriers which prevent enterprises through the chain from achieving better returns on investment.

4.3 **The increasing demands on value chains to meet ethical and product integrity demands** – this includes meeting regulatory and commercial requirements to account for impact on environmental conditions and adherence to food safety, welfare and other requirements of the consumer and community.

Trade impacts

5.1 **The extent and influence of primary and processed product exports** – returns from products with significant exports will generally strongly influence the pricing and returns to producers or processors of the domestic consumer product in question.

5.2 **The extent and timing of imported products in primary, processed or finished goods form** – greater access to domestic markets for imported products will have a stronger influence on the available prices that locally produced foods can achieve in domestic markets, depending upon timing, quality differentiation and price sensitivity of the later-stage processor or consumer.

5.3 **The greater influence of prevailing world commodity prices** – in the primary product or in early stages of processing, this influences the threat of imports, as well as the benchmark prices that producers seek in the domestic market for commodities.

Technology and innovation

6.1 **The increasing capital intensity in product transformation and manufacture** – which is changing cost structures to reduce a dependence on variable, globally uncompetitive labour costs towards greater associated fixed processing costs, requiring in turn greater consistency of production runs and limited downtime and product switching.

6.2 **The differing degrees of transparency in market conditions as to prices and costs** – whilst also a factor that relates to the integration in the value chain, the way in which knowledge is managed and shared through a value chain to create certainty of the commercial environment is strongly influencing outcomes between sectors.

6.3 **Greater investment in innovation to diversify core products and extract value from co-products** – as with 3.1, there is pressure to depart from a heavy reliance on commodity products but also to ensure that the greatest potential value is extracted from the raw product through by-product or co-product processes.

Consumer and retail market dynamics

7.1 **The growth of the private label in food products** – retailers in the Australian domestic market have generally placed private label products into discount categories which are reflected in generally lower buying prices from suppliers. The growth of the private label has been fuelled by strong price competition to provide the retailer with greater control of the category and better margins from the use of shelf space.

7.2 **Greater demand for convenience and lifestyle solutions in meals and snacks** – this is driving retailers and their suppliers to create more innovative options in convenience product form. There is less cooking being done in the home and less cooking from base ingredients. The concept of the meal is being redefined due to the nature of the busy city lifestyle. Changes in the way that people are eating meals is challenging the role of conventional foods and product forms.

7.3 **Greater concentration in the retail sector** – this is providing the chain retailer with far greater bargaining power in negotiations with suppliers who are faced with decreasing options in many categories due to the size of retail market share that the chain store offers. With greater bargaining power has come increasing imposition of the costs of retail (reflected in terms of trade) and margin pressure on suppliers who are competing for available shelf space.

3. Analysis of the determinants of prices and costs in product value chains

DAIRY PRODUCTS

Analysis of the determinants of prices and costs in product value chains

Overview of the dairy industry

The dairy industry is a major agribusiness sector which has historically been largely production and supply driven:

- the majority of milk production enterprises supply dairy manufacturing or processing cooperatives which have developed into large enterprises aimed at achieving the best overall returns from supplied milk;
- major volumes of milk are converted into storable dairy products which are sold into available international markets; and
- national milk production is highly seasonal to take advantage of low-cost production conditions (such as spring pasture growth).

With the strong forces of globalisation, the industry value chain has in the past decade been highly exposed to demand factors and forces in export and domestic market segments. These have had a profound effect on the returns to the overall industry and the nature of competition through the chain. The most marked of these changes has been in the domestic consumer product sector.

Since the early 1980s the industry progressively removed internal support and regulation of prices and supply, and focused on taking advantage of low-cost production conditions to become a major player in the world market for dairy commodities and dispose of larger volumes of product.

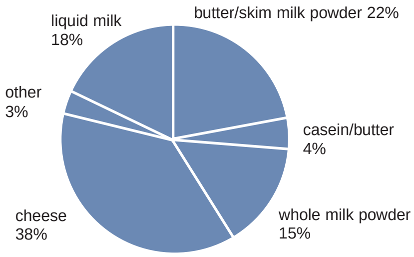
The final phase of that deregulation – of pricing and supply of milk to the packaged milk sector which directly affected less than a fifth of national milk output – is a relatively recent event. Considerable adjustment is still occurring in parts of the production and processing sector today.

The industry's product and market mix

The chart below shows the overall use of milk in the total industry, including all markets. The diagram uses 2002 numbers in terms of milk volume, considered normal prior to the sharp fall in production in 2003 as a result of the drought. In this diagram, 'liquid milk' includes packaged product that encompasses fresh and UHT (long-life) milk, and 'other' includes fresh dairy products such as yoghurts and desserts.

The influence of the world market extends well beyond simply setting returns for export products – it sets the overall return on a significant portion of manufactured dairy products such as cheese, ingredients and butter in the domestic market. This is due to the proximity of New Zealand which is the major exporter onto the world tradable products market.

Figure 5. **Milk utilisation, 2001–02**



Source: Dairy Australia 2003

DAIRY – PACKAGED MILK

Overview of the product

The packaged milk market consumes about 17 per cent of total milk output according to 2003 numbers.

Packaged milk is a traditional product category on which much of the industry production technology and culture was originally based – a commitment to service the fresh milk needs of the community. Significant changes have been seen through the chain as a result of technologies which have improved milk qualities, logistics systems capabilities and shelf life, as well as changes in consumer preferences towards greater convenience and health consciousness.

The history

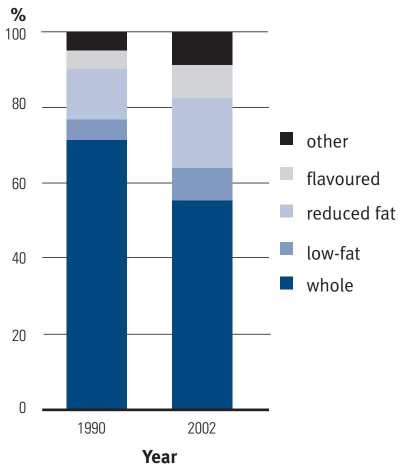
The industry has a background history of regulated prices through the chain at points which included factory gate, wholesale and back of store, and retail. The last piece of pricing regulation was removed on 1 July 2000 with the removal of farmgate regulated prices for milk used in packaged milk products.

The product–market mix

About 55 per cent of packaged milk sales in the domestic market are made through major supermarket chains.

The product mix has changed significantly over the past 10 years towards products with lower fat content, although white whole milk dominates volumes.

Figure 6. **Milk product mix**



Source of data on this and next page: Dairy Australia 2003

Drivers of pricing

A number of factors have significantly altered pricing in the packaged milk value chain in recent years:

- deregulation of pricing and supply laws that existed at state level, which included farmgate, wholesale and retail prices;
- major retailers moved to national supply contracts in packaged milk;
- the existence of excess capacity in milk packaging operations in the three major processors, coupled with increased awareness by retailers of the costs of milk production and processing;
- the use of private label products at a discount from proprietary branded products underpinned a gain in market share by chain retailers;

- growth in consumer adoption of larger pack sizes with 3 litre containers now almost as popular as 2 litre in supermarkets; and
- increasing competition from health beverages including waters, juices and other functional drinks.

Figure 7. **Growth in large pack sizes, litres sold per quarter, average**

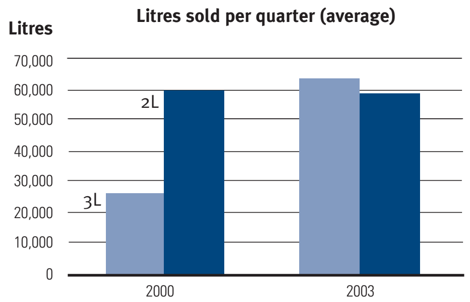


Figure 8. **Growth in private label milk, 2 litre, litres sold per week**

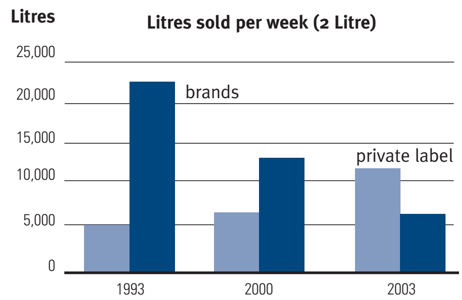


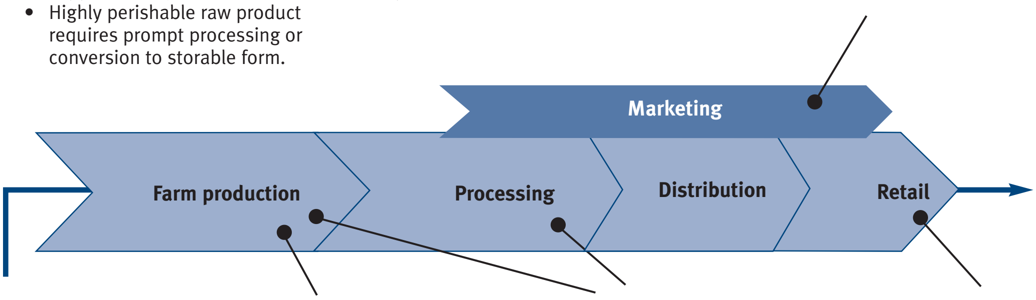
Figure 9. **Packaged milk: Major drivers of prices and costs**

Packaged milk is a high-profile case study in the evolution of supply chain pricing in fresh food products. The analysis however must take account of the dynamics of the packaged products in the context of the wider industry.

1. Farm production factors
- Production volumes are relatively stable year to year.
- National production is strongly seasonal in low-cost production regions where milk is mostly used to manufacture commodity products.
- Milk used in packaged milk must meet a consistent daily supply requirement, incurring higher supplementary feeding costs.
- Highly perishable raw product requires prompt processing or conversion to storable form.

2. Value-chain integration
- Integration of activities along the chain to the extent that cooperatives are engaged in milk processing.
- Increasing scale efficiency of milk plants has occurred in past five years.
- Greater concentration of ownership of processing capacity.
- Removal of regulation has created a commercial market at the farmgate level, increasing the variety of sources of milk to processors.

3. The marketing approach
- Increasing differentiation of milk products into functional and convenience beverages to resist strong competition from other beverages.
- Increasing investment by major processors in distribution channels to convenience retail markets to retain a substantive volume of higher margin business.



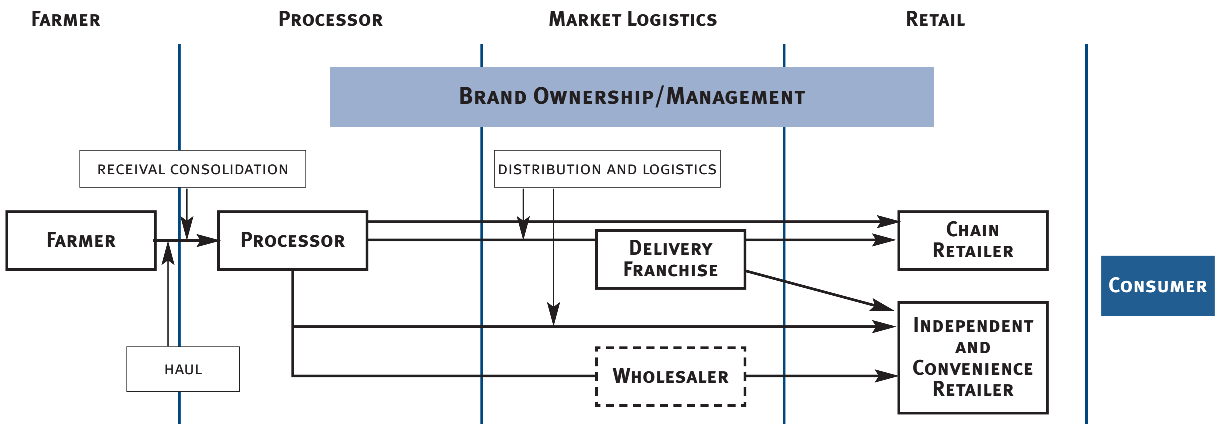
4. Regulation and compliance
- Increasing costs of compliance with environmental, welfare and food safety requirements for milk producers and processors.
- Competition constraints on further consolidation of processing sector.

5. Trade impacts
- Growing share of total industry production committed to export market reduces the long-term average return for raw whole milk.
- Limited exposure to potential import competition from extended and long-life milk products which do not have strong consumer support.
- Overall returns to farmgate strongly influenced by world commodity returns for bulk products, which in turn influence the margin paid for milk designated for packaged milk usage.

6. Technology and innovation
- Increasing capital intensity of the farming sector. Changing cost structures in the processing sector.
- The transparent farmgate prices and costs enable a greater understanding by processors and marketers of the scope for different sourcing options.
- Significant investment in applied technology and innovation in milk production.

7. Retail market dynamics
- Increasing share of the total milk category for chain retailers.
- Development of a national milk buying market by chain retailers.
- Rapid growth in the share of supermarket sales of the private label milk lines, priced significantly lower than branded lines.
- Strong price-based competition between chain retail and convenience channels for packaged milk sales.
- Strong competition from an increasing range of health-based drinks.

Figure 10. **Whole milk, 2 litre, supply chain map**



Farmer

Approx. 11,000 dairy farmers, but only 4000–5000 share directly or indirectly in packaged milk market.

- 'Receival consolidation' is where milk is consolidatd in regional receival facilities and then tankered to the necessary processing plant.

Processor

- Packaged milk uses about 17% of the total market.
- Three national processors with more than 80% of processing market.
- Up to 20 other small niche or regional processors.
- Significant overcapacity (estimated at between 2 to 3 times the market) exists in processing sector.

Market Logistics

- Convenience market retains a strong share of packaged milk market.
- Distribution strategies of dairy companies vary, with a mix of company-owned and outsourced or private route operators.
- Major route to market is through franchised delivery businesses.
- Role of separate wholesale sector is minimal – only to provide paper-based trading on behalf of retailers, without taking title.

Retail

- Chain retail share of total market increasing to more than 55% of retail volumes.
- Increasing share of private label product in chain and independent (IGA) retail. In chain retail estimated at more than 60%.
- Steady increase over time in low-fat modified milks which have 27% of volume (whole milk has 56%).

DAIRY – ANALYSIS OF PACKAGED MILK PRICING

Retail prices for milk

Historic regulated milk prices at retail were set on a cost-plus basis. Costs built up through the chain to provide each sector with a deemed appropriate margin which was justified on a cost-recovery basis.

Since the removal of price regulation, retail prices have broadly fluctuated around those historic levels with gradual increases over time. However, strong price competition remains between retailers, between major chain retail and independent stores and across the beverage category.

Retail versus farmgate pricing analysis

The dairy industry has emerged from a recent history where regulation supported a practice of setting different prices for 'manufacturing' (for milk used in manufactured dairy products) and 'market milk' (for milk used in packaged liquid milk products) at the farmgate level.

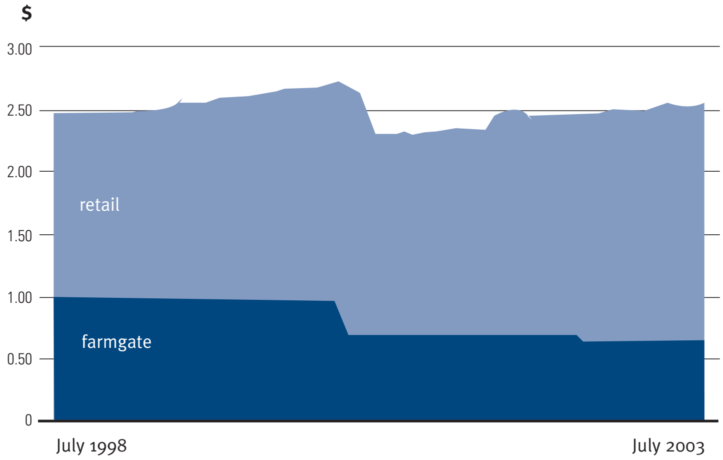
The major adjustment for the industry was moving from a production-push pricing culture into an environment where the returns of the processor and producer were very directly exposed to the consumer market realities of the fresh dairy category.

An analysis of the history of farmgate versus retail supermarket pricing over the past six years is contained in the chart below which illustrates pricing for a 2 litre whole milk product.

The farmgate price in the chart below is a farmgate price calculated as the average paid by packaged milk processors.

As expected, with the loss of regulated arrangements, there was a sharp fall in the farmgate price. Since that time, farmgate prices have fallen (commensurate with a fall in world market prices for dairy products) and average retail prices have risen.

Figure 11. **Retail versus farmgate packaged milk, $/2 litre equivalent in nominal amounts**



Source: Dairy Australia and Whitehall Associates

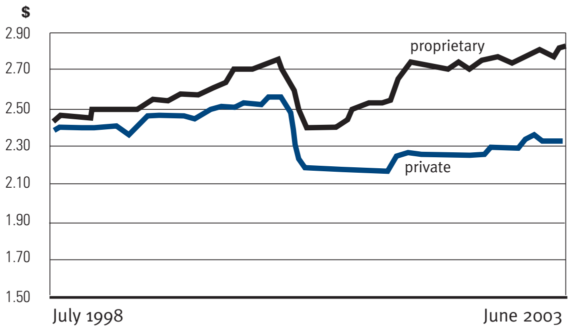
The gap between farmgate and retail has widened now that world market returns effectively set the benchmark for prices for packaged milk processing.

Retail prices

The returns from the packaged milk sector have been strongly influenced and driven by the strength of private label growth. The growth has been achieved through aggressive price competition which has seen a widening of the gap between the proprietary and private brand prices in supermarkets. A 2 litre milk product is one which is sold at a little or no margin overall to the processor. It is a volume product that enables the disposal of milk volumes, providing a distribution platform for the sale of profitable low-fat, specialty and flavoured milk products into various channels.

With lower margins available from the supermarket sector, processors have made varied responses to the growth in the private label as they have each sought to maintain brand equity in all channels to the consumer.

Figure 12. **Supermarket segment retail prices, milk, $/2 litre, 1998–2003**



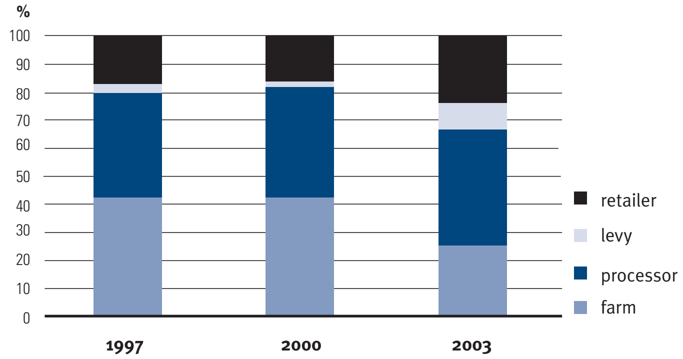
Source: Dairy Australia

Retail prices in the non-supermarket sector are generally higher than those in major retail. However there are frequent instances of discounting of 2 and 3 litre lines by independent stores in order to attract custom. Packaged milk products are now used in many segments of non-supermarket retail as a loss leader to attract customers to make other store purchases.

Prices through the chain

Our analysis of the history in farmgate and retail supermarket pricing over the past six years is set out below, illustrating pricing through the chain for a 2 litre whole milk product. The major trigger for change of the share of margins was the pricing of national contracts for the packaging of private labels. In view of surplus capacity, processors bid for the rights to supply those contracts at low prices in order to optimise plant throughput. This has resulted in a cut in wholesale prices for the private label by more than 25c a litre from pre-existing regulated prices.

Figure 13. **Supermarket sales, packaged milk, 2 litre, % of retail sales value**



Source: Dairy Australia

The above analysis is an assessment of an industry-wide average. Differences exist in farmgate prices depending on the supply region and, at wholesale level, depending on the business mix. Processor costs include meeting costs of cartage, processing and distribution. Marketing costs have tended to increase as processors attempt to put greater efforts into support of brands through the route trade. In recent years certain companies have achieved significant improvements in processing costs through investment and business rationalisation. Since the major shift in product margins in 2000, processors have won back small gains in net wholesale prices, though the average increase in wholesale returns is restricted by the increasing market share of the private labels.

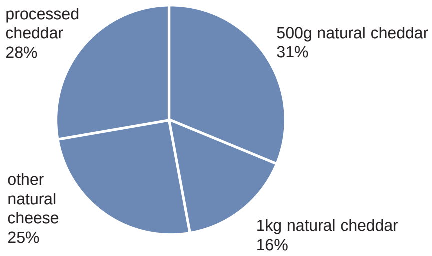
DAIRY – NATURAL CHEDDAR CHEESE

Overview of the product group

Cheddar cheese is a key product line to the Australian domestic dairy sector. Cheese products use 45 per cent of milk consumed in manufactured dairy products or approximately 36 per cent of total milk usage, making it the largest product category for the dairy industry. There are up to 50 style categories in the cheese cabinet of the retail market, differentiated on the basis of production method, fat content, texture and appearance. Cheddar is the largest style category within the cheese products group with about 55 per cent of total output. Australia exports about the same total volume of cheese that it consumes in domestic markets.

About 55 per cent of domestic cheese sales are made through the supermarket channel. Of that segment of the retail market, the product mix (Figure 14) shows the importance of the 500g and 1kg matured cheese lines, providing almost half of all cheddar sales. Processed cheddar, including slices provides 28 per cent of sales.

Figure 14. **Shares of supermarket sales of cheddar cheese**



Source: Dairy Australia 2003

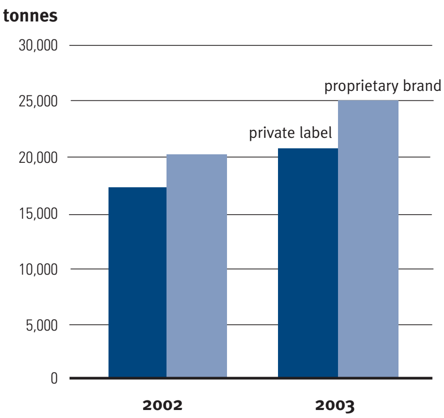
The pricing analysis for this report has been based upon a selection of major retail products. A combination of two major product lines – 500g and 1kg matured cheddar – has been chosen as it is indicative of the level of return from the major matured cheddar products.

Drivers of pricing

A number of factors have significantly affected pricing in the packaged cheddar cheese value chain in recent years:

- major retailers moved to national supply contracts for private label cheese products;
- prevailing import parity prices – for bulk cheddar and packed cheddar from New Zealand – which are set by world market conditions. Such conditions are strongly influenced by the level of demand in major customer countries to which the industry has access and the level of subsidised support paid to European Union cheese exporters;
- the existence of excess capacity in cheese manufacturing or inventories on hand from time to time in the hands of the major manufacturers. These are due to poor export market demand and/or prevailing commodity prices;
- the use of private label and branded products at a discount from primary proprietary branded products to underpin a gain in total market share by chain retailers;
- consolidation of cheese cut and pack facilities to enable manufacturers to achieve economies of scale in product manufacture; and
- deregulation of pricing and supply laws at state level which affected the volumes of milk available in certain regional areas for cheese manufacture.

Figure 15. **Sales in supermarkets, cheddar, 1kg and 500g, tonnes per annum**



Source: Dairy Australia 2003

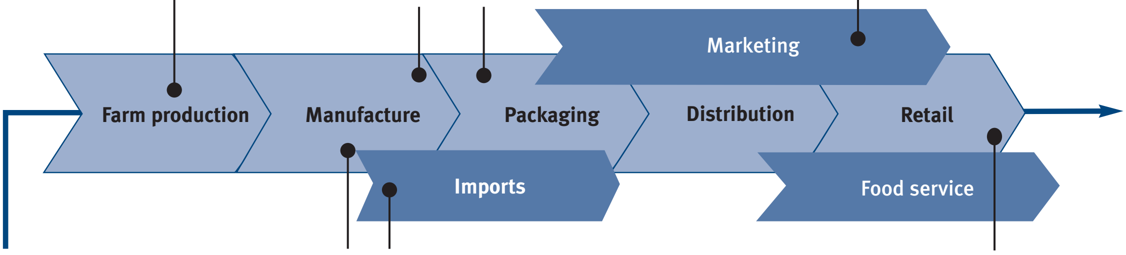
Figure 16. NATURAL CHEDDAR CHEESE: MAJOR DRIVERS OF PRICES AND COSTS

The cheese category is very diverse, with a wide range of products that create more than 50 cheese styles and more than 500 SKUs (stock keeping units) at retail level. The analysis is performed on the major lines of matured (or tasty) cheese.

1. Farm production factors
- Production volumes are relatively stable year to year.
- National production is strongly seasonal in low-cost production regions where milk is mostly used in manufacture of commodity products.
- Most cheese plants are located in or near low-cost production milk fields.
- While raw milk is highly perishable, cheese is storable.

2. Value-chain integration
- Strong integration of activities along the chain with much of cheese production controlled by cooperatives.
- Increasing commoditising of bulk cheese manufacture implies that sustainable cheese production facilities must have viable by-product markets for processed whey and other components.
- Greater concentration of toll cut-and-wrap operations to increase throughput scale efficiencies.

3. The marketing approach
- Increasing differentiation of cheese products into market use segments – lunchbox, entertainment, low-fat etc.
- Consolidation of the ownership of cheese brands.
- Increasing use of brand and co-brand partnering strategies.
- Steady growth in style and taste niches – proliferation of farmhouse, varietal and regional cheese styles in indulgence markets.



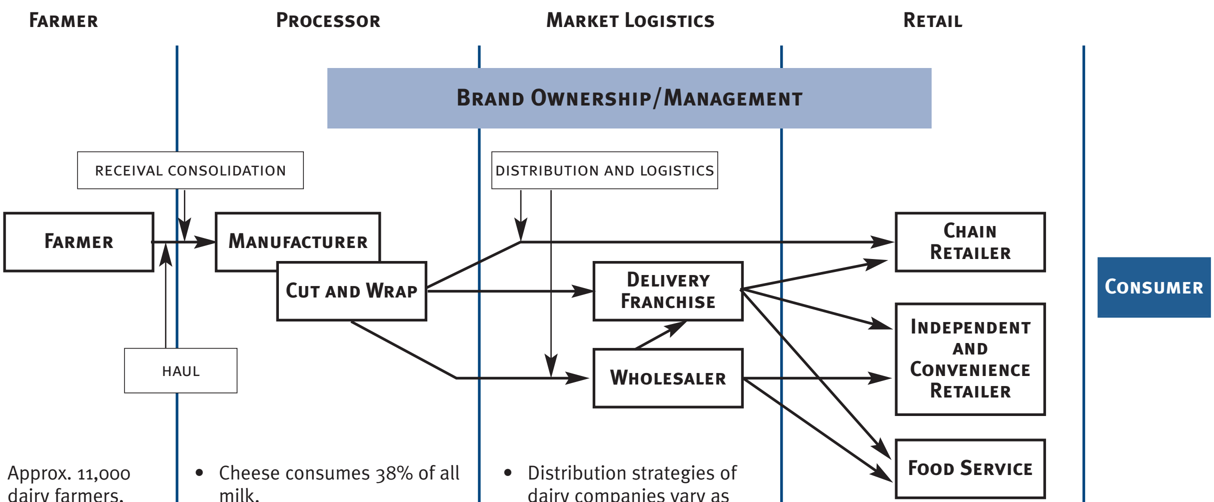
4. Regulation and compliance
- Increasing costs of compliance with environmental, welfare and food safety requirements for milk producers and processors.

5. Trade impacts
- Strong influence of imported New Zealand cheddar cheese which has approx. 25% of domestic market. Hence prevailing world commodity prices determine prices in major lines.
- Increasing export volumes of commodity cheese underpins expansion in industry manufacture.

6. Technology and innovation
- Significant investment in applied technology and innovation in milk production to achieve better component attributes.
- Increasing application of size efficiency in milk production and in cheese manufacture.
- Increasing size efficiencies and automation in cut-and-pack operations.
- Greater investment in innovation in extraction and further processing of milk components (for example, whey powder) into high-value niche ingredients.

7. Retail market dynamics
- The steady growth of the private label in bulk product lines.
- Greater demand for customisation, convenience and lifestyle solutions in cheese applied to meal and snack usage.
- Greater retail concentration has resulted in strong margin pressure.

Figure 17. NATURAL CHEDDAR CHEESE, 500G AND 1KG, SUPPLY CHAIN MAP



Farmer

Approx. 11,000 dairy farmers, with more than 9,000 sharing directly in the cheese market.

Processor
- Cheese consumes 38% of all milk.
- Four major manufacturers with more than 80% of processing market.
- Very diverse array of small and regional cheese makers.
- Yield factor is approx. 9.9 litres of milk per kg of cheese – this varies with other varieties due to different fat content.
- This function has become more concentrated with toll cut-and-wrap facilities at Bega and Kraft.

Market logistics
- Distribution strategies of dairy companies vary as most cheese companies are not involved in the fresh dairy products market.
- 25% of cheese by volume is imported, mostly from New Zealand.

Retail
- Chain retail share increasing to more than 75% of grocery retail sales volumes.
- Block cheese has about 45% of cheese market.
- Cheddar largest category of domestic cheese with 55% of cheese market.

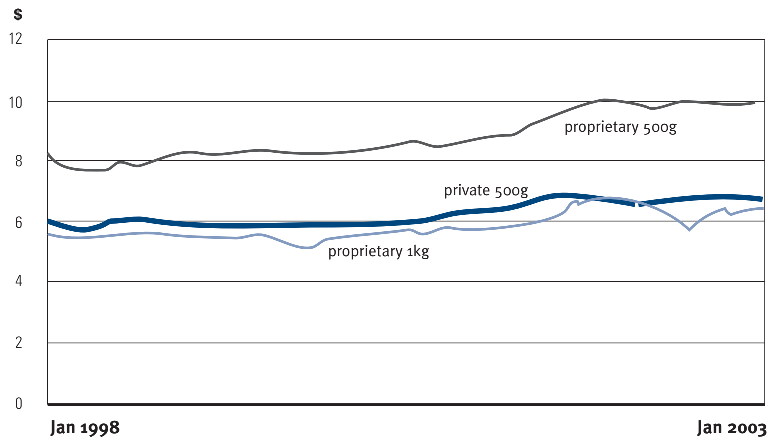
DAIRY – ANALYSIS OF CHEESE PRICING

Retail prices

The retail prices of cheese are based on a cost-plus approach, whereby world prices effectively set the level of returns at wholesale to cheese manufacturers. Marketers and retailers add margins to these prices.

With the significant volume of commodity cheddar cheese imported into the retail sector, price levels are kept in check with next best available prices.

Figure 18. **Retail price of cheddar cheese, 1998–2003, 500g and 1kg, $/kg**



Source: Dairy Australia

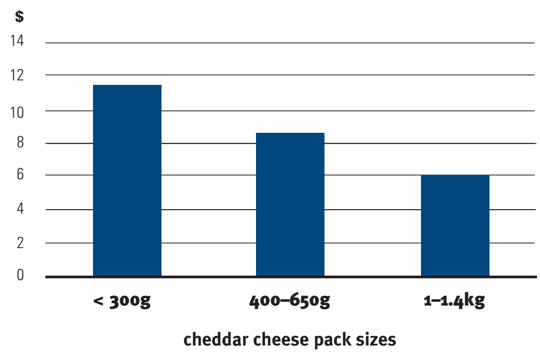
The climate in the world market for cheese also has a major bearing on prices from time to time, whereby if the industry is operating in poor market conditions with oversupply of product, major manufacturers are likely to seek an outlet for product in the retail sector through discounting. This effect can be seen in the past two years in the right of the graph above – fluctuating pricing for the 1kg branded product reflects a period of poor world market returns for cheese.

Retail prices

There is substantial variation in retail prices of cheddar cheese products across different pack sizes and maturity grades which range from mild to vintage or extra tasty.

The chart below provides an example of the differentials in average supermarket prices for the range of cheddar pack sizes (across all cheddar block pack sizes) over the past year.

Figure 19. **Retail price of cheddar cheese packs, $/kg**



Source: Dairy Australia

The 1kg product is a bulk discount line. Discounts drive consumption throughout the year and suppliers effectively take turns to fund the retailer's discount program in order to sustain activity levels in these products.

Farmgate prices

Farmgate prices are determined according to the prevailing returns from the total market available to the industry – a mix of export and domestic returns – as outlined on pages 33–34 in *Dairy – how are farmgate milk prices set?*

The major participants in the dairy industry do not differentiate between the various end uses of milk when setting prices at the farmgate.

The vast majority of cheese manufacture is owned by cooperatives, and milk pricing offered by such companies will tend to be weighted average prices that are payable from returns on a range of dairy products from export and domestic markets.

As cheddar cheese is a storable commodity dairy product, cheese-making cooperatives like to take advantage of lower cost seasonal milk production systems. This sees much of the output generated in the spring and summer months of the year. It is nonetheless more efficient and profitable for an operation to be in production for most if not all of the year in order to spread fixed overhead costs over higher volumes of product.

Milk prices are accordingly structured to manage the flows of milk during the year by offering incentives which promote higher production of milk in months when grass-fed production is most difficult. Prices contain incentives to also promote optimum composition of butterfat and protein.

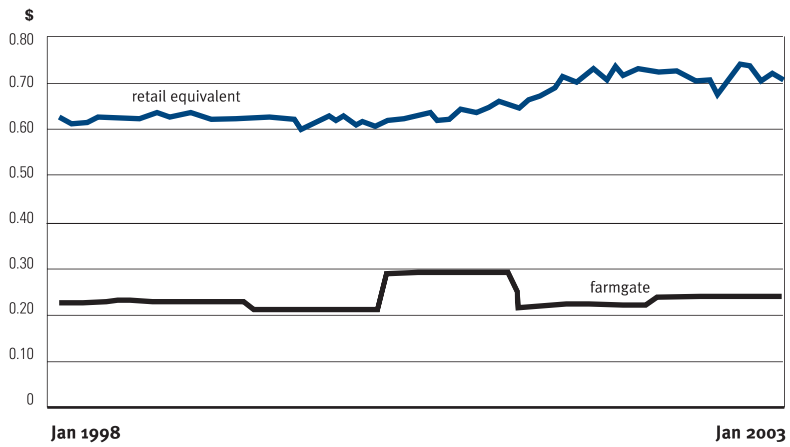
The retail–farmgate spread

Straightforward comparisons of cheese product prices and farmgate returns are overly simplistic: cheese is produced using butterfat and protein ingredients which are separately valued in milk pricing formulas offered by dairy companies.

Dairy – analysis of pricing of dairy spreads, pages 30–32, describes the factors taken into account in the pricing of farmgate milk.

The chart below depicts the spread of retail and farmgate prices that are relevant to the two major-selling cheese lines. The retail price data presented in the chart includes the weighted average of supermarket sales data for 500g and 1kg packs of mature cheddar cheese. This is compared to the average farmgate price paid by major manufacturing companies in the past six years.

Figure 20. **Retail versus farmgate cheddar cheese prices, $/litre equivalent nominal amounts, 1998–2003**



Source: Dairy Australia and Whitehall Associates

Note: This chart is based on the following:

- weighted average monthly data from chain retail over six years combining 500g and 1kg cheddar cheese blocks;
- average manufacturing rates for milk used by Victorian manufacturing companies over the six years to June 2003; and
- conversion of milk into cheddar cheese at the yield of 9.88 litres per kg cheese.

Share of retail dollar

The chart on this page shows the contrast in the share of the retail dollar at various stages in the value chain between 2000 and 2003 for major cheddar cheese lines.

Changes in margins over time

The chart shows a dissection of the margins in cheese products. The following points should be noted:

- The study of movements in retail and farmgate prices shows that while retail prices have shifted there is little evidence over the past six years that retail prices have moved in response to changes in the cost of milk at the farmgate.
- However, as changes occur, it is typically the manufacturer and/or marketer that absorbs or enjoys the changes in margin between farmgate and retail selling prices in times of fluctuating milk prices. Note: there are cheese marketers who are not also manufacturers of cheese. A significant portion of cheese making and packaging is outsourced in the domestic industry.
- There have been some gains in scale efficiencies in cut-and-wrap plants in the past several years as a result of consolidation of facilities; yet these have not materially added to the returns of manufacturers.

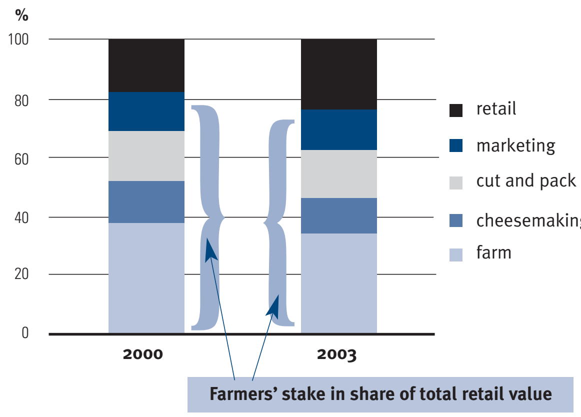
Who owns the share?

The majority of cheese-making and marketing enterprises engaged in major natural cheese products are owned by dairy farmers through cooperatives. As the chart depicts, dairy farmers have a stake in the share of retail dollar through to the point of wholesale sale to the retailer.

The exception to this feature is the Bonland Dairies business which is 100 per cent owned by New Zealand dairy farmers through Fonterra Cooperative Group.

The example using data from November 2000 was selected to show the effect when farmgate milk prices were high. At that time the prevailing farmgate price averaged 29c/litre, whereas in 2003–04 it is close to 25c/litre. 2003 analysis is based on the estimated annual average. This margin analysis is indicative only. It is based on assumptions as to margins and costs incurred through the chain by dairy companies, marketers and retailers.

Figure 21. **Share of retail dollar, cheddar cheese, margin analysis over time**



Source: Dairy Australia and Whitehall Associates

Over time, the industry's performance in managing the costs of cheese making and cut-and-wrap facilities has improved with consolidation of these functions.

There are substantial fluctuations in margins across product groups based on the contribution of the products to the overall category for the retailer and the marketer. (The concept of category management is explained in Section 5.)

DAIRY – ANALYSIS OF PRICING OF DAIRY SPREADS

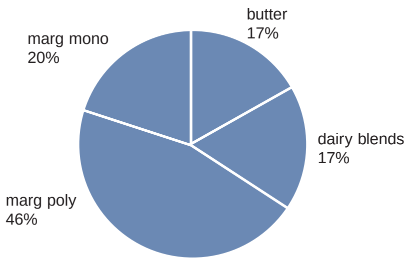
Overview of the product group

Dairy spreads are a major product line in the Australian domestic dairy sector. Butter has been the traditional mainstay of the sector, however blends of butter and vegetable oil have overtaken retail sales volume of packaged butter.

Butter is the major dairy spread product group. Approximately 50 per cent of butter product is exported (this varies year on year according to market conditions and available product supply). Of the product consumed in the domestic market, about 85 per cent is sold as straight butter product – of which only 40 per cent is reported as sold in supermarkets. The remainder is used in food service and industrial markets.

Dairy spreads compete in the table spreads market against margarines (polyunsaturated and monounsaturated) which dominate the category with more than two-thirds of sales volume according to 2002 supermarket data.

Figure 22. **Share of supermarket sales of spreads, 2002**



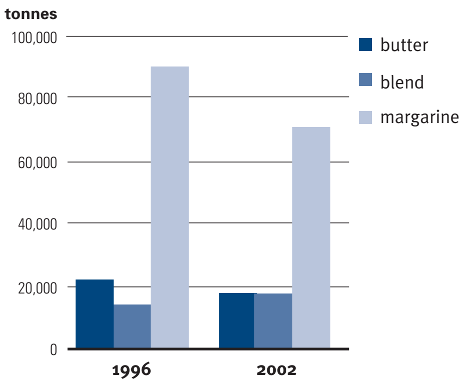
Source: Dairy Australia

Drivers of pricing

A number of factors have significantly affected pricing in the dairy spreads value chain in recent years:

- major retailers moved to national supply contracts for private label dairy spread products;
- prevailing import parity prices for packaged butter and dairy blend products from New Zealand which are set by world market conditions. Such conditions are strongly influenced by the level of demand in major customer countries to which the industry has access, and the level of subsidised support paid to European Union butter exporters;
- total steady decline in the overall table spreads category over time, falling steadily in total volumes each year since the early 1990s (source: Ibisworld 2003d);
- the long-term decline in consumer demand for butter products, offset by increasing demand for dairy blend spreads combining vegetable oils which have lower saturated fat content and properties which enable easier spreading;
- the existence of excess capacity in butter manufacturing or inventories on hand from time to time in the hands of the major manufacturers due to poor export market demand and/or prevailing commodity prices; and
- the use of private label and branded products at a discount from primary proprietary branded products to underpin a gain in total market share by chain retailers.

Figure 23. **Supermarket sales of spreads, tonnes**



Source: Dairy Australia

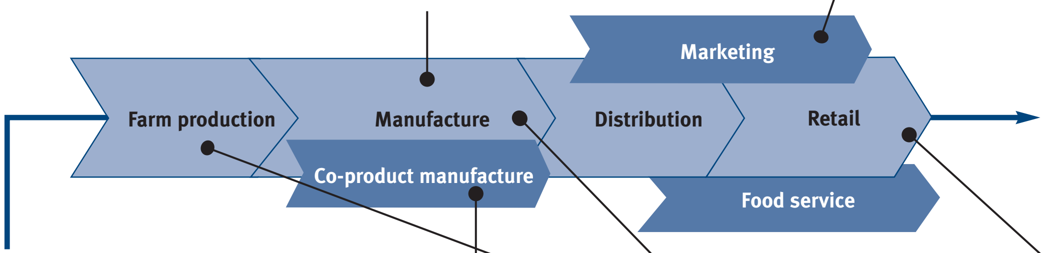
Figure 24. **Dairy spreads: Major drivers of prices and costs**

This category covers butter and butter-churn or blend products.

1. Farm production factors
- Production volumes are relatively stable year to year.
- National production is strongly seasonal in low-cost production regions where milk is mostly used in manufacture of commodity products.
- Most major butter plants are located in or near low-cost production milk fields.
- While raw milk is highly perishable, butter is storable.

2. Value-chain integration
- Strong integration of activities along the chain with much of spread production controlled by cooperatives.
- Increasing commoditising of bulk manufacture implies that sustainable butter production facilities are tightly dependent on concurrent achievement of scale efficiencies in co-products (such as skim milk powder).
- Greater concentration of commodity factory ownership by major cooperatives following industry deregulation.

3. The marketing approach
- Strategies to combat pressure on the yellow fats spread category due to greater health consciousness of consumers.
- Increasing differentiation of spreads with the inclusion of low-fat and churn blends, and functional ingredients (for example, sterols).
- Consolidation of brands through gradual rationalisation of butter producers.
- Customisation of product solutions to growing food service markets and end uses.



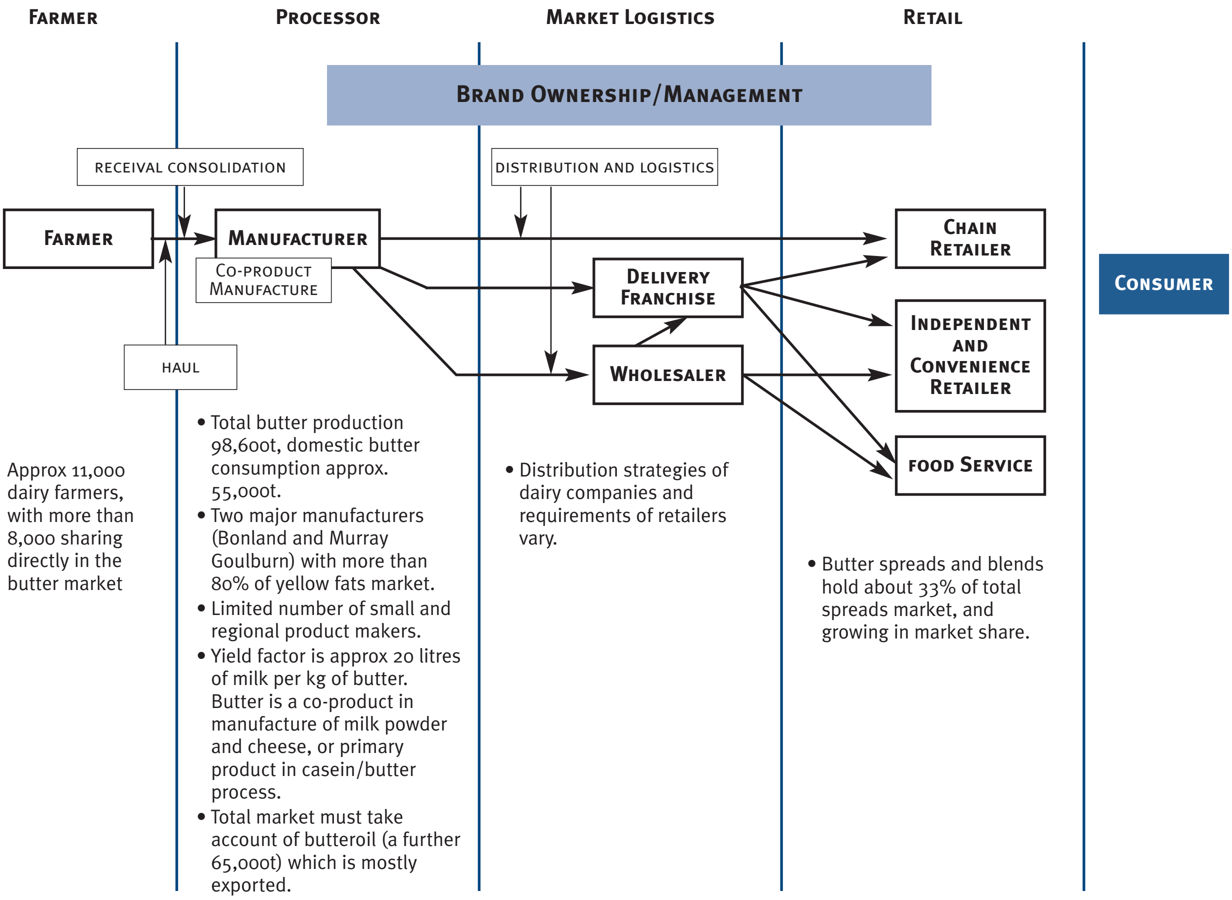
4. Regulation and compliance
- Increasing costs of compliance with environmental, welfare and food safety requirements for milk producers and processors.

5. Trade impacts
- The profitability of butter production is highly dependent on prevailing levels of export market prices of butter and its co-products.
- Prevailing world commodity prices are affected by commodity competition from other traders, including the effects of intervention by subsidised exporters.

6. Technology and innovation
- Significant investment in applied technology and innovation in milk production to achieve better component attributes.
- Greater investment in innovation to diversify and extract value from major co-products through customisation and specialisation for end use. This affects overall viability of the product combination.
- Innovation in application of functional ingredients to spread product category.

7. Retail market dynamics
- Total spreads market volumes are in decline.
- Limited total growth in yellow fats category over recent years, but use of blends with vegetable oils has improved market share.
- Increasing prevalence of private label products.
- Greater retail concentration has resulted in strong margin pressure.

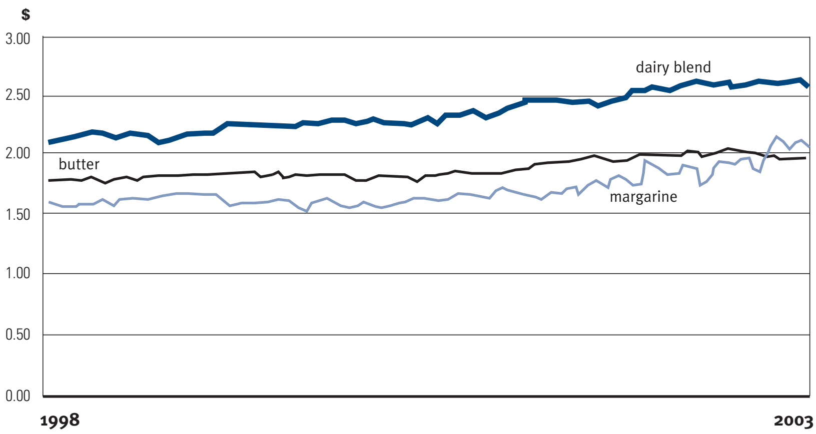
Figure 25. **Dairy butter and blend spreads, supply chain map**



Retail pricing

The six-year supermarket retail price history shows the different price points being assumed due to the nature of the market for each product. Butter prices have remained relatively flat due to static sales levels.

Figure 26. **Retail selling prices, dairy spreads, 500g tub, 1998–2003**



Source: Dairy Australia

Margarine prices fluctuate due to the continual discounting by retailers; more so in recent times as market share has been lost to the dairy spreads.

Farmgate prices

Straightforward comparisons of butter-based consumer product prices and farmgate returns are not meaningful. Butter is produced using butterfat, which is separately valued in milk pricing formulas offered by dairy companies.

In addition, with the static nature of the global butter market, butter is largely produced as a co-product in combination with products which have been more important in terms of volume and value growth over the years, such as cheese and skim milk powder. There are few standalone butter factories in the industry.

As in the case of cheese, farmgate prices are determined according to the prevailing returns from the total market available to the industry – a mix of export and domestic returns – as outlined next.

The vast majority of butter manufacture is also owned by cooperatives and milk pricing offered by such companies will tend to be weighted average prices that are payable from returns on a range of dairy products for export and domestic markets. Comments on the nature of milk pricing are as for those made in the section of this report on cheese.

DAIRY – HOW ARE FARMGATE MILK PRICES SET?

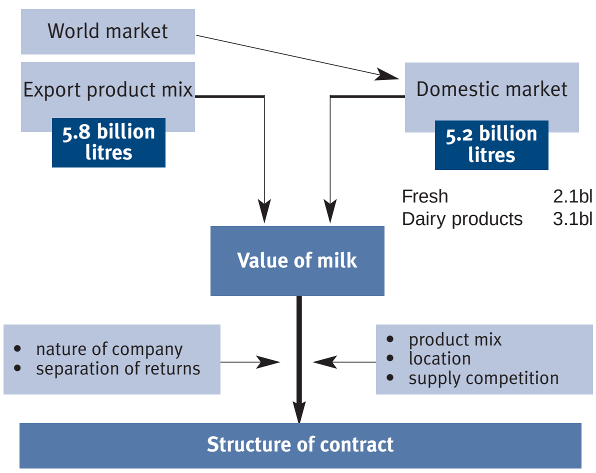
Drivers of farmgate pricing

Milk prices at farmgate are driven by the level of returns to the Victorian production regions which produce more than two-thirds of total output and more than 75 per cent of exports. Milk is sourced by dairy companies on a regional basis – each production region is regarded as a discrete economic milk field by companies relevant to their alternative sources of input that are available to their plants.

Dairy companies pay for milk solids (butterfat and protein) such that the effective price per litre depends directly upon the percentage of components per litre, which varies widely amongst individual producers. The value of milk solids to processors and manufacturers is driven by the level of product prices available to the industry in export markets which sets the returns for about 70 per cent of the milk produced in the highly seasonal regions of Victoria and Tasmania.

Major exporting cooperatives set farmgate milk prices based on net returns that can be achieved from their operations, making allowance for capital costs and working capital. Milk price is generally determined as a residual amount after the costs of business.

Figure 27. **Influences on farmgate environment, 2002**



'Step-ups' are paid by several large dairy companies and cooperatives to top up milk prices over the year as the cash flows from proceeds of the annual sale of product permit. Step-ups are generally in the order of 5–10 per cent of the eventual full year price and are typically only paid by companies that have a highly seasonal milk supply exposure.

A variety of approaches have been taken to the structure of farmgate supply contracts, with the major packaged milk processors now relying on contracts which contain a range of signals and incentives to suit the needs of the packaged milk business for high reliability.

These signals address the shelf life of the milk product, volume efficiencies, the costs of collection and haulage to the factory and the avoidance of impurities in the milk. As a result they can cause significant variation in the ultimate per litre milk price for the producer.

Milk used in packaged milk products

Prices for milk used in packaged milk processing are based on a balancing of the need to pay a sufficient price to encourage sufficient year-round production and a recognition of next-best supply alternatives available to processors. The prevailing price of dairy commodities has a major bearing on the overall value of milk that is sourced from each region.

Milk processors do not differentiate between the various end uses of milk when setting prices at the farmgate, although a requirement for milk used in packaged milk can typically induce a higher average farmgate price in a region due to the need to provide sufficient price incentive to producers to engage in year-round milk supply.

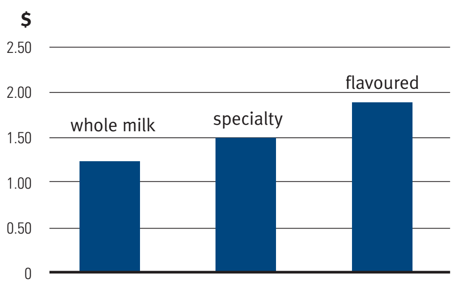
The true costs of milk to a processor will vary depending upon how the full litre of milk is used in their business and how they deal with the fluctuations in supply compared with their daily processing requirements. Processors face the challenge of balancing milk – handling the differences in milk flow as collected on a daily basis and used in a weekly processing cycle that is compatible with periods of peak consumer buying (late week and weekends). They also face the challenge of disposing of excess fat from the growing portion of low-fat milk drinks – fat is a commodity and must be converted to product for sale.

DAIRY – VALUE-ADDING IN THE DAIRY PRODUCTS MARKET

Milk

Significant differences in product returns are gained by processors between the standard whole 2 and 3 litre products and the range of specialty, flavoured and low-fat lines. The chart below shows comparison of retail prices for 2 litre packs between whole, specialty (low and reduced fat) and flavoured milk.

Figure 28. **Milk prices, 2 litre packs, $/litre, July 2003**



Source: Dairy Australia

These margins are enhanced in impulse product lines in smaller pack sizes but there is a higher cost in support of these products in marketing and distribution infrastructure.

Cheese

A competitive cheese production and marketing company in the modern era must invest in activities across a range of applications. These would meet the definition of 'value-adding' in normal terms.

This is the case for several reasons:

- to provide a competitive offering to retail customers, cheese marketers must attempt to provide the entire range of cheese products in the main cheddar cheese style groups – covering natural and processed cheese;
- the returns to manufacturers from the production of commodity cheddar cheese are inadequate due to the tight price competition in the world market, the increasing costs of waste disposal and the economies of scale in achieving necessary plant throughput levels; and
- manufacturers must extract optimum value from the whole litre of milk in the form of whey protein or whey powder products (for which there are niche export markets as ingredients in a range of nutraceutical – nutritional and pharmaceutical – applications) in addition to minimising the wastage from cheese cutting into consumer packs (by returning offcuts to be converted into processed cheese products).

Value-adding as such is confined to areas where specialisation in pack size, maturity and preparation for special applications and end uses are developed into part of the product range. Cheese companies do not tend to regard this as value-adding but as simply having a competitive offering in the marketplace.

The value-adding activities in a cheese business address two major priorities, as set out below.

Value-adding to product value	Extracting a greater return from processing the commodity
• smaller, convenience retail pack sizes	• processed cheese products (consumes offcuts from natural cheese lines)
• extending cheese maturity	• processing of whey into whey powder and whey protein concentrate products
• low-fat cheese blocks	
• natural cheese slices	
• entertainment pack cheeses	
• specialised processed products to target lunchbox market (for example, cheese stringers)	

THE MEAT SECTOR

Analysis of the determinants of prices and costs in product value chains

MEAT SECTOR – OVERVIEW

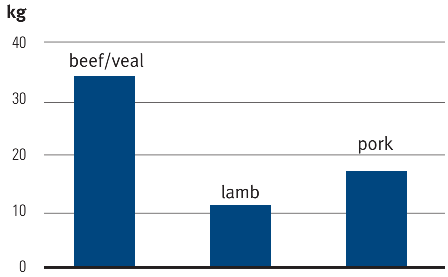
Background

Analysis of the pricing through the chain in the meat sector requires recognition of the diversity of the value chain in each of the major meat industry sectors and major trends that are affecting overall returns to each industry. Industry returns are however in each case driven by international trade, which in each case determines available farmgate returns for the animal carcass.

The analysis has been undertaken across beef, lamb and pork. In terms of total value and volume of industry output and retail turnover, beef is the dominant meat segment.

Australia is one of the largest consumers of processed meat on a per capita basis, yet this has been in decline in recent years due to competition from poultry and seafood. These have increased largely as a result of consumer concerns for diet and health.

Figure 29. **Meat consumption, kg/person, 2002**



Source: MLA

The influence of trade

Industry estimates as to the use of product show the importance of export markets to the beef and lamb industries. In the case of the pork sector, recent imports of frozen product have had a dramatic effect on product returns.

Domestic market

The meat industries feature differing degrees of integration from producer to consumer. The scale of supermarket dominance of the domestic meat category is common to each meat sector, due to a strong focus on the presentation, pricing and product range. The meat industry has focused its promotion and market development activities at improving the information and choices available to the consumer in the form of cuts and eating quality. Major retailers have been best placed to optimise these activities.

Figure 30. **Share of meat output**

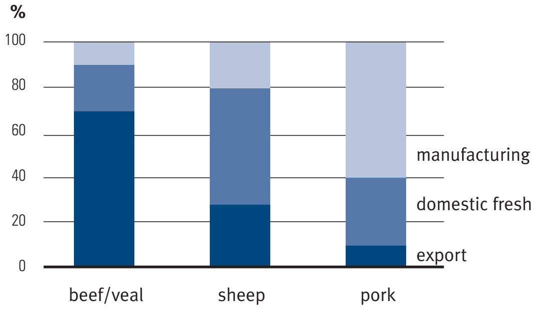
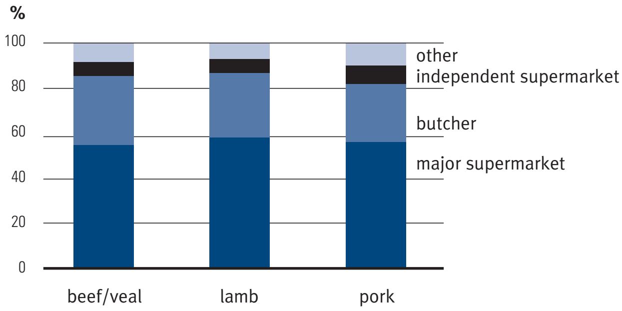


Figure 31. **Market share, meat, June 2003**



Source: MLA

Approach

The nature of the value chain for domestic retail meat products (covering beef, sheep meat and pork) requires a cautious approach when comparing farmgate returns and the levels of retail pricing. It is invalid to draw direct comparisons between individual retail products and the value of the carcass at the farmgate due to the diverse array of products that are produced from each animal.

Assessments of the share of returns at each stage also needs to take account of the importance of co-products and waste streams which are derived from each carcass. These have a significant influence on the overall recovery from processing.

The quality of data

An analysis of pricing through the value chain in meat industries is made difficult not only by complexity but also by the relevance of available data sources. Increased concentration of processing and the increasing share of retail market share in the hands of major supermarkets, along with the greater role played by direct supply arrangements to those chains, reduces the overall data that is available in the industry. Whilst reported wholesale price series are relevant as a barometer of the marketplace, less business is being conducted through traditional market channels which allow capture of data.

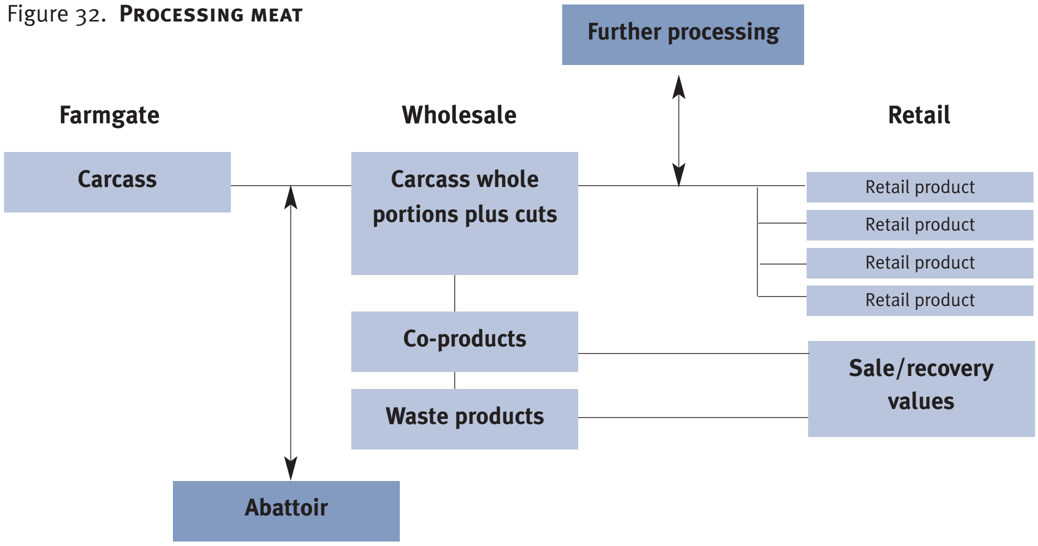
Other than published information from ABS, there are limited time series of retail data across the meat sector. This again limits the ability to draw accurate conclusions as to the relationships over time. Meat industry agencies have in recent times increased the investment in these areas and that data is presented in this report.

Our work has been based on recent time series and an analysis of the value chain in each case.

The approach taken

The pricing analysis will compare typical domestic animal returns at each of the major price points: farmgate, wholesale and retail.

Figure 32. **Processing meat**



In so doing, it has taken a whole-of-carcass approach to analysing the structure of prices and costs through the chain. As this report deals with domestic food prices, the work has used case studies based on typical domestic carcass lines.

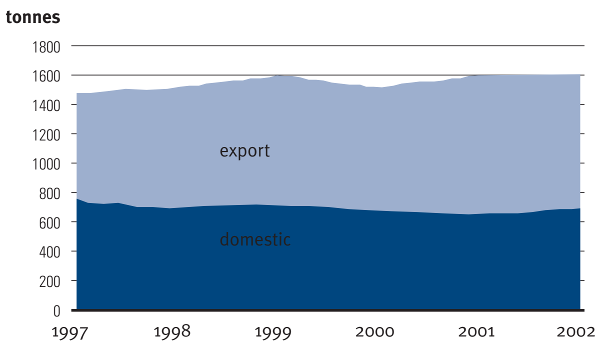
While there is limited detailed retail data that provides sufficient coverage over time of the trends between each of the major price points, this approach nonetheless increases the validity of comparisons and assertions that can be made.

BEEF – OVERVIEW

Background

- Australia, as the world's largest exporter of beef, accounts for around 22 per cent of total beef exports.
- The industry has the ability to produce a range of low-cost beef by virtue of its production systems allowing beef to be sourced from feedlots, crop and pasture or from rangelands.
- The live trade in cattle remains an important market channel for the industry.
- The feedlot sector has increased in importance over recent years to the extent that 27 per cent of 2001–02 livestock turnoff (from farm to market) was from grain-fed feedlots.
- ABARE has estimated that of the cattle on feedlot operations in March 2003, 46 per cent were destined for the domestic market.

Figure 33. **Beef production, tonnes, 1997–2002**



Source: ABARE

Major drivers of prices – international

- Global production of beef in the last decade has been steady. This reflects increased competition for land from alternative uses such as grain and urban development.
- The beef industry in Australia is strongly geared for export production, whilst there is static overall domestic consumption. Strong growth in the value and diversity of export markets for the Australian industry has helped underpin the stability of export returns, despite recent food health scares related to beef in major markets.
- International competitiveness is aided by Australia's disease-free status which allows preferential access to the high-priced markets of Japan and the United States. Extensive beef operations have the capability to give overseas customers continuity of supply and consistency of quality which are critical to higher value markets.
- The forces of supply and demand in international beef markets drive the level of returns to the Australian industry. In the short-run, these returns are affected by:
  - seasonal conditions which affect both quality and quantity;
  - exchange rate relativity and volatility;
  - trade policy issues such as import quota systems and tariffs which affect market access for Australian exports;
  - disease outbreaks and general consumer health and safety concerns;
  - competitor meat or protein prices from lamb, pork and chicken; and
  - general economic conditions in consumer markets.
- Meat processors have in recent times faced very tough operating conditions due to the reduction in available livestock slaughtering with the decline in the national herd from drought and the continued build-up of the live trade.

Major drivers of prices – domestic

- Competing sources of meat drive prices at the consumer end of the value chain, while export returns dictate prevailing returns and costs at the other end.
- Consumers are demanding that eating quality of beef is predetermined and consistent – this factor is important to compete with chicken and pork for the protein dollar.
- Buyers of cattle for the domestic market compete at various points of sale against export buyers, processors and marketers.
- The prevailing farmgate price at which a major domestic buyer will purchase cattle will be influenced by:
  - the strength of international demand from time to time;
  - the domestic demand for store and breeding cattle;
  - the level of available supply; and
  - prevailing key export price indicators.
- When export markets are strong, the producer with reliable, consistent quality will retain leverage in domestic transactions.
- Major retail buyers operate with a variety of models to ensure they cover three sets of risks in the face of fluctuations in export demand – price, supply and quality risks.
- Major retailers will attempt to buy at a target (per kg) buying price to maintain target returns for the category, based on carcass usage, processing cost and competing retail prices for the category.
- Over time the major retail buyers vary the mix of product sourcing between dedicated producers, paddock selection and markets (saleyard and over the hooks or OTH), based on market conditions, while processing is outsourced.
- Dedicated supply arrangements are usually structured with medium-term rolling contracts. When buying off-farm or in markets, OTH is the preferred method of buying for processors as it passes risks back to the producer – ensuring that beef is paid on market specifications.

The changing value chains – various integration models

The pages that follow outline the value chain for the sector, although it is necessary to appreciate the complexities with which the beef sector is grappling. The domestic beef value chain sees increasing diversity as the competition within the sector remains strong, and while competing meats and protein sources improve their sophistication. The following points are relevant:

- **Beef production companies** are vertically integrating through the chain (for example, AACo and Stanbroke) to manage breeding, finishing, processing and retailing/branding.
- There are limited barriers of entry for grass-fed beef production. However cattle herds are increasing and rural land prices continue to escalate.
- Producers with feedlot operations – more attractive to the marketplace – achieve sufficient economies of size and better leverage based on their ability to deliver larger numbers of quality carcasses on a more consistent basis.
- Smaller producers, often with limited quality control systems, prefer liveweight and saleyard selling systems where they are not penalised for poor carcass quality.
- **Processors** have high barriers to entry (in terms of required capital, access to export markets and access to sufficient throughput of carcass volumes), experience strong competition and strong exposure to business risk due to the level of invested capital. Processors will tend to absorb the risks associated with fluctuating volumes.
- Processors are looking to embark increasingly on value-based livestock selling and marketing.
- **Retailers** have access to significant contract processing capacity to provide scope to improve their control over the overall returns from the carcass.

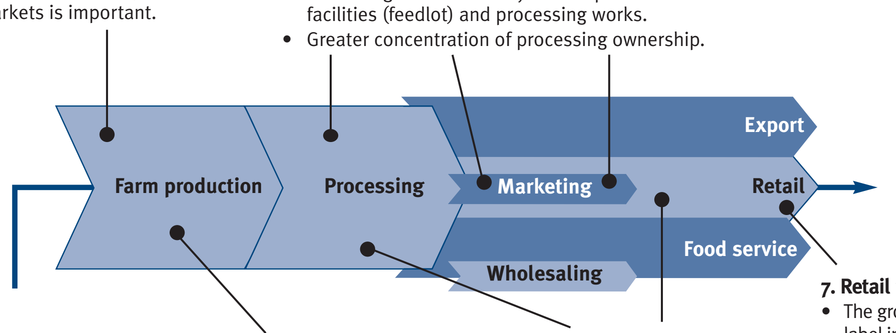
Figure 34. **Beef: Major drivers of prices and costs**

The beef sector is an extremely diverse category with a very wide range of product applications and market/product combinations.

1. Farm production factors
- Production stable – limited production volatility.
- Limited effects of the seasonality of production
- Profitability of intensive operations influenced by feed prices.
- Meat products are perishable with very limited shelf life once slaughtered. Timely access to markets is important.

2. Value-chain integration
- Increasing integration of production, processing and marketing along the chain.
- The management of supply of product through the chain is affected by a large trade in frozen product.
- Integrated (vertical) value chains are being driven by a variety of models – a mix of producer-led, processor-led and retailer-led.
- Large producers integrating through marketing alliances.
- Increasing scale efficiency of beef production facilities (feedlot) and processing works.
- Greater concentration of processing ownership.

3. The marketing approach
- Increasing differentiation and de-commoditising of beef products through specialised cuts and eating quality grades to enhance competitive position against other forms of protein.
- Niche branding of beef products based on ethical and integrity values.



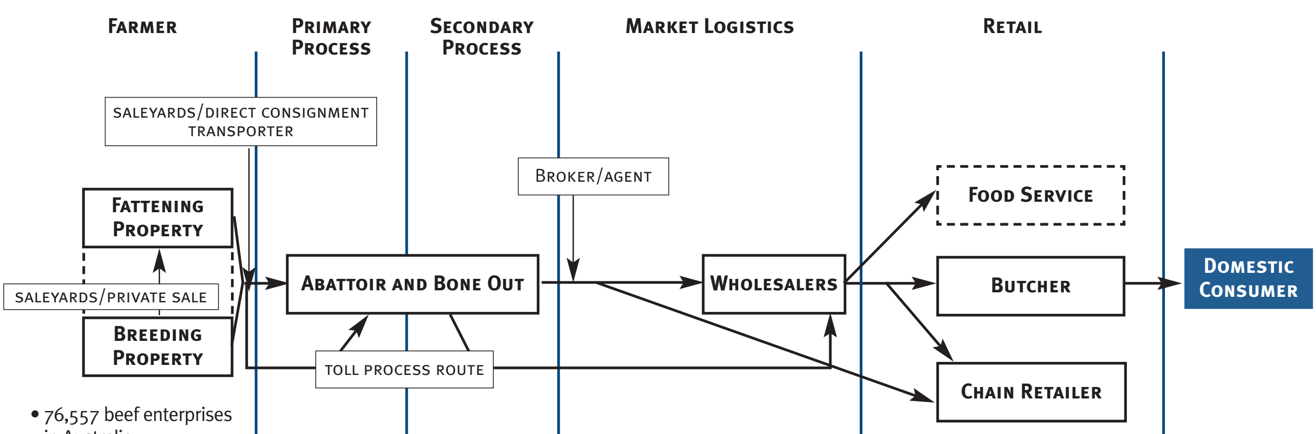
4. Regulation and compliance
- Increasing costs of compliance with environmental, welfare and food safety requirements for beef producers and all meat processors.
- Limited further integration of processing under competition laws.
- Strong requirement to meet ethical and product integrity demands in export markets.

5. Trade impacts
- Returns to beef industry are driven by the nature and scope of export market access into a range of high-value and commodity market segments.
- Export share of total output fluctuates and accordingly determines overall wholesale returns.
- Prevailing world commodity prices effectively set wholesale prices in domestic markets.

6. Technology and innovation
- Increasing capital intensity in feedlot production and processing facilities is changing cost structures.
- Moderate transparency of market prices and costs provides adequate market signals to early chain participants.
- Technology in beef genetics, lot feeding and especially traceability are improving the quality and reliability of the product.
- Greater investment in innovation to diversify beef cuts according to eating quality and to extract value through marketing lower grade commodity.

7. Retail market dynamics
- The growth of the private label in meat retail packaging.
- Declining per capita consumption in recent years through price competition from other meats.
- Greater demand for convenience and lifestyle solutions in preparation of cuts for a wider range of meal solutions.
- Greater concentration of the retail markets for meat products in supermarkets.
- Strong segmentation in retail market between premium, mid-range and commodity products from retail and specialist butchers.

Figure 35. **Rump steak, grassfed, 1kg, supply chain map**



- 76,557 beef enterprises in Australia.
- Around 25 million head of cattle.
- Gross value of production around $5.7 billion, with 65% of production exported.
- Feedlot sector has about 27% of total production.
- Main drivers of price – herd levels in competitive world market supplier-countries, export status of competitors, export market sector demand, consumer preferences, drought, health status.
- Niche market supplier prices driven by these are additional factors associated with quality.

- There are around 250–300 meat processors (beef and sheep meat) in Australia.
- Around 25 large processors located across Australia process 61% of production.
- Bone out is done primarily at the abattoir where the animal was killed.

- Increasingly, producers are retaining ownership of their beef beyond the farmgate and marketing it under their own brands. Therefore they use the toll processors. This method is being undertaken by larger players.
- Increasing integration up and down the value chain is reducing the role and influence of a separate wholesale function.

- Fresh beef is sold through major supermarket chains and butcher shops.

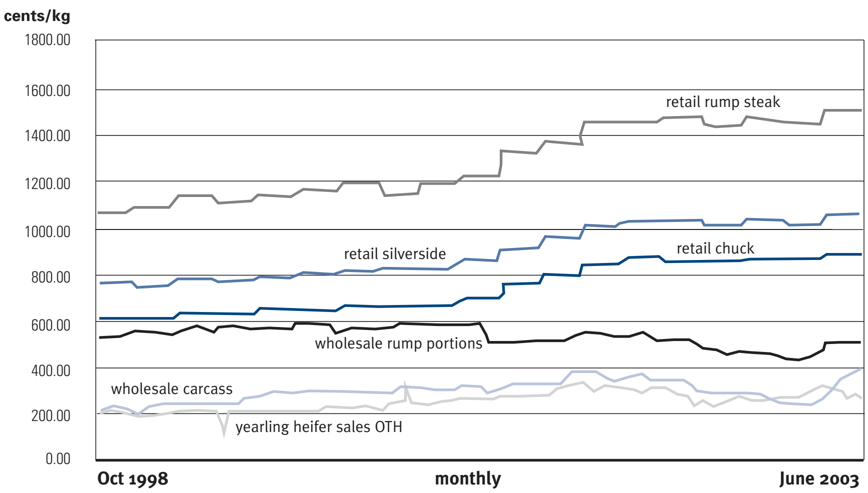
BEEF – ANALYSIS OF PRICING

Retail, wholesale and farmgate

As discussed above, there are dangers in simple comparisons between farmgate and retail prices.

The limited long-term series price data for meat shows that there is little correlation between levels of prices over time.

Figure 36. **Farmgate, retail and wholesale price trends, cents/kg, 1998–2003**



Source: MLA and NLRS

The approach taken

Assumptions used in this analysis are:

- over the hooks sales have been based on 230kg yearling heifer sales as reported by NLRS;
- wholesale prices for carcasses and rump portions are based upon NLRS wholesale market data from the Sydney wholesale market; and
- retail prices for rump steak, silverside and chuck steak are based on ABS surveyed data.

Wholesale markets for beef carcasses and portions of beef are used in the minority of cases and provide a valid guide as to the level at which the market is operating. However, the vast majority of volume of meat reaching the market is flowing through integrated arrangements between producer, processor and retailer, in view of the size of the major retail portion of the market and its increasing use of direct supply arrangements with producers.

Observations

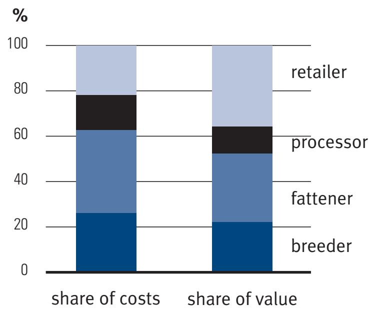
The price comparison shows that there is a general price trend which sees broad consistency in movement across farmgate, wholesale and retail prices. Yet the complexity of carcass usage and diversity of end retail products within cuts renders this type of broad comparison relatively meaningless in terms of an analysis of the drivers of individual retail product prices and livestock prices.

Whole-of-carcass approach to assessing returns

The study has undertaken a measurement of the returns from whole carcasses, based on a domestic animal.

This analysis is valid as a snapshot. It indicates how each major sector is involved in the value chain. It shows the gross returns that are available to each major sector through the chain.

Figure 37. **Shares of retail beef prices, 2003**



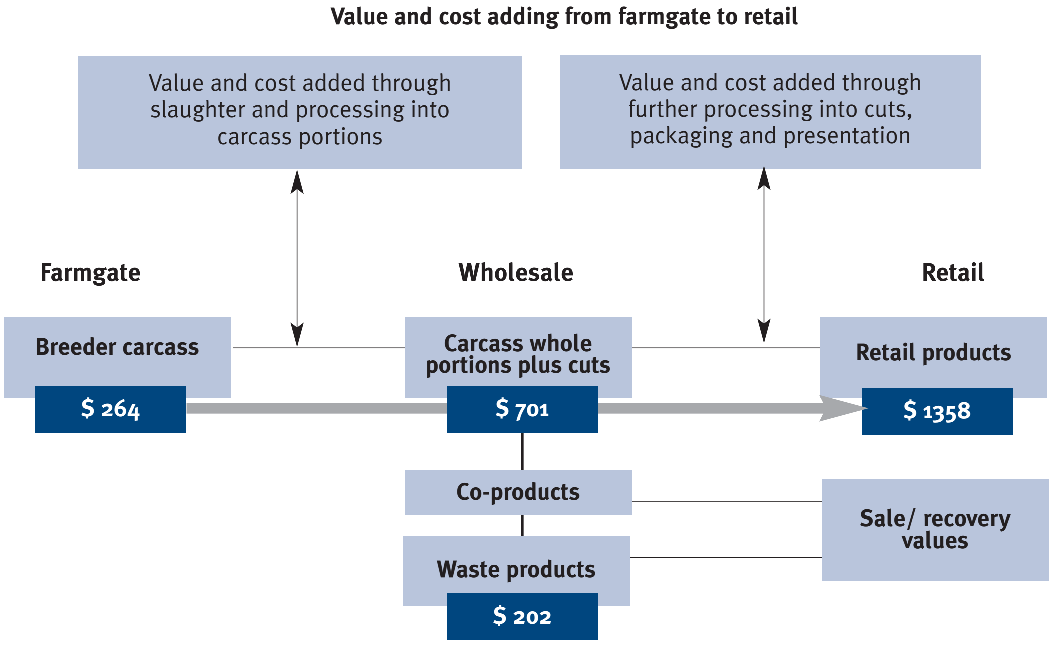
Source: analysis by Macarthur Agribusiness

The analysis in the above chart and in the next map has been based on national average spot retail prices for common cuts prevailing in August 2003, as well as processors estimates of the returns at wholesale for meat and co-products.

The analysis is based on a model of the typical usage of a carcass in the domestic market, across the various meat segments.

Significant value and cost-adding occurs throughout the chain to create retail value from a bred animal. As identified in the assessment, the returns at processor level are driven not only by the prevailing wholesale market for domestic portions but also by the extracted value of co-products and by-products (which in this model makes up more than 20 per cent of the gross returns).

Figure 38. **Value and cost-adding from farmgate to retail, beef**



This analysis is inherently complex and subject to a large number of assumptions regarding meat quality, market conditions and cost structures. Yet as an approach it remains the only valid means of making comparisons between the returns at each stage in the value chain.

LAMB – OVERVIEW

Background

Lamb is a major element of the red meat sector but its industry fortunes have been historically linked to that of the sheep sector, in view of the dual role of sheep as sources of meat and fibre, and the historical influence of merino genetics in the overall sector. The demise of the total sheep flock with the declining prices for wool has been offset by the focus on the production of lambs for meat.

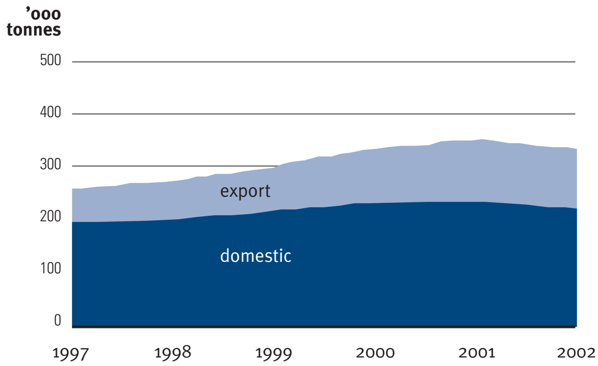
Australia is the largest exporter of lamb and is well placed to capitalise on gaining a greater share of the international lamb market as the lowest cost–highest quality producer of the meat.

Specialisation in prime lamb production is increasing over time as production and feeding systems become more sophisticated.

The industry's market mix

Total production of lamb meat has grown strongly over time. The domestic market remains the majority destination with 68 per cent of total usage.

Figure 39. **Lamb market sales, '000 tonnes per annum, 1997–2002**



Source: ABARE

Major drivers of price

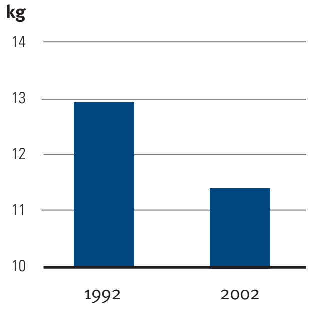
- Despite the high proportion of meat going into the domestic market, returns to the lamb production and processing sector are strongly influenced by world trade through prices demanded by overseas customers. Domestic market consumption is relatively static and subject to price competition from other red and white meats.
- A major influence in recent years has been the decline in product availability on the world market from other major production countries in the face of rising demand in the major markets of the United States, Japan and the European Union. These trends are expected to continue into the foreseeable future.
- With growing export influence on the sector, the supply of lambs and accordingly the prevailing prices over time are driven by other factors which include:
  - exchange rate relativity and volatility;
  - seasonal conditions which affect both quality and quantity of stock. Drought may delay the sale of new season or sucker lambs, causing shortages (as seen in July and August 2003). Rainfall provides good feed and quicker turnoff of lambs which may increase supply and lower prices;
  - as the incidence of feedlots for lamb increases, there will be a greater exposure to commodity risks such as grain prices, import regulations and so on; and
  - the returns from wool – although, with the strong role played by cross-breeds in sheep and increasing specialisation in lamb production, this influence is weakening.
- The behaviour of consumer segments in key markets such as the United States will continue to drive change through the lamb sector and increase the focus on specialisation of production for those markets.
- In recent times, the strength of export demand, coupled with a reduction in the total available lamb production as a result of the drought, has sharply increased prices paid for lambs at producer and processor level.

Major drivers of domestic prices

Domestic retail prices in recent years have been driven by retailers setting prices at sufficient margin over costs, balanced against prices of competing meats at retail.

Domestic market consumption is relatively static and subject to price competition from other red and white meats. The consumer is sensitive to the pricing differentials between the meat choices, whilst also showing greater interest in meat that is tailored to different eating and cooking styles.

Figure 40. **Consumption in the domestic meat market, lamb, kg/person**



Source: MLA

Hence the competition between meats is based on price, quality, versatility and convenience.

Whilst consumers have a positive perception of lamb for quality, consistency and taste, they still believe it to be a fatty meat (source: MLA).

Seasonality is a factor that affects different cuts – summer is barbecue season and demand for lamb chops increases at this time. Winter is the prime sales season for roasts including legs of lamb.

Drivers of producer costs

Across the sheep industry, less than 40 per cent of producers derive more than 20 per cent of their income from the production of prime lambs. So production decisions have not, in the past, been driven by returns from lamb alone for the bulk of industry. The specialist lamb production sector is increasing in size, especially in recent times with the higher returns and scope for increased growth from export markets.

A high proportion of fat lamb production in Australia is based on opportunistic behaviour, where the predominant activity of the producer is an alternate farming enterprise. The production of lambs is therefore dependent upon returns from alternate uses of land and available feed, and the availability of adequate breeders. This leads to supply risk for processors and in response they are increasingly buying stock and having them toll fed in feedlots to reduce supply and quality risk.

Genetics for wool production (based on the traditional Merino wool sheep) are not optimum for fat lamb production which requires high growth rates in younger animals. Given that lamb prices are firm and the outlook positive, there is an increasing need to dedicate production specifically to the fat lamb market by changing genetics and production systems. These will provide greater market access, a better product and more market power.

Drivers of retailer costs

As with beef, the major retail buyers operate with a variety of models to ensure they cover price, supply and quality risks. Buyers seek to achieve a target buying price to maintain target returns for the category, based on carcass usage, processing cost and competing retail prices for the category.

Over time the major retail buyers vary the mix of product sourcing between dedicated producers, paddock selection and markets (saleyard and OTH) based on market conditions. With the strong seasonal production surge that usually comes in the spring, the use of market sources increases as a percentage of sourcing intake. In 2002, 37 per cent of lambs were sold OTH, 46 per cent at auction and 15 per cent in the paddock.

Dedicated supply arrangements are less common in lamb than beef and generally structured with medium-term rolling contracts. When buying off-farm or in markets, OTH is the preferred method of buying for retailers and processors as it passes risks back to the producer – ensuring that meat is paid on market specifications.

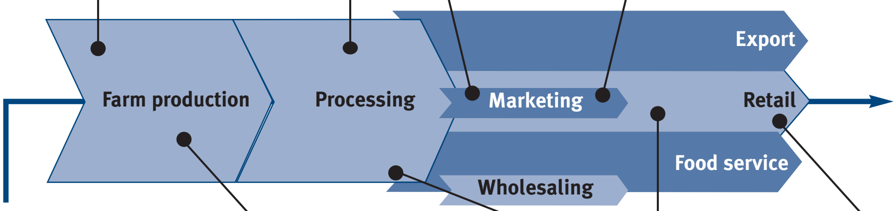
Figure 41. **Lamb: Major drivers of prices and costs**

To a lesser extent than beef, this sector is a diverse category with a very wide range of product applications and market/product combinations. Our final report will explain drivers of price in more detail based on carcass use in a range of premium and commodity product groups.

1. Farm production factors
- Production stable – limited production volatility.
- Limited effects of the seasonality of production.
- Meat products are perishable with very limited shelf life once slaughtered. Timely access to markets is important.
- Lamb industry fortunes linked to sheep industry prospects.

2. Value-chain integration
- Limited effective integration of production, processing and marketing along the chain.
- Limited scale efficiency of lamb production facilities (feedlot) and processing works.
- Greater concentration of processing ownership.

3. The marketing approach
- Increasing differentiation and de-commoditising of beef products through specialised cuts and eating quality grades to enhance competitive position against other forms of protein.
- Niche branding of lamb products based on ethical and integrity values.



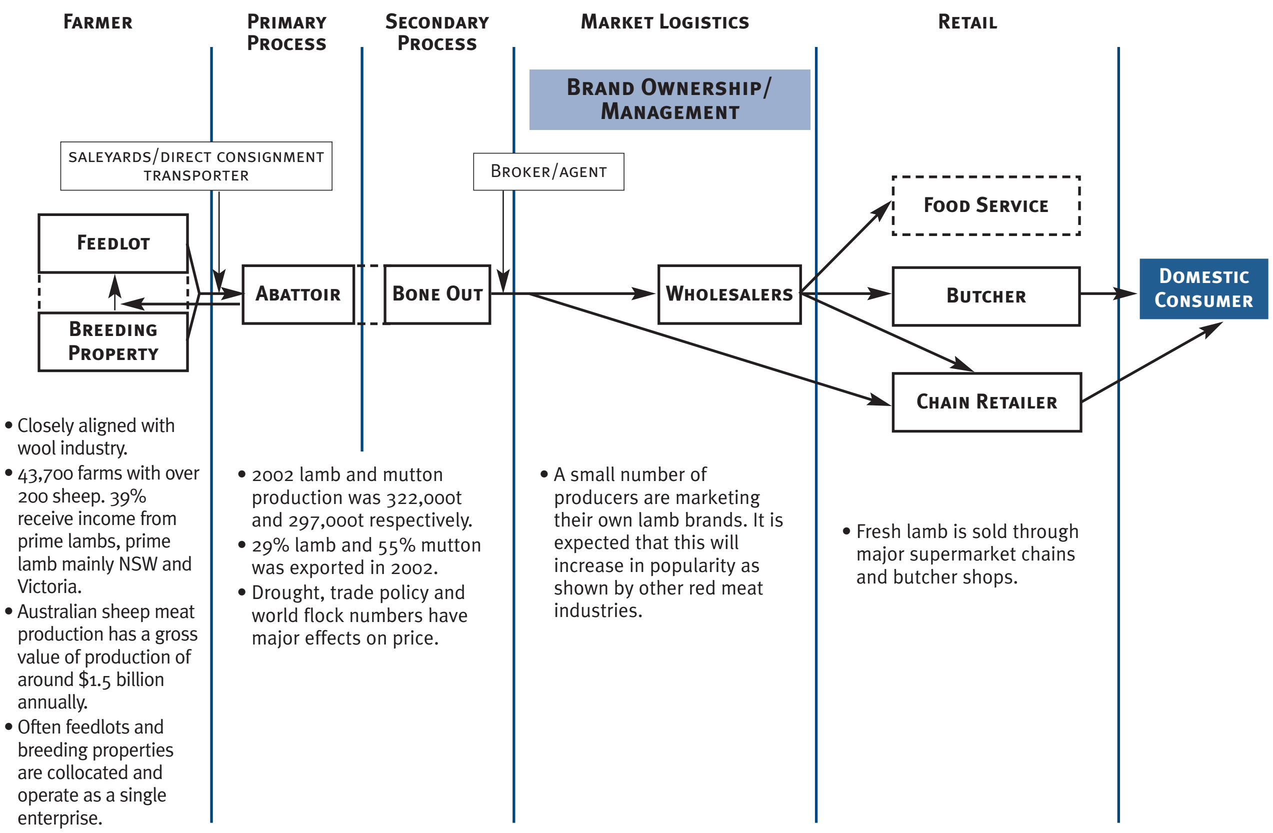
4. Regulation and compliance
- Increasing costs of compliance with environmental, welfare and food safety requirements for producers and all meat processors.
- Strong requirement to meet ethical and product integrity demands in export markets.

5. Trade impacts
- Returns to lamb industry driven by the fortunes of export markets in a range of high-value and commodity market segments.
- Prevailing world commodity prices effectively set wholesale prices in domestic markets.

6. Technology and innovation
- Moderate transparency of market prices and costs provides adequate market signals to early chain participants.
- Greater investment in innovation to diversify lamb cuts according to eating quality and to extract value through marketing lower grade commodity.
- Technology in lamb genetics and lot feeding is improving the quality and reliability of the product.

7. Retail market dynamics
- The growth of the private label in meat retail packaging.
- Greater demand for convenience and lifestyle solutions in preparation of cuts for a wider range of meal solutions.
- Greater concentration of the retail markets for meat products in supermarkets.

Figure 42. **Leg of lamb, supply chain map**

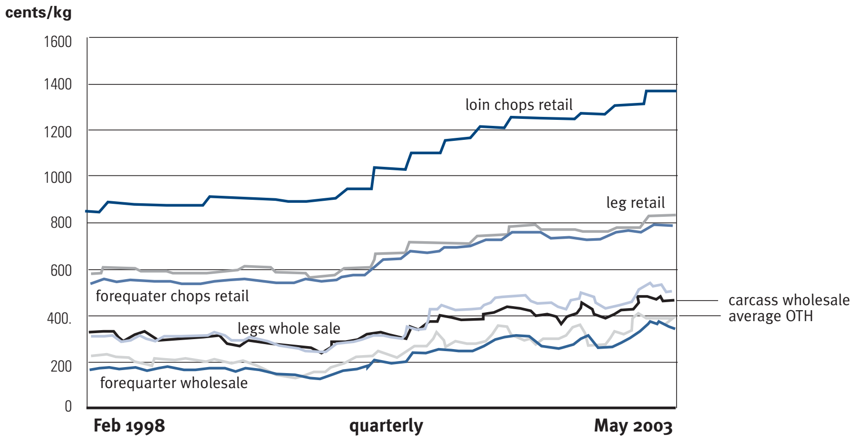


LAMB – ANALYSIS OF PRICING

Retail versus farmgate overview

As discussed above, there are dangers in simple comparisons between farmgate and retail prices.

Figure 43. **Farmgate OTH, wholesale and retail lamb trends, cents/kg, 1998–2003**



The approach taken

Assumptions used in this analysis are:

- OTH sales have been based on 18–20kg with a 2–4 fat score;
- wholesale prices for carcass, forequarters and legs are based upon NLRS wholesale market data from the Sydney wholesale market using 18–20kg carcass with a 3 fat score; and
- retail prices for loin chops, legs and forequarter chops have been based on ABS surveyed data.

Observations

The price comparison shows that there is a general price trend which sees broad consistency in movement across farmgate, wholesale and retail prices compared with that seen in beef. In the past couple of years where export returns have led farmgate prices, prices at retail have generally followed those at wholesale and farmgate.

Higher value cuts have increased at a greater level relative to legs and forequarter chops. This indicates a stronger demand for premium product and cuts as consumers become more conscious of the products they purchase.

PORK – OVERVIEW

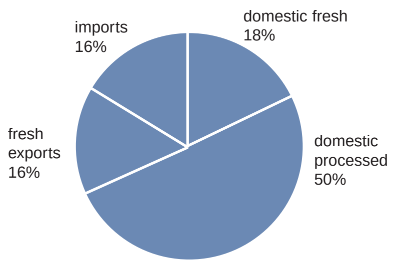
Background

Pork is a major retail fresh meat category, yet its fortunes are largely determined by its end use in processed meats, a market to which other red meats are less exposed. The pork sector has undergone significant adjustment in recent years with the removal of restrictions on the importation of meat. Approximately 60 per cent of Australian pork production is consumed in the manufactured meat and smallgoods sectors – this volume varies according to the competitiveness of local product in the face of commodity imports.

Various factors have affected the pork value chain in recent years. Producers' margins have been squeezed due to cost pressures associated with the drought and high feed prices, and their returns are being negatively affected by increased imports and a higher Australian dollar. Smallgoods manufacturers and retailers, however, have benefited from the increased availability of lower priced imported product and lower domestic prices for fresh pork in comparison to other meats.

Industry response has been to seek greater demand for fresh Australian pork products and cuts in domestic and export markets (which have included chilled pork to Japan and Singapore). These markets are for chilled product which has provided higher returns than domestic end uses, based on the industry's competitive advantages of transport proximity, herd health status and product integrity.

Figure 44. **Share of pork product market, 2002**



Source: ABS

Major drivers of pork prices

- Returns to the production sector of the industry from domestic and export markets for pork are determined by a set of forces affecting various pork cuts in the product–market mix.
- In the domestic market, imports from Canada and Denmark have increased price competition in the smallgoods sector with the import of leg meat from Canada and bellies from Denmark. Imports from these production industries are seasonal and dependent upon currency factors.
- Our industry is at a cost disadvantage to these suppliers due to their production scale, low feed costs and processing costs.

- Export markets have created growth in demand for fresh chilled carcass portions, yet the carcass size sought for export markets is not compatible with domestic fresh markets, forcing a portion of the export carcass into the processed meat market.
- Retail prices for pork products and cuts are subject to competition, in terms of price and consumer preferences for meat use, from other red and white meats.
- The overall impact of these different forces on carcass profitability has been to put downward pressure on net returns for pork processors and producers.
- The upshot of these divergent forces is to break the nexus between fresh meat retail prices and farmgate returns for the industry.
- Feed is the major cost of production representing 60 per cent in pig meat production in normal conditions. The recent surge in feed costs as a consequence of higher world protein costs and the drought in Australia saw producers forced to meet very high costs of production, with no commercial avenue to recoup such costs from the customer due to the pressure on prices from imported product. Imports had enhanced competitiveness due to the rising value of the Australian dollar.

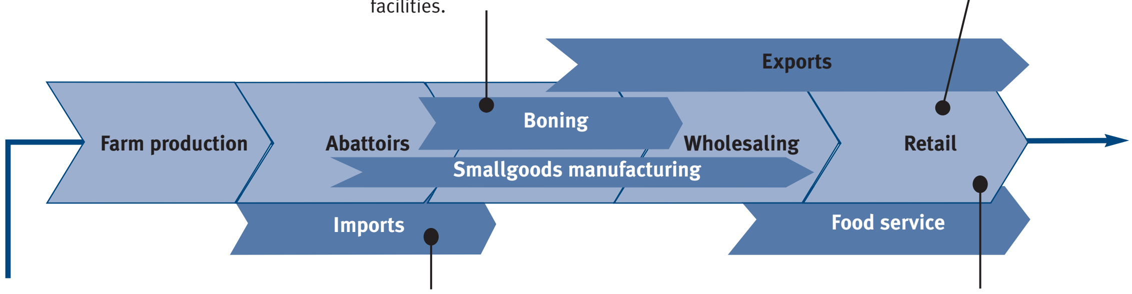
Figure 45. **Pork: Major drivers of prices and costs**

The pork value chain has been under significant cost pressure in recent years due to its greater exposure to imported commodity products which are used in smallgoods processing and the changing consumer product mix.

1. Farm production factors
- Production volume displays low short-term volatility.
- Pigmeat production is seasonally based on fertility and economies of feed and pork prices.
- Meat products are perishable with very limited shelf in life once slaughtered.

2. Value-chain integration
- Increasing alliance of production, abattoir and boning activities to more closely align pork to market use – but little or no integration exists beyond processing through to market.
- Returns from pork sector strongly influenced by returns from smallgoods co-products which consume about 60% of pig meat across a diverse set of products.
- Increasing scale efficiency in pig production and processing is rapidly changing cost structures in supply chains across industry.
- Greater concentration of ownership of processing facilities.

3. The marketing approach
- Limited product differentiation or de-commoditising compared to eating quality and new cut marketing innovations undertaken in other red meat categories.
- Limited product branding.
- Greater customisation of carcass and portion use in different markets.



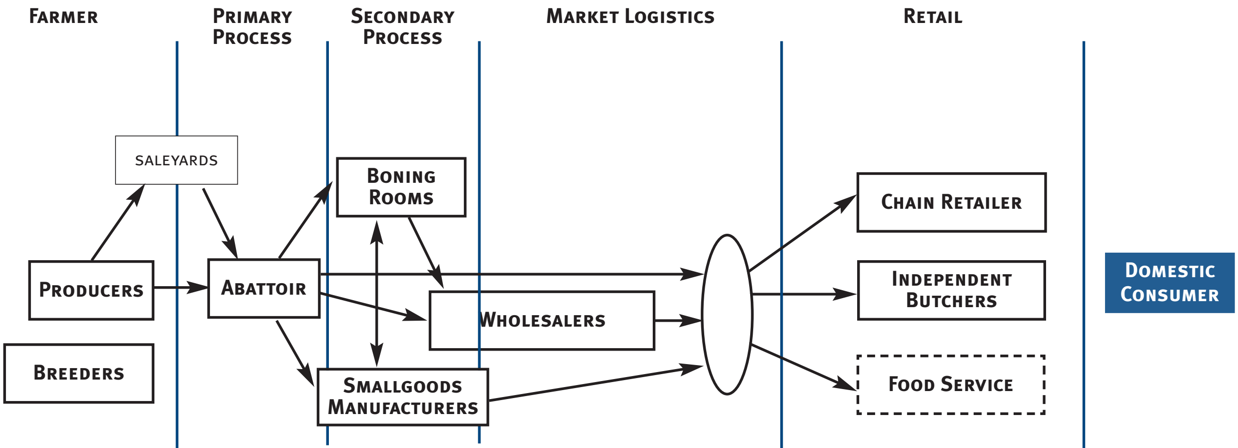
4. Regulation and compliance
- Increasing costs of compliance with environmental, welfare and food safety requirements for pork producers and processors.
- Strong community requirement for new facilities to be located further from residential areas due to environmental factors.
- Strong requirement to meet ethical and product integrity demands in export markets.

5. Trade impacts
- Significant pressure from imported commodity carcass portions (in frozen form) in smallgoods sector of industry affects overall carcass returns.
- Strong influence of prevailing world commodity prices for pig meat (as a threat to domestic market returns).
- Moderate influence of the growth in export volumes in carcass and cuts. This has an impact on the compatibility of residual carcass profitability in domestic markets.
- Strong influence of prevailing commodity prices for feed grains.

6. Technology and innovation
- Increasing capital intensity is changing cost structures in production and processing.
- Limited transparency of market prices and costs.
- Greater investment in innovation to improve overall carcass return through matching to market requirements.

7. Retail market dynamics
- Greater demand for convenience and lifestyle solutions in the eating grades and cuts of meat products is affecting competitiveness of the pork category.
- Greater specification of retail products requiring smaller carcass size.
- Price competitiveness based on competition between meat cuts.
- Greater concentration of the retail markets for pork products in supermarkets.

Figure 46. **Pork products, supply chain map**



- About 2,500 pig production enterprises (herds) in Australia prior to drought impact.
- Total production of 420,000t, which has seen an increase over the past year of about 5%.
- Main drivers of price are the balance of supply and demand and the influence of imported product on the demand from the smallgoods sector.

- There are six major pork processors which process more than 60% of total production.
- About 60% of meat usage is in the smallgoods sector.
- Bone out is done primarily at the abattoir where the animal was killed.

- A disaggregated value chain typifies the pork industry. Separate wholesaling has a major role in the value chain with about 70% of volume.
- Exports of about 66,000t mostly to higher value fresh pork markets in Singapore and Japan.
- Imports of 45,000t of frozen pork supplied into the smallgoods market. This has seen sharp growth since 1998.
- Large number of smallgoods plants across industry – approx. 150 in bacon, ham and smallgoods.

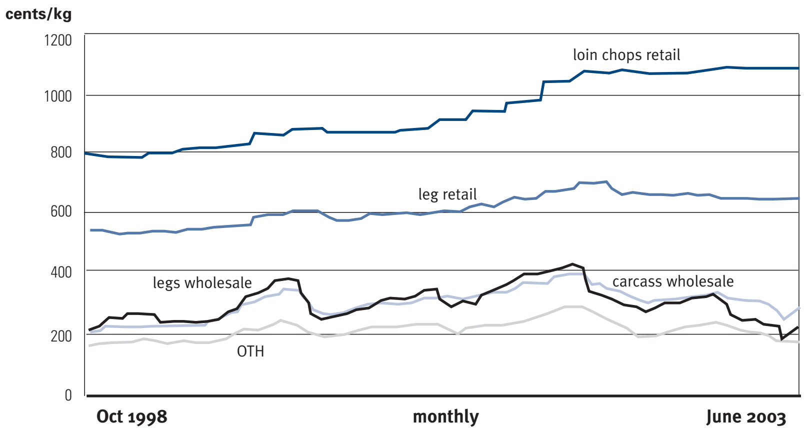
- Fresh pork and smallgoods are sold through major supermarket chains and specialist butcher shops and delicatessens.

PORK – ANALYSIS OF PRICING

Background

As discussed above, there are dangers in simple comparisons between farmgate and retail prices.

Figure 47. **Farmgate, wholesale and retail pig meat trends, cents/kg, 1998–2003**



Source: NLRS and ABS

The carcass return which drives the wholesale and OTH prices is strongly influenced by the returns from the processed meat market which consumes 60 per cent of output and is subject to seasonal import competition. The fluctuations in wholesale prices reflect these forces. Processors have accordingly sought to extract optimum value from the domestic fresh retail segment of the market by steadily increasing prices (subject to red meat and chicken meat competition). Retail prices above reflect retailers' addition of margins over such buying and further processing costs.

The approach taken

Assumptions used in this analysis are:

- OTH sales have been based on a baconer carcass;
- wholesale prices for carcasses and legs are based upon wholesale market data from the Sydney wholesale market; and
- retail prices for leg meat and loin chops have been based on ABS surveyed data.

Observations

The price comparison gives evidence of the lack of nexus between retail prices of products and the wholesale and farmgate prices for portions and carcasses.

Prior to the last couple of years, where growth in imports increased sharply, prices at retail generally followed the trends at wholesale and farmgate.

Higher value cuts such as loin chops have increased to a greater level than legs. This indicates a stronger demand for premium product and cuts as consumers become more conscious of the eating characteristics in meat products.

Prices and costs

The work in this study has included a measurement of the returns from whole-of-carcass based on a domestic animal.

The analysis of the returns from the carcass shown in the chart is valid as a snapshot. It indicates how each major sector is involved in the value chain. It shows the gross returns that are available to each major sector through the chain. The analysis has been based on national average spot retail prices for common cuts prevailing in July 2003, as well as estimates of the returns at wholesale for pig meat and co-products. Significant value and cost-adding occur throughout the chain to create retail value from the dressed carcass.

No assertions can be made as to which sector captures each of the margins in the sale of pork portions and cuts from such a carcass due to the fact that various potential models may exist as to who value-adds at what stage.

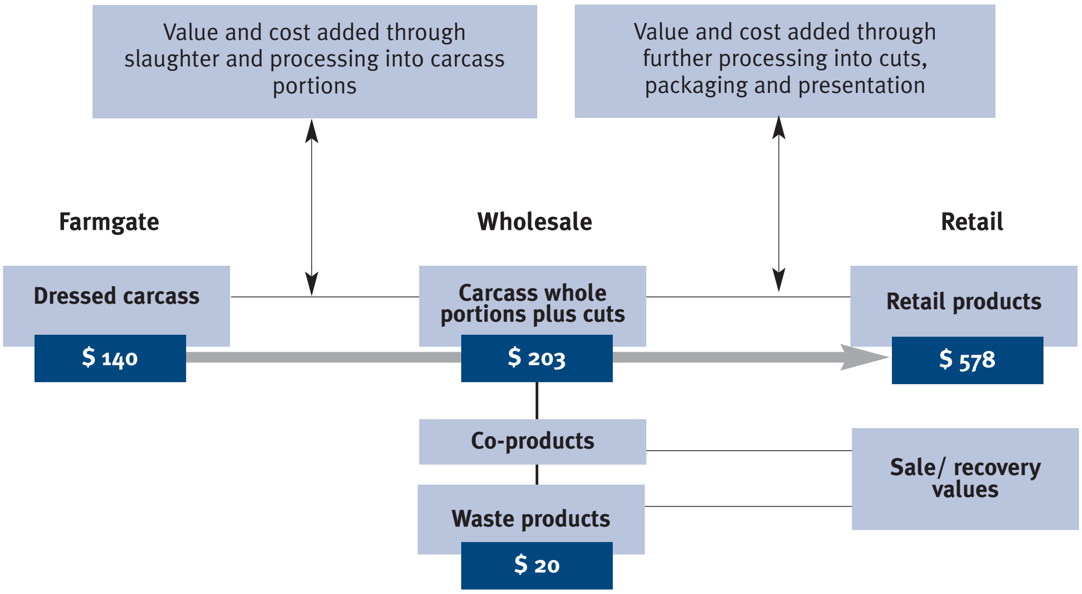
The analysis is based on a model of the typical usage of a 70kg carcass, designed for fresh pork products in a domestic market across the various meat segments.

These assumptions would not hold for baconer and backfatter animals which will have more of their carcass sold to the smallgoods sector, subject to direct import competition.

As in the case of beef, this analysis is inherently complex and subject to a large number of assumptions regarding carcass purpose, market conditions and cost structures. Yet as an approach it remains the only valid means of making comparisons between the returns at each stage in the value chain.

Our analysis of the returns at each stage of conversion from a domestic pork carcass is best performed using the same analysis as undertaken in *Beef – analysis of pricing*.

Figure 48. **Value and cost-adding from farmgate to retail, pork**



Co-products include blood, offal, skin and fat which are sold for a variety of end uses.

FRESH HORTICULTURE PRODUCTS

Analysis of the determinants of prices and costs in product value chains

FRESH HORTICULTURE – OVERVIEW

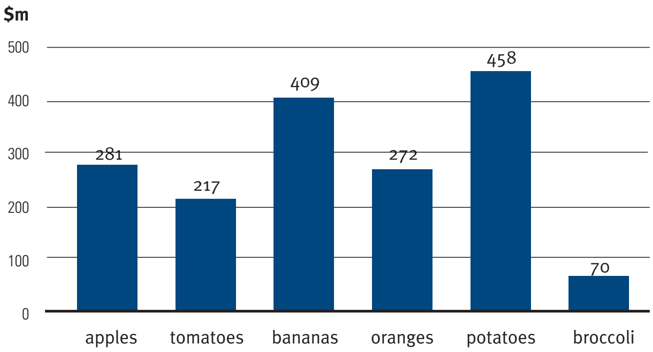
Background

Fresh fruit and vegetables are a major food category and an important aspect of a study of food pricing in the context of the Australian food industry.

The industry's product mix

It is estimated by HAL that the gross value of production of all fruit and vegetables in 2001 was $4.6 billion. The estimated gross value of production of the major lines that have been covered in the analysis are estimated by HAL as follows, representing lines which collectively make up 37 per cent of the horticulture sector.

Figure 49. **Gross value of production, fruit and vegetables, $m, 2001**



Source: HAL 2003

Supply factors

There have been changes over time in the structure of many commodity sectors, with increasing farm sizes, a greater prevalence of irrigated farms and migration of production away from close proximity to urban areas. There are few major restrictions other than quarantine on the importation of fruit and vegetables – freshness and perishability remain key limitations but this is being overcome in certain areas with key import competition expected from New Zealand (apples) and Southeast Asia (pineapples, bananas).

Demand factors

- Fresh fruit and vegetables are the most frequently purchased, freshest items in the shopping basket. Despite the profile given to the fresh produce industry, it is estimated at only 4.5 per cent of consumer food expenditure.
- Increased spending is due to better range and availability, and increased focus on health and nutrition in food, yet per capita consumption is now flat after a period of growth.
- Time-poor consumers are driving the need for more convenient products (less preparation required) and convenient shopping locations.
- Consumer expectations continue to rise with the growing availability of high quality alternative health and snack food offers.
- There is a challenge for the fresh produce sector to retain consumer loyalty, especially amongst the young, as there is a wide array of new health, snack and other product alternatives supported by highly competitive marketing.

Supply chain management

Wholesale markets remain a major function within the chain where the majority of prices through the chain are set or directly influenced. This is despite an increasing percentage of business direct to supermarkets to support their fresh product image and customers, and to obtain greater stability of returns. This practice varies by category based on the volume of individual commodity lines and the scale and sophistication of the enterprises.

The size of the consumer markets accessed by major supermarket chains has applied pressure for coordination of facets of supply activity (for example, quality management). However, the range of buying options reduces the scope for other forms of integration between producers (such as the use of open-price supply agreements and mixing supply between direct sources and purchases off the market floor). Seasonal competition exists subject to availability – though this is less of an issue these days as crops of major lines tend to be available all year.

Main drivers of prices through the chain:

- Retail prices are influenced by the seasonal costs of supply but also by the level of spending by the consumer. The consumer is sensitive to the cost of fresh food items that go into the shopping basket.
- The wide range of factors that drive the retail pricing of any food category over time are set out later in the report.
- As with other categories, retailers seek a target margin to achieve corporate and/or business targets but also to cover losses associated with produce spoilage, clearance discounting and the labour-intensive business of putting fresh food appeal into practice with stock display replenishment and adequate turnover of bay space.
- Wholesale prices (where the grower sells produce to a wholesaler who on-sells or sells on the grower's behalf to a retailer) are generally set in the fresh wholesale market system which exists in capital cities and limited other major urban centres. The increasing practice of producers directly supplying retailers to bypass wholesale markets are nonetheless set with reference to such prices.
- Seasonal crop variations resulting from climatic change and other natural events or causes are generally the greatest single production factor to affect prices. Such variations affect:
  - higher/lower output than the normal crop;
  - smaller/larger fruit size;
  - climate/storm damage; and
  - crop disease and pest damage.
- The wholesale price setting mechanism is not set to pay the highest for best quality but to clear all product that is supplied. At times it pays low prices for high quality and vice versa.
- A major weakness in the fresh food market system is the lack of discipline that is sought by the supplier to the market and the general lack of complete information as to the supply and satisfied demand at any point in time.
- Market pricing is therefore open to manipulation by the intermediary and to a lesser extent by major buyers due to the lack of total market visibility. A major fresh food market is a place for the well informed buyer and seller in this day and age. Otherwise participants are exposed to price/return risks, regardless of product quality.
- Supply is still the largest driver of price. Markets are relatively uninformed with minimal credible forecasting data or an understanding of the volume/price relationship. This leaves much trade occurring in commodity conditions.
- More organised fresh categories which provide participants with good information as to total crop forecasts, market conditions and product availability over a season are far better at managing the risks that arise from poor information.

Figure 50. Fresh fruit: Major drivers of prices and costs

The fresh fruit category is highly diverse in terms of the product groups, scale of enterprises in farm production and extent of integration that exists through the chain. The sector is strongly driven by the competition at retail level between major supermarkets and other outlets for a share of the consumer dollar.

1. Farm production factors

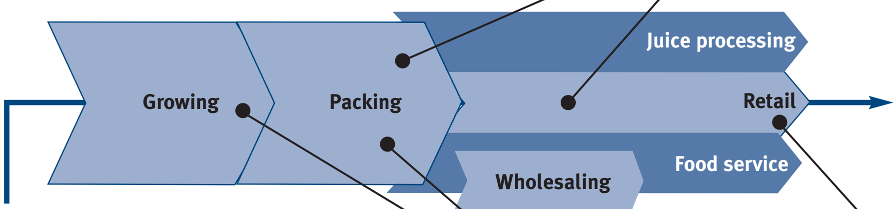
- Production volume highly volatile and seasonal which has a major bearing on the volumes coming to market, resulting in large fluctuations in wholesale and retail prices.
- High perishability and limited shelf life of product requires timely access to market once crops are planted and picking time committed.
- Pressure for water-use efficiency has improved yields over time.

2. Value-chain integration

- Increasing scale efficiency and integration of growing/packing and brand marketing activities by larger growers.
- Increasing incidence of direct supply by integrated growers/packers to chain retailers, providing stable pricing in order to secure long lines of consistent quality product.
- Pressure on wholesale/agency enterprises through growth in direct supply business.
- Juice fruit availability and returns have strong bearing on returns to citrus sector.

3. The marketing approach

- Increasing branding of product by grower/packer has impact on market access to more stable returns at retail and wholesale.
- Increased use of fresh food retail themes and systems by major chain retailers as a point of differentiation has driven strong supply and quality management disciplines back through the value chain to suppliers and logistics systems.
- Limited branding of fresh food at point of retail sale.



4. Regulation and compliance

- Increasing costs of doing business in farm enterprises to meet environmental, product integrity and food safety demands.
- A few other regulatory barriers to value-chain profitability.

5. Trade impacts

- Export volumes are increasing in scale but based on market windows into premium fresh markets in Asian cities.
- Potentially strong impact of imports in certain areas (bananas, pineapples, table grapes, apples) is currently adversely affecting confidence for further investment to maintain economies of scale in production enterprises.

6. Technology and innovation

- Increasing capital intensity in large-scale production and in packing house efficiency is changing operating cost structures.
- Limited transparency of market prices and costs through the wholesale market sector.
- Greater investment in innovation to improve production consistency and quality, varietal performance and handling efficiencies in harvesting, grading, transport and packing.
- Innovation in minimal processing and pre-preparation of fresh fruit for more convenient end use in home and food service.

7. Retail market dynamics

- Strong competition at retail level between major chains and between chains and other forms of convenience and specialty retail.
- Competitive pressure from food service.
- Greater demand for convenience and lifestyle solutions in meals and food preparation.
- Greater preference for consistency of product availability and quality in retail presentation.

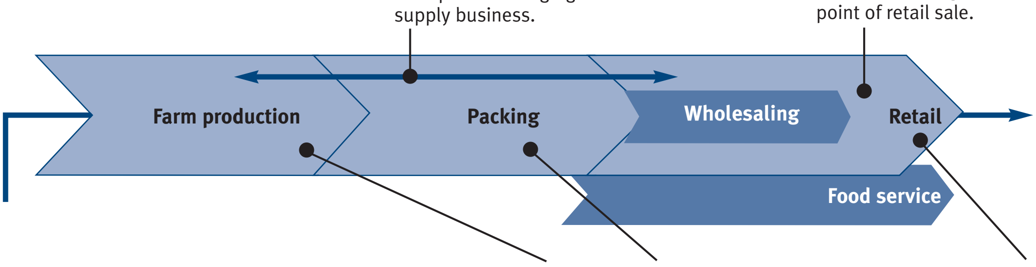
Figure 51. **Fresh vegetables: Major drivers of prices and costs**

The fresh vegetable category is highly diverse in terms of the product groups, scale of enterprises in farm production and the extent of integration that exists through the chain. The sector is strongly driven by the competition at retail level between major supermarkets and other outlets for a share of the consumer dollar.

1. Farm production factors
- Production volume highly volatile and seasonal which has a major bearing on the volumes coming to market, resulting in large fluctuations in wholesale and retail prices.
- High perishability and limited shelf life of product requires timely access to market once crops are planted and picking time committed.

2. Value-chain integration
- Increasing integration of growing/packing and brand marketing activities by larger growers.
- Increasing incidence of direct supply by integrated growers/packers to chain retailers, providing stable pricing in order to secure long lines of consistent quality product.
- Increasing scale efficiency of growers and packing houses.
- Pressure on wholesale/agency enterprises through growth in direct supply business.

3. The marketing approach
- Increasing branding of product by grower/packer has impact on market access to more stable returns at retail and wholesale.
- Increased use of fresh food retail themes and systems by major chain retailers as a point of differentiation has driven strong supply and quality management disciplines back through the value chain to suppliers and logistics systems.
- Limited branding of fresh food at point of retail sale.



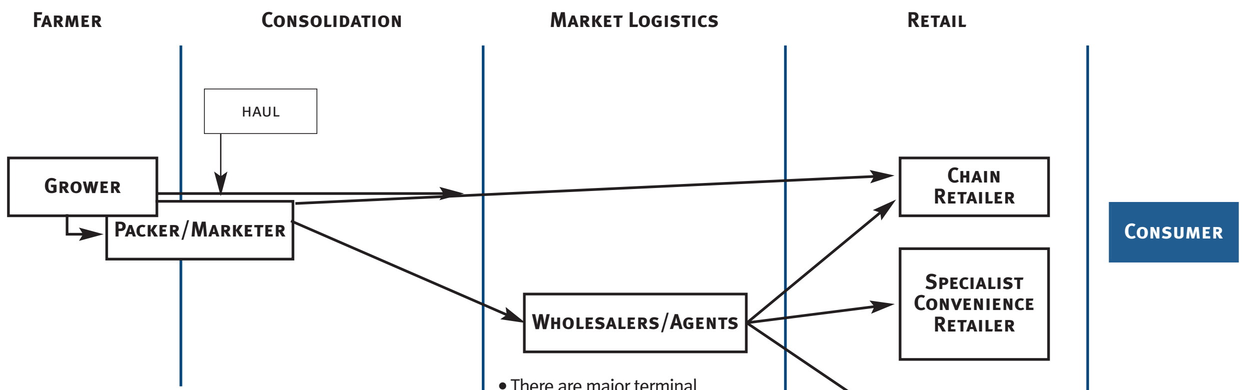
4. Regulation and compliance
- Increasing costs of doing business in farm enterprises to meet environmental, product integrity and food safety demands.
- Meeting ethical and product integrity demands.

5. Trade impacts
- Limited influence of exports on domestic market dynamics, as volumes are generally minor only.
- Export volumes are increasing in scale but based on market windows into premium fresh markets in Asian cities.
- Limited overall influence of imports or prevailing commodity prices.

6. Technology and innovation
- Increasing capital intensity in large-scale production and in packing house efficiency is changing operating cost structures.
- Limited transparency of market prices and costs through the wholesale market sector.
- Greater investment in innovation to improve production consistency and quality, varietal performance and handling efficiencies in harvesting, grading and packing.
- Innovation in minimal processing and pre-preparation of fresh vegetables for more convenient end use in home and food service.

7. Retail market dynamics
- Strong competition at retail level between major chains and between chains and other forms of convenience and specialty retail.
- Greater demand for convenience and lifestyle solutions in meals and food preparation.
- Greater preference for consistency of product availability and quality in retail presentation.

Figure 52. **Fresh fruit and vegetables, generic, supply chain map**

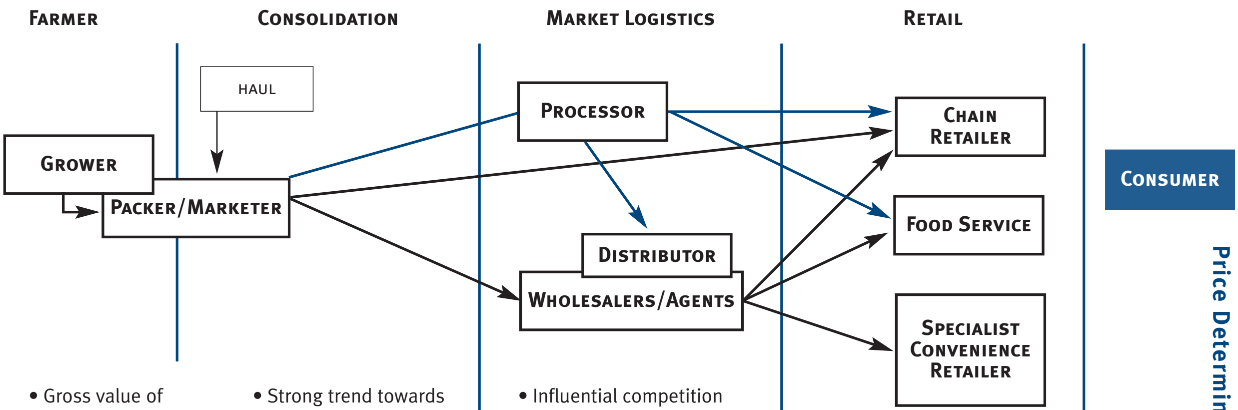


- There is increasing integration of growing and packing, yet most fruit and vegetables are produced by growers who do not have a stake in packing.
- There is an increasing volume of business being sourced by retail chains direct from the grower/packer, including that sourced by packers from groups of growers on behalf of retail buyers.

- There are major terminal wholesale markets in each capital city and certain other major cities which operate as trading floors, allowing suppliers and buyers to deal with wholesalers.
- Major retail buyers use certain agents as specialist procuring agents to procure major supply requirements on their behalf either in specific commodities or across the fresh food category.
- The majority of fresh food is transacted by wholesalers without the produce physically passing through market premises, as described below. Similar practices apply between parties.

- There is a diverse retail market for fresh food with a large number of independent or specialist fruit and vegetable retailers maintaining a significant role alongside major chains and other independent retail groups.

Figure 53. **Tomatoes, apples, supply chain map**



- Gross value of production is approx. $230m at farmgate for fresh produce which is about 25% of total tonnage produced.
- A further $40m per annum is sold into the processing sector (low-grade product).

- Strong trend towards close alliance between growing and packing/marketing.
- Minimal fresh exports.

- Influential competition for processed tomatoes from imported processed product (generally packaged as generic chain retail brands).
- Supermarket chains prefer different logistics arrangements for fresh product.

- There is a diverse retail market for fresh food with a large number of independent or specialist fruit and vegetable retailers maintaining a significant role alongside major chains and other independent retail groups.

FRESH HORTICULTURE – WHOLESALE MARKETS

Price setting in wholesale markets

There have been many allegations from the production sector of the horticulture industry that wholesale markets are the source of profit-taking at the expense of fresh produce suppliers.

There has not been a study of the practices in and through use of the markets, yet the work has drawn on the input of a limited number of participants and reviewed a number of published works that have identified and analysed the problem.

The wholesale markets are claimed to be the best example of what is called 'the perfect market', where price discovery occurs with the fair and free exchange of information about supply and demand. The major difficulty that faces many participants supplying fresh food markets is that the state of competition in the fresh food sector requires much more skill on the part of a seller than in the past.

Modern trading conditions require not only that a producer has the obligation to ensure that the quality and presentation of their fruit is of highest possible quality but that they make themselves fully aware of the market conditions prior to the time of harvesting and packing. It is clear from the nature of the information available that it is not enough to simply read the market reports that are published daily – it requires a close relationship with the traders working on the floor of central market facilities, as well as having one or more options for the sale of fruit to the retail market.

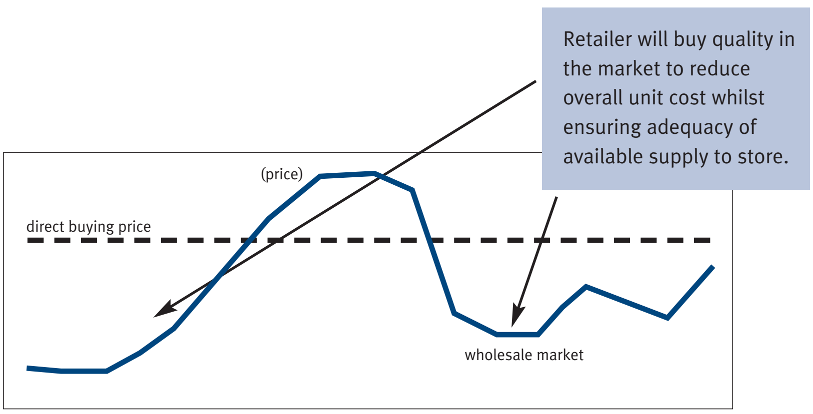
Ongoing relevance of the markets

It is arguable also that the wholesale market system does not accurately reflect consumer demand. Markets are driven by short-term pressure to clear the fruit which is on the floor and does not respond directly to consumer demand for fresh food. This frequently creates demand aberrations (oversupplied or poor quality non-preferred apples, oranges or other perishables become in demand through short-term price discounting) which flow through into the retail product.

Wholesale markets continue to maintain a relevance to new forms of retail supply and supply chain management. It is largely against a wholesaler's interest to bypass his investment in the wholesale market structure by helping to improve the quality of the connection between supplier and retailer.

Supermarkets maintain significant facilities in wholesale markets to support procurement and distribution of many major lines of fresh fruit and vegetables while it suits their risk management in terms of cost, security of supply and quality. They will do so as long as direct supply of produce fails to provide the security of quality, volume and cost.

Figure 54. **Retailer risk management**



Different marketing options

A supplier to fresh markets can opt to seek any one of a number of positions regarding the sale of their produce. Figure 55 outlines the potential corresponding wholesaler positions that a supplier will face when using the markets.

Those in the know are able to exist in comfort. Those who have inferior quality, few or no market relationships or do not have their own source of market intelligence are exposed to manipulation by the trade. It is suggested that this is the source of most complaints about the fairness of market practices.

Figure 55. **Fresh fruit and vegetable markets – the practices**

This example is based on the observed practices on the Sydney fresh food market floor. The prevailing market price for top quality on the day is $16 per 12kg carton of fruit.

Type of supplier	Supplier's position	Wholesaler's action	Retailer's position
A **Top quality** Reliable high quality with brand, consistent volumes, loyal with good personal relationship	Strong relationship with wholesaler, in touch with market mood and daily prices, trusts wholesaler will achieve best price.	Highly values supplier's custom. Has lined up buyer at $16 ahead of product arriving on the floor. Offers $16 less 10–15%. Fruit moves quickly off floor.	**Major chain** Has sourced 50–70% direct from suppliers. Will seek to top up with supply from A or B, depending on price and volume.
B **Good quality supplier** Usually reliable quality, seasonal volumes, loyal supplier	Reasonable relationship with wholesaler, knows market prices, trusts wholesaler will achieve best price.	Will make a judgement call based on the state of the market but likely to make a safe call at $12 to achieve a reasonable margin based on the overall level of activity and volume out of A suppliers.	**Independent** Where a close relationship exists, sale will have been pre-agreed on availability of A produce at $16. Will buy lower depending on quality stance. Where weak or no relationship, will buy B to D based on price, quality stance and general price position.
C **Average quality supplier** Usually reliable quality, seasonal volumes, loyal supplier	Has a supply relationship with wholesaler, is broadly aware of market prices, relies on wholesaler to achieve best price.	Cautious as to proceeds based on quality and buyer capacity. Avoids commitment to price and suggests 'wait and see'.	**Outcome may be $4–8 to grower**
D **Poor quality supplier** Usually unreliable quality, seasonal volumes, not a loyal supplier	Selects wholesaler based on previous custom. Fruit arrives with limited notice. Takes assurance 'will do the best I can'.	Cautious as to proceeds based on quality and buyer capacity. Avoids commitment to price and suggests 'wait and see'.	

FRESH HORTICULTURE – ANALYSIS OF PRICING

Data on prices

A significant amount of data assists analysis of pricing in the horticulture sector:

- retail prices observed by industry groups;
- reported wholesale market prices which have been purchased from market reporting agencies for a three-year period; and
- specific industry price monitoring (in the case of bananas).

There are a number of problems with these data sets. As with any wholesale market in the absence of regulation, there is no compulsion to report wholesale information in the market. Reporting services operate to improve the transparency for buyers and sellers who need to refer to prevailing price indicators. There are three reasons for the inaccuracy of reported prices:

- reported wholesale prices are generally based on very wide ranges;
- methods of collation are only based on what the wholesaler tells the collection agency; and
- the key feature of such reporting services is a subjective 'most sales at' reported price.

It has been frequently alleged in anecdotal information provided to this study that reported market prices are subject to manipulation. The accusation is that the natural inclination of those who provide information to the reporter is to understate the price. This dampens the expectation of the seller and creates greater scope for margin to be won in the selling price. It also creates the impression of lower income levels to the wholesaler.

A further major weakness affecting the reliability of the overall wholesale returns is the increasing tendency of major retailers to source direct supply at prices which are generally higher than the wholesale price in order to obtain the necessary commitment to consistent volume and quality.

Approach taken

Across a number of sectors of the fresh horticulture industry, the work has included the following:

- compared reported wholesale prices to observed retail prices across periods where both sets of data are available;
- taken care to match variety in this comparison;
- ensured the accuracy of the unit size, converting carton sizes to get appropriate like-for-like comparisons;
- consulted with industry groups as to likely direct supply prices to major chain retailers; and
- calculated apparent shares of the retail value of key product lines.

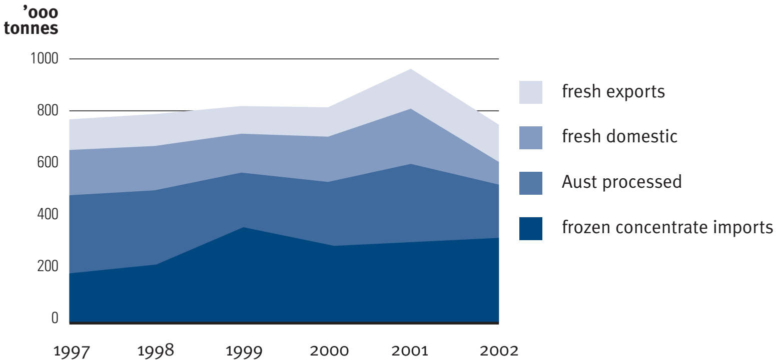
In addition, a tracing of selected products has been made over a period of time through the markets to provide an illustration of price setting in real time.

ORANGES – ANALYSIS OF PRICING

The industry's product mix

The importance of fresh orange exports to the sector has grown: export markets have typically returned far more to marketers in recent times. With exports now representing about one-quarter of production, they provide about half of value at farmgate due to the low level of value of processed fruit.

Figure 56. **Orange products**

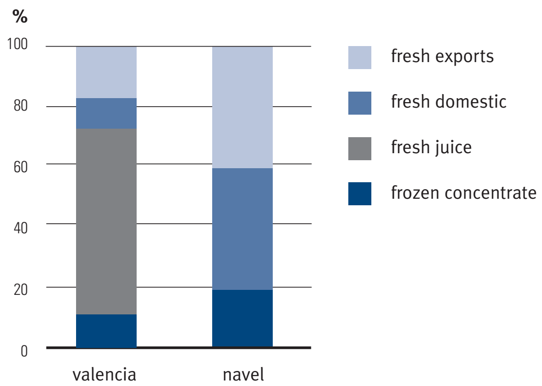


Source: ABS

Factors affecting prices through the chain

- It is necessary to read these comments in conjunction with those on juice, as approximately half of the annual crop of oranges is processed into juice.
- The influence of the mix of product that goes into each of the end uses has a bearing on the prices available to each major variety.
- The industry has moved to focus on varieties that are strongest in relevant market segments, such as navels in fresh markets. It is estimated that 80 per cent of navels are sold into fresh markets, half into exports. Navels typically earn a much higher return than valencias due to their taste and typical end use as a juice fruit.

Figure 57. **End use of orange varieties**



Source: ABS

- As with many other sectors of horticulture, seasonal production variations are one of the biggest drivers of prices and returns, though the increased role of frozen orange juice concentrate in the industry has changed the overall dynamics of returns. Frozen concentrate typically soaks up the supply that is left over from the fresh market.
- Key export market opportunities exist in seasonal windows in the United States and Asian markets.
- Export returns are affected by a range of factors including the presence of major competitors in target markets, as well as the various approaches taken by the Australian industry to secure

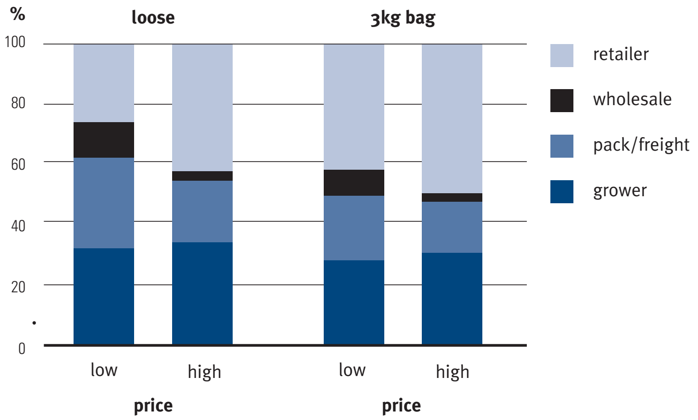
market access – in the United States market the industry sells through a single importer arrangement, yet in many other markets there is a competitive approach which typically results in a lower return.

- At retail, oranges compete with other fruits and refreshments. Seasonal availability can provide advantages but there is increasing availability of a range of other fruits across the board which removes such advantage.

An illustration of the pricing of product through the chain for juice oranges has been undertaken in recent times in the Productivity Commission's review of the industry arrangements regarding the use of export control powers.

Prices of valencia oranges that are received at farmgate will fluctuate significantly over time due to the use of a significant portion of fruit in processing. This affects available supply onto the fresh market. Any illustration of the sharing of retail margins has to take account of such variation:

Figure 58. **Shares of different retail prices, valencia oranges, loose and 3kg bag**

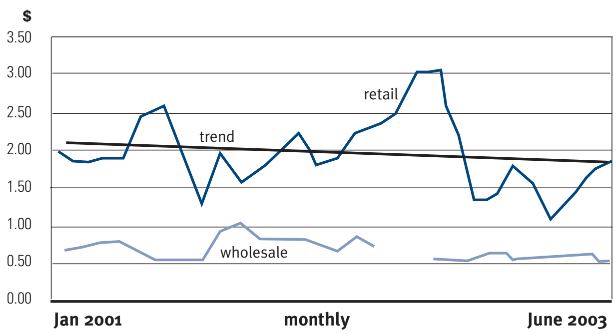


Source: Retailworks 2002

The analysis above for loose fruit was based on retail prices of (low) $1.50 and (high) $1.80/kg, whilst bagged fruit achieved a sale price of $0.66/kg, concluding that most business is undertaken on this latter basis. Bagged fruit is sought by the consumer at this price for home juicing. Margins captured through the chain may vary widely depending upon the position taken upon the sale of fruit by grower and packer. A packer may be able to extract a higher margin by buying fruit at a packing shed price and taking the market risks of placing that fruit into either juice or fresh markets.

The analysis of reported market wholesale prices contrasted against the assessed major chain retail values for valencia oranges shows the wide variation in prices over time.

Figure 59. **Prices of valencia oranges, 1kg, $/kg, Brisbane**



Source: Ausmarkets and HAL

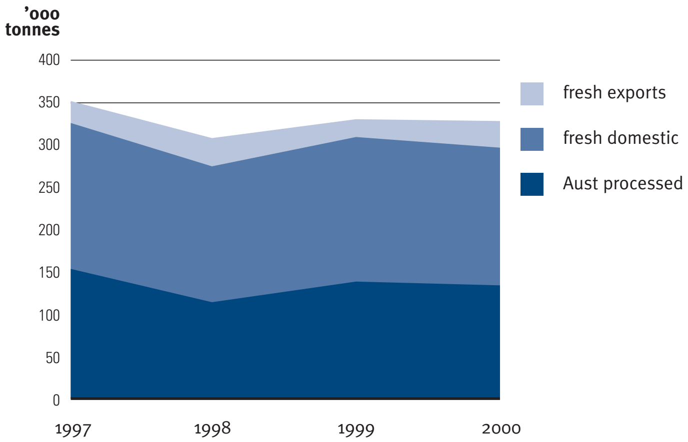
The analysis of margins can be undertaken on a similar basis in the case of navel oranges where a higher proportion of fruit is sold fresh.

APPLES – ANALYSIS OF PRICING

The industry's product and market mix

There has been an insignificant change in the total volume of Australian apple production over the past decade. There has been a modest increase in per capita apple consumption in recent years (for example, 1995 = 12.3kgs, 1999 = 15.3kgs). Both fresh sales and juice sales have shared the increase.

Figure 60. **Total industry production, apples, '000 tonnes, 1997–2000**



Source: ABS 2002

Exports remain small in importance to the total industry with minimal influence on overall returns.

By far the bulk of Australian retail apple sales are in a loose, undifferentiated form. Small amounts are bagged (generally small sizes of main volume lines). Some fruit (for example, pink lady) is sold from single layer trays. The emergence of new apple varieties (such as gala) has added some upward pressure to values but in general the slow industry change away from old, less preferred varieties (for example, red delicious) has increased downward pressure on prices.

Factors affecting prices through the chain

- Seasonal production variation is the biggest driver of prices and returns.
- At retail, apples compete with other fresh fruit lines such as stone fruit and bananas. Seasonal availability can provide advantages but there is increasing availability of range across the board which removes such advantages.
- Other key in-season fruit items (mainly oranges, mandarins and bananas) affect the choice of apple purchases based on their relative value and quality during the apple season. Over time, other snack food options have also greatly affected the demand and potential returns for apples.
- The apple industry still suffers from a reputation for having highly variable quality and availability between and during seasons. Variations in region, time of season, retailer and variety also cause much fluctuation in apple retail pricing and adds to consumer uncertainty and confusion.
- Varietal prices vary greatly depending on consumer preference and supply.
- There are currently no apple imports into Australia to affect market supply and demand. The main issue is the restriction on the import of New Zealand apples due to quarantine concerns about fire blight.
- The New Zealand fire blight issue has recently become affected by a successful United States challenge in the World Trade Organisation. This may increase pressure in the medium term to allow access of New Zealand apples into Australia. This would have a significant impact on the Australian market and industry restructuring.
- Currency has a highly significant impact on trade each year. Significant flows of apples move in and out of export each year due directly to currency-affected export competitiveness. For example, a 10 per cent export volume change causes a 3,000 tonne movement of apples in or out of the local market.

The industry's product mix

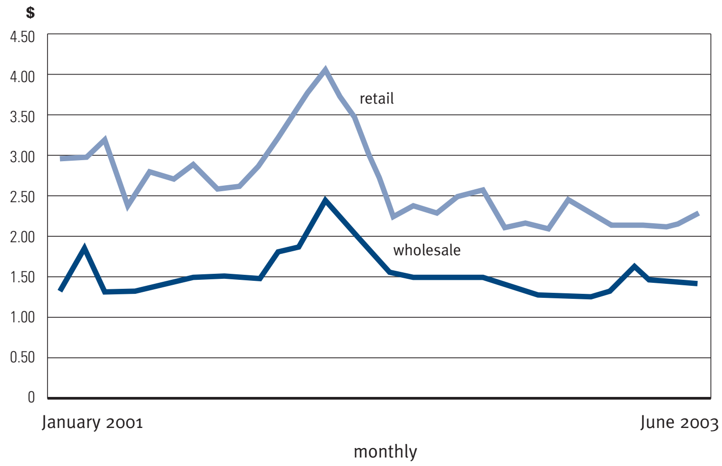
The key price references in an analysis of apple pricing are the main established apple varieties (red delicious – 30 per cent of total apple volume, granny smith – 28 per cent) sold by the main retail sellers.

Analysis of red delicious retail prices during 2001–03 shows:

- a wide price range of $1.82–4.70/kg during the period;
- low prices in 2001, high prices in 2002 and relative price stability in 2002–03;
- a decline in prices over the 2001–03 period; and
- a general pegging of wholesale and retail margins but also continual short-term variations in the margin between wholesale and retail prices.

Sydney market pricing over the last three years shows a comparison between retail and reported wholesale market prices.

Figure 61. **Price of red delicious apples, 1kg, $/kg, Sydney, 2001–2003**



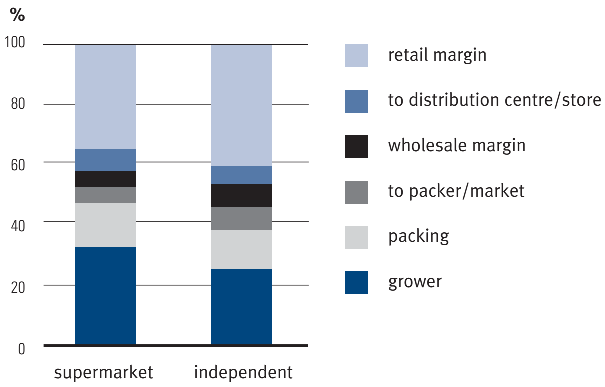
Source: Ausmarkets and HAL

While there has been a declining price trend, there have been marked seasonal differences in prices as well as price fluctuations during the season.

Factors affecting prices through the chain

There was a decline in real grower returns for apples over the 1995–96 to 2000–01 period. Across all apple categories, gross returns fell from $1.09/kg to $0.86/kg. This reflects both fresh apple and processing returns. Gross returns are typically 20 per cent higher than farmgate prices, reflecting the approximate level of wholesale margins.

Figure 62. **Share of retail price, apples**



Source: Industry sources

The assessment of margins through the chain, based on recent retail and wholesale levels, are in the table.

PRICING ANALYSIS

Figure 63.
Prices of field gourmet tomatoes, 1kg, $/kg, Brisbane

These charts provide examples of the analysis of data that is typical of the differences between the **reported wholesale data** and industry data that is collected from **supermarket retail sales**. It is dangerous to make assertions about the share of margins that is obtained from this comparison because of the weaknesses in approach in collation of the wholesale data and the growing portion of retail buying which is direct into warehouse at prices which are different from those wholesale values shown above. The only valid means by which a comparison can be made is via traced sales through the markets into the retail market to ensure there is like-for-like comparison of the price points.

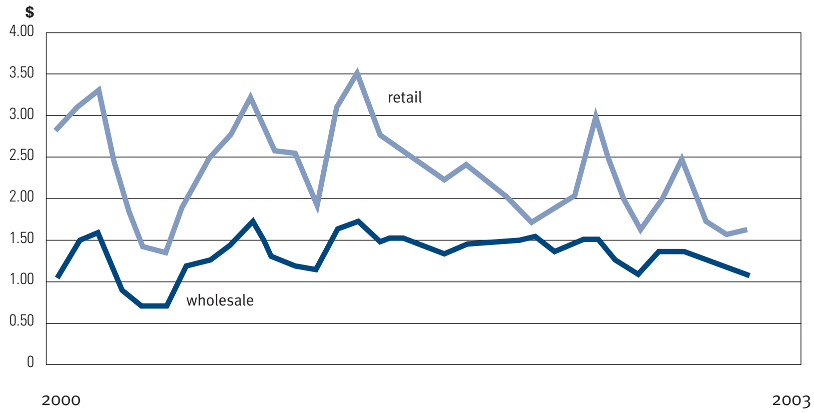


Figure 64.
Prices of Cavendish bananas, 1kg, $/kg, Melbourne

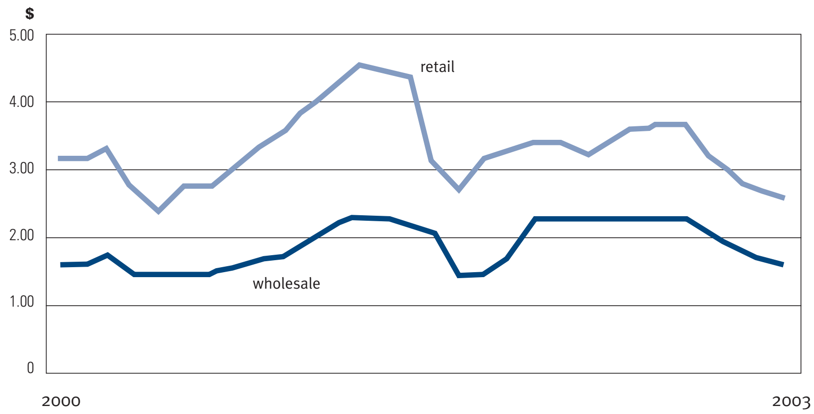


Figure 65.
Prices of granny smith apples, 1kg, $/kg, Melbourne

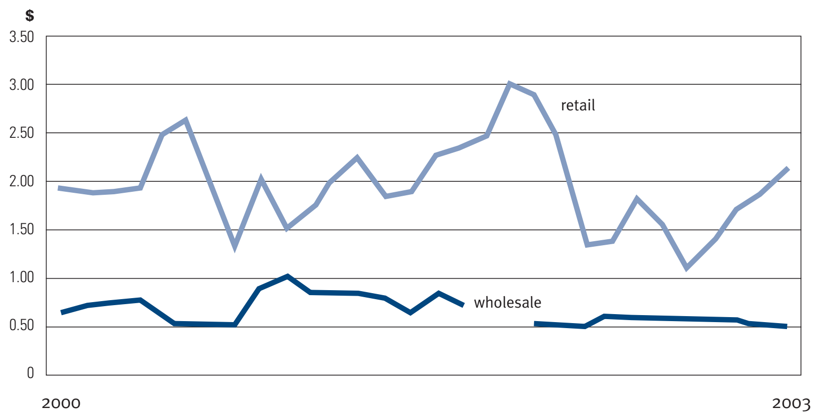


Figure 66.
Prices of Valencia oranges, 1kg, $/kg, Brisbane

Source: Ausmarkets and HAL.

PROCESSED FRUIT AND VEGETABLES

Analysis of the determinants of prices and costs in product value chains

PROCESSED FRUIT AND VEGETABLES – OVERVIEW

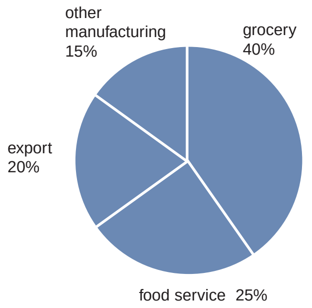
Background

The processed fruit and vegetable sector comprises frozen vegetables and tinned fruit and vegetables. The processed fruit segment is 65 per cent of this sector by market share.

The industry's product mix

This sector has the following mix of products and markets.

Figure 67. **Share of fruit and vegetable product market**



Source: Ibisworld 2003e

Grocery remains the major driver of returns as the market share held by the major retailers is very high.

Major drivers of prices

- Returns to processors and producers from the processed tinned and frozen food products sector are strongly influenced by international trade – with a significant percentage of imports (on average, 20 per cent) affecting several major lines.
- Competition between companies is chiefly based on price, though companies have been striving to increase the diversity of their product range offering to remain attractive to retailers, to leverage brand position and to increase capacity utilisation.
- These food segments have suffered due to their traditional product nature and companies have been forced to innovate in several areas to increase product appeal and relevance against increasing demands for convenience and fresh foods.
- Producers have been forced to operate for lengthy periods of time without price increases due to the competitive pressure on processors and manufacturers.
- At retail, locally produced processed food products are under pressure from a range of food innovations and marketing and promotional strategies in other sectors.
- The major push by grocery retailers for a clean and fresh image, as well as policies of sourcing processed products globally (where prices are competitive with locally supplied product), has limited sales and margin growth for the processed food sector.

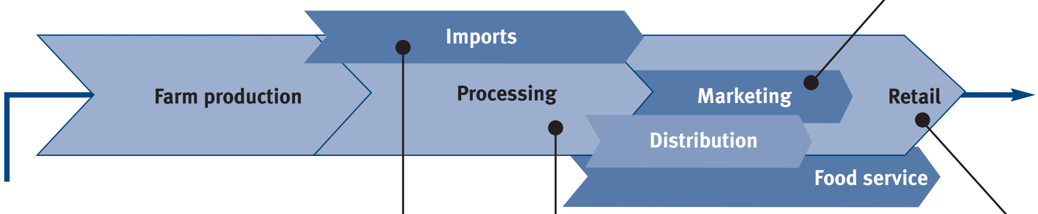
Figure 68. **Processed frozen vegetables: Major drivers of prices and costs**

The processed frozen vegetable sector is dominated by two major international processors in several categories. The product category remains under pressure from actual and potential imports of product at processed or finished goods stages.

1. Farm production factors
- Stable volumes of production.
- Seasonality of production is tightly controlled through terms of supply contracts between grower and processor.
- Prices limited by strong market power of the processors.
- Products have high perishability, picking schedules are structured to prevent need for storage.
- High barriers to entry in terms of skill, customer contracts and capital outlay for land and equipment.

2. Value-chain integration
- Majority of farm supply is under contract with tight controls over the timing and volumes of supply.
- Limited integration of activities along the chain.
- Increasing scale efficiency in certain sectors of farm production and in vegetable processing.
- Tight concentration of ownership of processed food operations.

3. The marketing approach
- Local industry is dominated by international manufacturers and brand marketers.
- Increasing differentiation of frozen products for retail and food service sectors tailored to a wider range of convenience cooking needs (for example, stirfry combinations).
- Product marketing continues to aim at a convenience theme to avoid wastage of fresh product in kitchens.



4. Regulation and compliance
- Increasing costs of doing business in farm enterprises to meet environmental, product integrity and food safety demands.
- Tight concentration of processing sector – limited scope for further rationalisation to enhance profitability.

5. Trade impacts
- Imports have access to significant portion of markets in certain segments (for example, peas).
- Majority of frozen imports are packed in private label products or packed in local plants – this places limits on domestic processed prices into retail.
- Pressure from the potential to import frozen potato products keeps pressure on local wholesale returns to processors.

6. Technology and innovation
- High level of capital intensity in harvesting, grading and processing stages.
- Limited innovation in varieties for processing.
- Limited transparency of market prices and information beyond the farmgate due to tight concentration of the sector.
- Greater investment in innovation to diversify core products and extract value from co-products (potato gems, hash browns) – especially the case in potatoes for food service and vegetables prepared for different end uses.

7. Retail market dynamics
- Growth in value-added frozen and ready meal and combination products.
- The growth of the private label in frozen products has put price pressure on branded products.
- In potato segment, strong presence of quick service restaurants has expanded the category.
- Quick service restaurant sector under pressure to re-invent itself through consumer concerns on food and body health.
- Greater demand for convenience and lifestyle solutions in meals and snacks
- Greater retail concentration has resulted in strong margin pressure.

Figure 69. **Frozen vegetables, peas, beans, supply chain map**

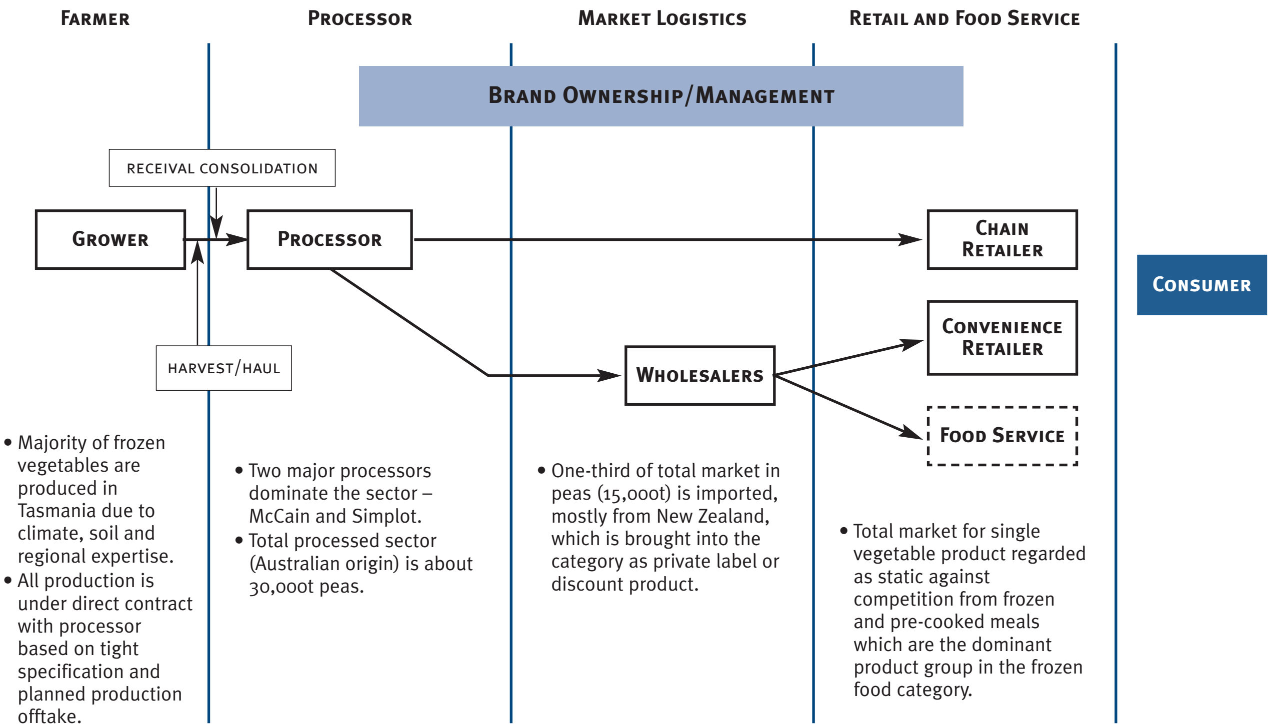
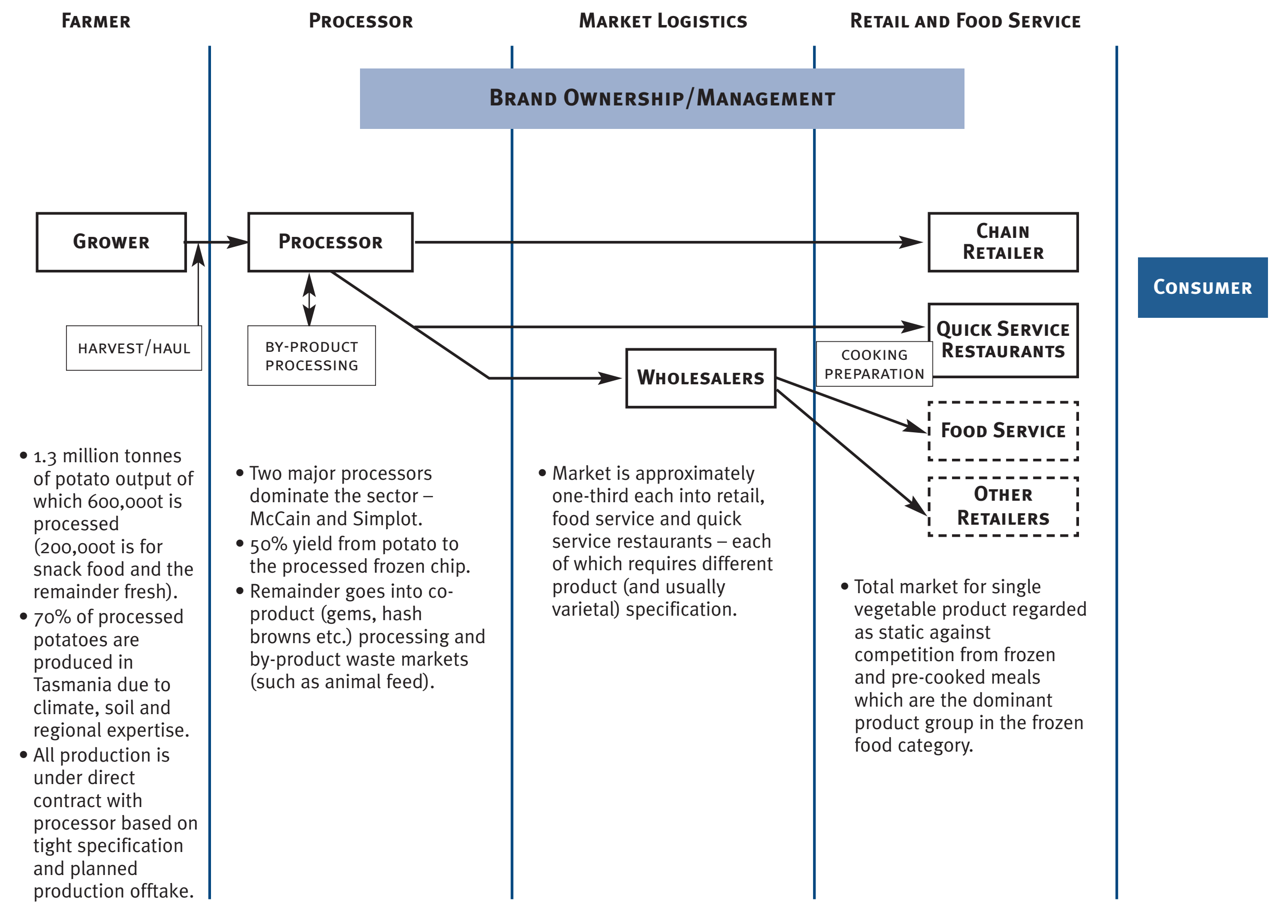


Figure 70. **Processed potatoes, supply chain map**



FROZEN PROCESSED VEGETABLES – ANALYSIS OF PRICING

Background

Australia has a small frozen vegetable processing sector that services the products markets in frozen peas, beans and potato products.

The green vegetable sector is based in Tasmania, which has a low-cost production environment in a very reliable climate without water and heat issues which affect yield and quality, and a reliable skills base in growing.

Grower contracts

The supply of vegetables to processors for use in processed beans, peas and potatoes is made under supply contracts with processors. Suppliers are contracted to supply in certain time windows. Overall production is managed by the processor to maintain a supply profile that is in line with the needs of the business.

The contracts specify area, timing, yield performance, product specifications, price and terms. The contracts carry strict penalties for variation from specification to avoid wastage or poor yields through processing.

The major challenge facing producers in the regions supplying the vegetable processors has been the lack of price increase over time despite the perceived gains in the end price of the products.

There are high cost barriers to entry in the game – gaining access to land, technology, equipment and a contract. Limited land availability is another restriction.

Processors of these products have invested substantially in automation of processing to reduce the costs and increase yields.

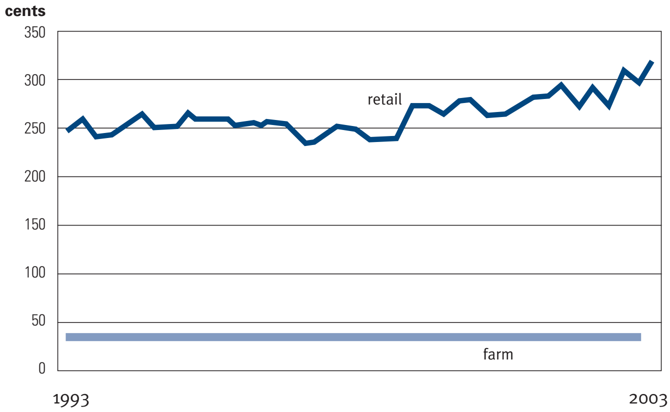
The approach taken

The only available data on the analysis of farmgate and retail prices in the processed frozen sector is that which compares the products on an equivalent basis in a snapshot approach.

Other than the reported retail prices for frozen products from the retail sector, there is little transparency in the information at wholesale and farmgate levels. While there is a time series of data at retail level for frozen peas (shown below), no such analysis exists for potato products. Anecdotal retail data is available in this regard.

In the case of peas, an imputed estimated average farmgate cost per kg of product has been used.

Figure 71. **Retail prices for frozen peas, cents/kg, 1993–2003**



Source: Industry sources and ABS

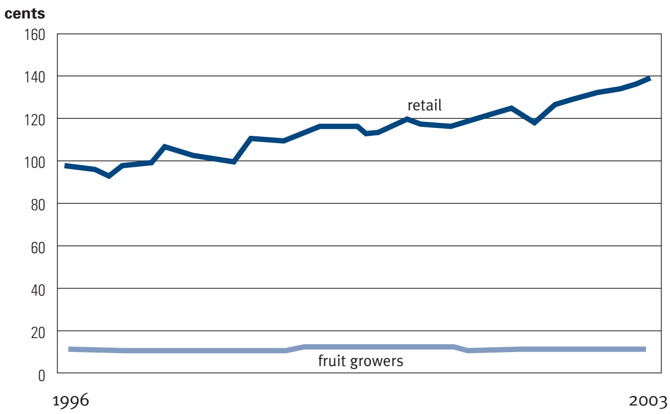
Price competition for domestically produced peas and beans comes in the form of imported product which is generally sold under private label, though imported brands. This maintains tight pressure on the scope for price increases to the processor, though the extent of margin pressure is unclear.

PROCESSED PINEAPPLES – ANALYSIS OF PRICING

The industry's product mix

The majority of the annual pineapple crop is processed into a range of tinned and minimally processed products. It is estimated that the offtake of product by the major processor, Golden Circle, is about 70 per cent of total output.

Figure 72. **Retail and farmgate prices for pineapple, 450g tin, cents/tin, 1996–2003**



Pricing of pineapples at the farmgate has historically been set according to production quotas. These were allocated by Golden Circle according to the level of supplier shareholding in the company. Supply rights were stapled to the shares. Through this mechanism, the company set pool prices for quota and non-quota supply where the quota allocation represented the majority of the company's committed production requirements and the non-quota returns fluctuated as influenced by the world market for pineapples.

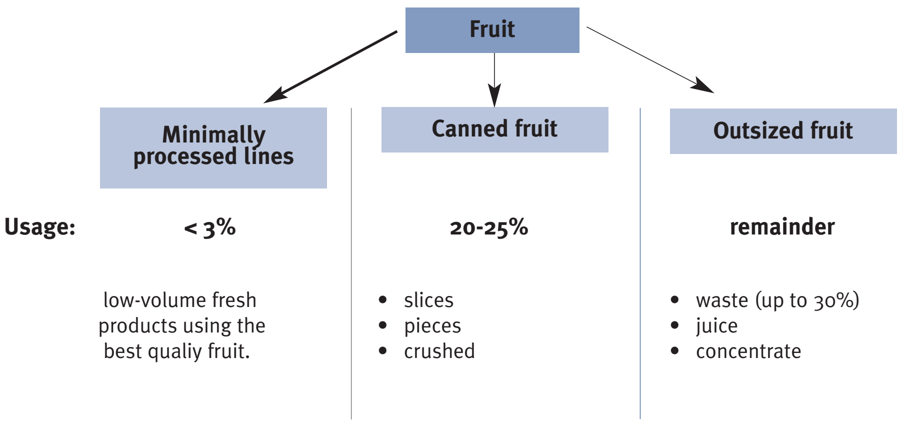
During this time, pineapple pricing was treated in a similar way to milk pricing by a cooperative. Pineapple prices were set as a key balancing item in the financial performance of the group. In 2001, the nexus between fruit prices and shareholding was broken and commercial prices were set for fruit in accordance with long-term supply contracts which contain specifications on supply commitments and product quality.

The pricing of product

The chart on the left shows the comparison between retail value (per ABS data) and the payment for fruit content in the tinned product. Fruit payments represent a small portion (less than 10 per cent) of the overall costs of the business given the diverse nature of the business of the company.

The sensitivity of margin analysis to the company and the industry prevents the disclosure of an analysis of the share of the retail dollar.

Figure 73. **Use of raw material in processing**



The overall use of raw material product through a fruit processing operation is balanced between the demand for fresh (minimally processed) lines, the usage of product which meets specifications for canning and optimising the use of outsized fruit in juice or concentrate. A significant portion (around 30 per cent) is disposed of as waste product, generally to the livestock sector as feed.

While retail prices for canned lines have steadily risen over time (at a rate close to 2 per cent per annum), the ability for the processor to extract sufficient returns across all uses of fruit has been limited due to the strength of competition in the drinks market (with imported concentrates accessible to industry) and the need to invest in products and market promotion to widen the product range. Costs of marketing, packaging and factory labour have increased over time at faster rates than price rises have allowed.

Figure 74. **Fruit juice, citrus: Major drivers of prices and costs**

The juice processing channel has a major impact on the prices and costs in the citrus and apple industry value chains. The earlier overview showed its impact on those sectors. This figure overviews the juice sector itself as a standalone category.

1. Farm production factors

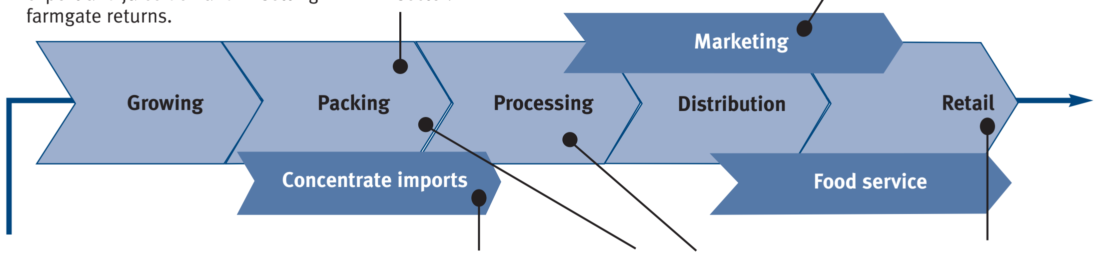
- Relatively stable production volumes of juice-grade fruit available for processors.
- Production has defined seasonality in different varieties (navel and valencia) across the production industry with different growing regions.
- Product perishability limits holding time in the chain – therefore strong interplay between domestic fresh, export and juice demand in setting farmgate returns.

2. Value-chain integration

- Increasing scale efficiency and integration of growing and packing activities by larger growers.
- Concentration of juice processing into a small number of large processors/converters and a number of regional juice companies.
- Strong influence of concentrate availability limits the extent of or reliance on contracted juice supplies or any further backward integration into the growing sector.

3. The marketing approach

- Limited differentiation in product has been occurring to enhance appeal of 100% fresh juice products at the premium end of retail and convenience markets.
- Differentiation through addition of functional ingredients and boosters in juice drinks.
- Growth in the convenience markets provides scope for strength of brand-driven products.
- Limited retail package innovation beyond convenience packs for lunches and entertainment.



4. Regulation and compliance

- Increasing costs of doing business in farm enterprises to meet environmental, product integrity and food safety demands.

5. Trade impacts

- Strong influence of imported concentrate volumes of orange juice on the available processor prices for juice grade fruit.
- Very limited influence of export market volumes of fresh and processed products.
- Export returns and demands in sectors of citrus influence fruit supplies available for juicing and can affect ex-packing house prices.

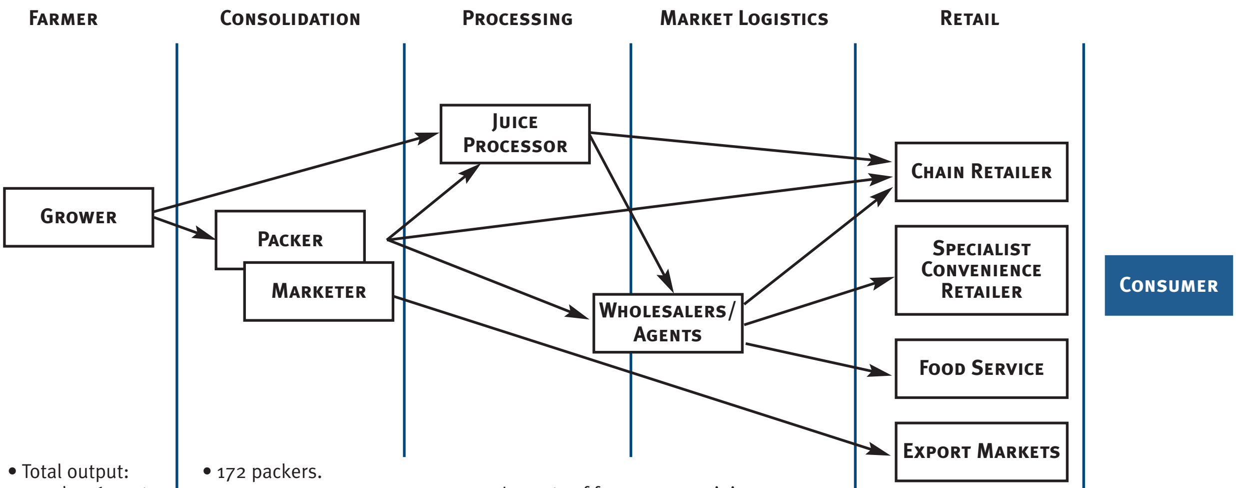
6. Technology and innovation

- Increasing capital intensity in large-scale production and in packing house efficiency is changing operating cost structures.
- Limited transparency of market prices and costs through the packing sector.
- Some investment in innovation relevant to juice fruit to improve production consistency and quality, varietal performance and handling efficiencies in harvesting, grading and packing. Uptake in production sector is patchy due to unstable prices.

7. Retail market dynamics

- Price differentiation accepted by consumer between fresh and concentrate-based juices.
- Strong competition in the beverage and health beverages category between juice, carbonated drinks and waters.
- Emerging competition from in-house juicers in food service establishments and the proliferation of themed fresh juice outlets.
- Large range of juice drinks and concentrate-based products competing on price.

Figure 75. **FRESH FRUIT, WITH JUICE, SUPPLY CHAIN MAP**



- Total output: navel 296,000t, valencia 337,000t and mandarin 109,000t.
- About 3,300 farms, majority of which are mixed enterprise.

- 172 packers.
- Many larger operators are integrated with growing and marketing.
- Value chain less integrated compared with other major horticulture sectors.
- Consumption (in % of each line):

	domestic	export	juice
navel	30	39	31
valencia	22	13	53

- Imports of frozen orange juice concentrate of about 325,000t (equivalent).
- Fresh exports of about 150,000t oranges – most important market is the United States which provides substantial price premium.
- Eight processors.
- Large number of market wholesalers in city markets.

- Juice market is dominated by sales of 2 and 3 litre packs in major retail chains.
- Strong sector of the market is based on impulse products – smaller pack sizes sold chilled in convenience stores and outlets.

JUICE PRODUCTS – ANALYSIS OF PRICING

Overview

Orange and other mixed citrus-based juices are major lines in the beverage category. In recent years the size of the juice category has increased with the greater consumer focus on health and nutrition, coupled with the greater use of nutritional additives (calcium, folates) to enhance the health image.

Juices compete with a wide variety of beverages and are subject to consumer price sensitivity in the beverages market at retail.

Whilst category sales have expanded, the share of business within the category between shelf-stable, chilled and long-life juices changes over time.

Fresh versus concentrate

There has been recent growth in 100 per cent fresh juice due to the improved promotion and labelling of the product and an improvement in the quality of the grown valencia fruit. This has given the processors greater confidence of supply to promote increased consumption. The consumer has demonstrated a willingness to pay higher prices for fresh juice compared to the alternatives, yet this is subject to tolerance levels relative to carbonated drinks and waters and other juice alternatives.

The impact of imported frozen orange juice concentrate has a significant bearing on the profitability of the juice industry. Reconstituted juice products have also grown in total market size, aided by the increased attractiveness of imported frozen orange juice concentrate from major low-cost producers such as Brazil.

Australia does not produce enough fruit to satisfy the total market demands of the domestic industry for reconstituted products. The improved access by the industry to fresh fruit export markets has strengthened the focus of the industry on servicing fresh markets as a priority as local fruit is uncompetitive in frozen orange juice concentrate. Local juice fruit however retains a strong role through use in 100 per cent fresh juice products and an important role in blending part of the juicer's concentrate needs – though this depends upon price competition.

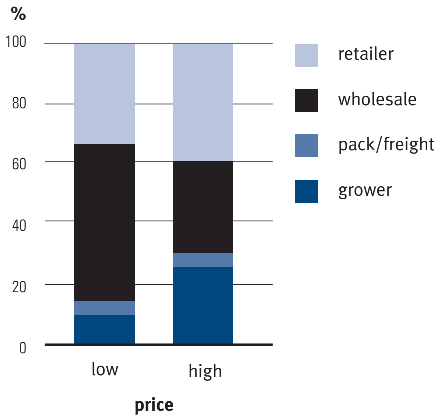
Margins through the chain

An illustration of the shares of the retail dollar for a fresh juice product was undertaken by Retailworks as part of the Productivity Commission review of the citrus industry. As in the case of fresh fruit, this identified low and high cases due to the wide variations that occur from time to time in the net price paid to the grower for fruit.

Those variations are due to:

- the available supply of juice acceptable for fresh juicing;
- the available fruit left for juicing from the fresh fruit market (and relative returns from the fresh market); and
- the prevailing price of frozen orange juice concentrate.

Figure 76. **Shares of different retail prices, fresh juice**



Source: Retailworks 2002

There can be significant fluctuation in the share of returns from season to season based on the above factors. In general, the supply of fresh fruit to the processing sector is regarded as a market of last resort by many in the growing sector. This is due to the impact on overall prices of the volatility of returns and the low prices that processors are willing to offer for frozen orange juice concentrate.

GRAIN AND OILSEED PRODUCTS

Analysis of the determinants of prices and costs in product value chains

GRAINS AND FLOUR – OVERVIEW

Background

The wheat industry is predominantly (85 per cent) export focused, while the flour industry is the reverse, with only 10 per cent of production exported.

The wheat industry has undergone significant change from a highly regulated industry to one that is now deregulated on the domestic market but still has export regulation via a single desk. Management of this single desk is undertaken under the supervision of a statutory authority.

While the domestic market and the storage, handling and transport arrangements are now fully deregulated, the history of regulation still has some influence on the market and pricing.

The flour industry has undergone considerable rationalisation. Today there are 10 milling companies, although only four of these are involved in the retail packet flour market. The industry is highly competitive, low margin and suffers from considerable under-utilisation (estimated to be 30 per cent at present).

The industry's product mix and use

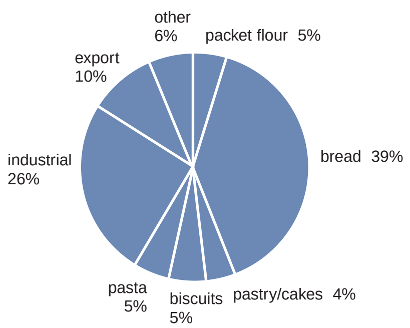
The market mix of the industry in 2002 saw only 5 per cent of flour production used in the retail flour market. The graph gives a picture of the flour market.

Packet flour is really only used in retail. Flour going to all non-retail areas is in 25kg bags or some other bulk form. The bread sector is dominant with 45 per cent of the usage. It should be noted that until the Goodman Fielder sale of mills only 18 per cent of this was unaligned – Westons own their own flour mills and bakeries as did Goodman Fielder. Effectively there has been little change as Goodman contracts their flour requirements and controls the plant bakery.

The packet flour market is in decline. Pasta use has shown significant growth (note that this uses durum wheat and different milling technology and thus does not have a direct influence on the companies involved in packet flour).

Export has also shown strong growth off a low base over the last couple of years but trade does tend to be opportunistic.

Figure 77. **Market mix of the industry's use of flour, 2002**



Source: Industry Sources

Major drivers of pricing

The main factor that affects prices through the chain is the international price of wheat. The wheat input represents the major cost component and directly influences flour price. International prices are driven by supply and demand, climate and exchange rates. International wheat prices reflected in the Australian Wheat Board pool price effectively set the price at which millers purchase wheat.

The other major influence on price at the retail level is product type and retailer positioning. Private label product trades at a 30–40 per cent discount to branded product and thus the margin shares of private label and branded product are significantly different. Private label prices are set via an annual tender process by the retailers.

Thus the variables that effectively influence shares are the wheat price and the ability of the marketer to retain margins.

Figure 78. **Flour products: Major drivers of prices and costs**

Flour products are a major consumer product group derived from grain products, where there is reasonably recognisable identity of product between farmgate and retail.

1. Farm production factors

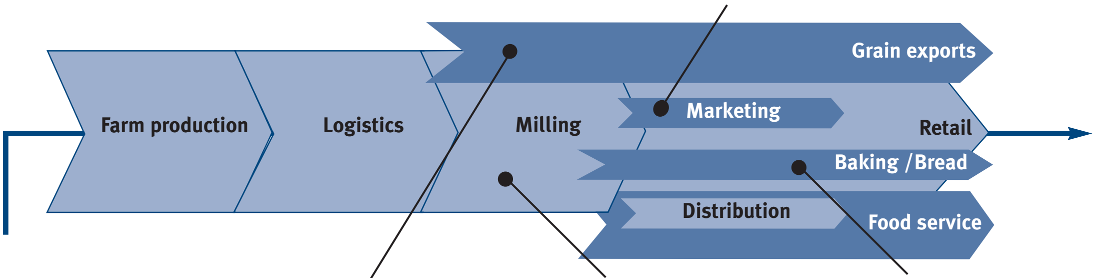
- Can be significant volatility in world grain production which alters price and quality.
- As domestic milling requirements are only 10% of total production, this does not threaten supply.
- Varieties a key determinant of price based on quality and functionality.
- General level of quality across the crop, that is, protein levels.

2. Value-chain integration

- Increasing integration with move out of a regulatory structure, particularly from farmgate to mill door and pre-farm regarding variety breeding and marketing.
- Focus has been on inwards logistics – logistics into the mill – and how to reduce costs.
- Further rationalisation of mills required but for some players may be in form of new greenfield investment.
- Considerable downstream integration – millers to bakers, hot bread chains or industrial applications.
- Significant under-utilisation (30%) of capacity in the industry which has a depressing effect on price.

3. The marketing approach

- Flour is a commodity – little differentiation in specifications in retail products compared to other end uses.
- New varieties will be developed with superior health or milling properties, in particular, growth in wheats which work with specific bread improvers.
- Small but steady growth in new and specialty segments.
- Traditionally dominated by major brands, but consumer perception is changing as smaller companies increase share in specialist categories.
- The gradual change in tastes and demand for convenience has increased flour use in pasta and pizza.



4. Regulation and compliance

- Domestic deregulation has reduced the power of the Australian Wheat Board as a supplier of wheat and opened new supply channels.
- Further rationalisation via mergers and takeovers is likely to be constrained by Australian Competition and Consumer Commission.
- New environmental controls have seen more capital-intensive technologies introduced.

5. Trade impacts

- At raw material level, 85% exported.
- Wheat industry driven by global not domestic factors.
- At flour level, 10% exported based on opportunistic trade and mostly low-value, marginal business.
- Limited flour imports.

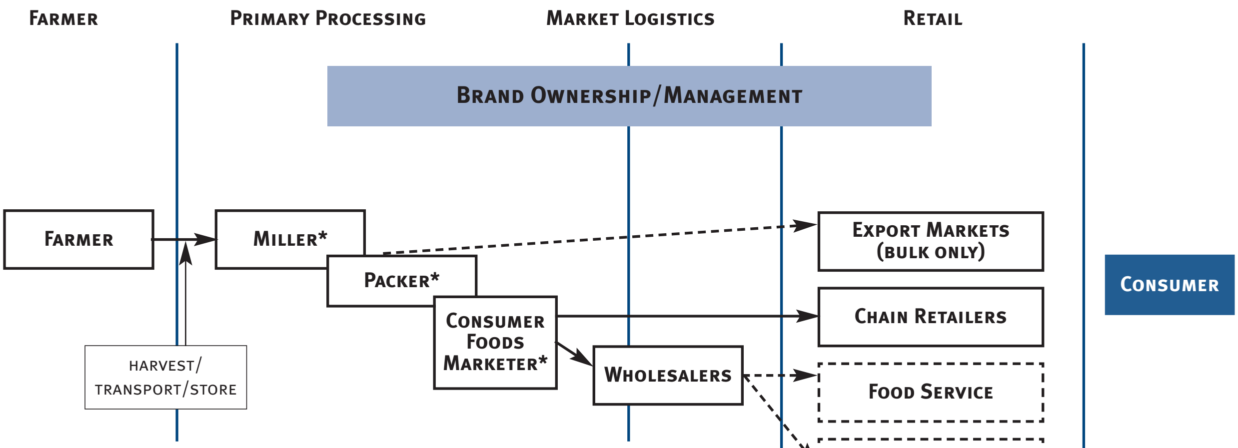
6. Technology and innovation

- High capital-intensive industry and rising.
- Little transparency in pricing beyond wheat input prices. Bread manufacturers, end users and retailers would have a reasonable idea.
- Basic technology is old but improvements in efficiency of equipment and development of smaller, modular plants provide flexibility.
- Investment in value-adding in form of specialty flours and premix products – but only small part of market.

7. Retail market dynamics

- Fragmenting marketplace.
- Traditional bread market impacted by hot bread shops and wider range of products, for example, wraps, rolls, flat breads, muffins.
- Greater demand for convenience and lifestyle solutions in meals and snacks.
- Straight flour sales falling as people cook less in the home or less from scratch.
- Growth of the private label in commodity flour products.

Figure 79. **Flour, 1kg, supply chain map**



- 20+ million tonnes of wheat produced.
- Australia-wide production but traditional milling wheats focused in Queensland/northern New South Wales.
- Price drivers include net returns from world market.
- Large number of players but Australian Wheat Board still dominates supply of wheat to millers. This may change with Allied purchase of Goodman Fielder mills.

*can be integrated or separate players

- 65% of total wheat produced is exported, but only 15% of flour produced is exported.
- Four mills producing retail flour with considerable excess capacity (10 milling companies of which three have total of 84% of capacity).
- Domestic milling industry uses only 2 million tonnes of wheat produced.
- Little value-adding activity.
- Most flour sold in bulk.
- 1.25 tonnes wheat produces 1 tonne flour.
- By-product recovery prices a key factor in profitability.

- Little sale of 1 kg packet flour into food service – 1kg is a specialty retail item.
- Supermarkets account for 95% of sales.
- Branded product about 50%.

FLOUR – ANALYSIS OF PRICING

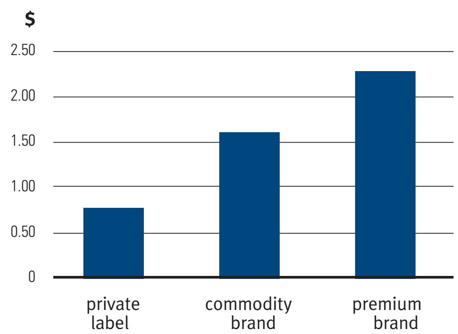
The Australian retail market

Flour is the key product line for the Australian wheat industry in terms of domestic processing. However, the packet flour market is only a small component of overall flour usage.

Packet flour accounts for only 5 per cent of flour manufacturing. As such, the packet flour market has a relatively small influence on overall miller profitability and trends through the chain. About 95 per cent of packet flour sales are through the supermarket channel. Private label represents about 30 per cent by value but almost 50 per cent by volume.

The graph below shows the difference in pricing between private label and the range of branded product.

Figure 80. **Retail price of flour by label, 1kg pack, $/kg**



Source: Industry sources

The packet flour segment declined by almost 1 per cent by value and 2 per cent by volume in 2002. This is a long-term trend and applies to other cooking inputs such as cake mixes and bread mixes. This reflects the fact that consumers are not baking in the home but tend to purchase finished products from hot bread and cake shops. Given this outlook for the sector, there is little investment or activity in value-adding.

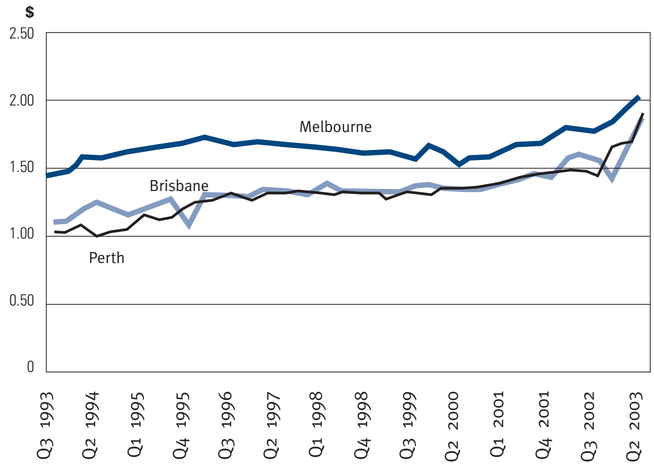
This is different at the food service level where bread and cake mix sales to hot bread shops, pastry and cake manufacturers and other food manufacturers are strong. In these segments there is considerable activity in new product development using specialty flours such as soy and rye. However, despite the level of activity, these products represent a small part of the overall market – specialty grains are estimated to be 5 per cent of the volume of wheat used.

Retail prices

The average value of the grocery retail market in the last 10 years has risen from $1.20/kg to $1.70/kg. However, this is an annual average increase of around 3.5 per cent, suggesting that prices in real terms have declined. This reflects the declining position of the product range and the increasing dominance of private label product. Increasingly the pricing and product sourcing policies of the major retail chains have restricted the increases in retail prices of private label flour products.

The chart below shows average retail prices for 1kg packet flour product.

Figure 81. **Retail price of flour, 1kg pack, $/kg, 1993–2003**



Source: Industry sources

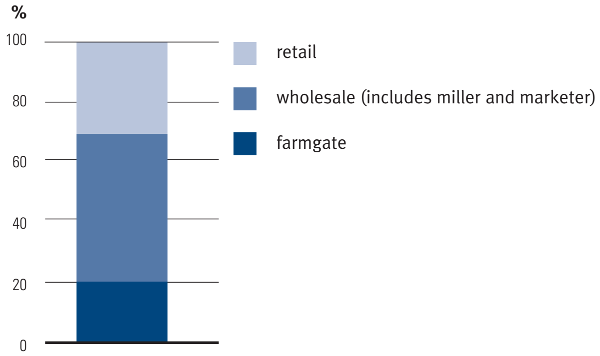
Background

Wheat for milling is a major part of the grains industry and traditionally has been seen as the high quality end of the market, that is, seeking prime hard or specialist categories of wheat such as soft wheat. However, as technology advances are made in areas such as bread improvers, the quality of the wheat input is becoming less of an issue. Bread manufacturers are seeking ways to reduce raw material prices and utilising lower quality wheat is one means of achieving this.

Retail pricing

Our analysis of the margins captured by each major sector engaged in the flour value chain is represented in the chart (note this applies to retail packaged flour only). This has been compiled by reference to the average retail value of retail flour product in the Australian market (per ABS data), the average net selling price achieved by the domestic miller/marketer and the farmgate return based on average prime white grade wheat delivered port prices adjusted to farmgate.

Figure 82. **Share of retail price of packaged flour**



Source: Industry sources and analysis by Bowman Richards

The past several years have seen a gradual increase in the share of the food sales dollar which has been captured by the retail sector, largely due to the competitive nature of the business and the costs of doing business with major grocery chains.

The major retailers tender annually for the private label products. Contracts tend to be purely price-based. (Retailers are also prepared to accept product that is out of specification. This puts pressure on players who produce to specification and thus incur higher costs.)

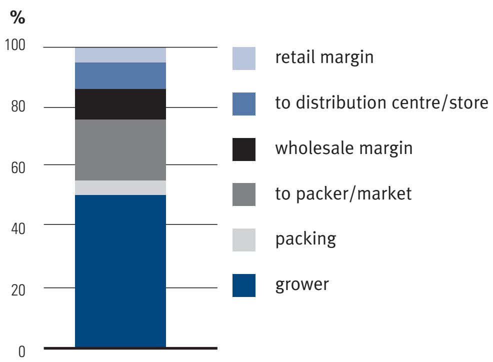
The margin on private label product for millers has effectively been competed away. Margins on branded product vary significantly. This is a major issue for the industry. In some cases it is claimed that business is being done at below cost. In branded product there is little relativity between retail prices and the wheat or flour price.

Drivers of cost

The variation in costs in the flour value chain is largely determined by the annual size of the local and international wheat crop. The Australian Wheat Board (the operator of the single desk for export wheat) has a major influence on wheat prices. In effect, the board sets the price with pool announcements and the flour miller has to pay more to attract wheat away from the pool. Millers buy most of their wheat at harvest so price movements after this have little influence.

The price of flour tends to be set annually – early in the new year – based on wheat cost. Over the year the margin gradually erodes away. Thus, if a flour miller does not read the market for wheat prices, then this will impact on their competitiveness for the year. The major cost in the production of flour is the raw material – wheat and other ingredients account for around 60 per cent of total costs ex mill (excluding warehousing and distribution). The graph below shows the major cost components, excluding marketing, promotion and margins.

Figure 83. **Cost components of flour**



Source: Industry sources and analysis by Bowman Richards

The main factors influencing miller costs are:

- international prices as previously noted;
- miller efficiency driven by yield, age of mill and technical capability; and
- offal (waste) recovery prices – can be costly if locked in and markets move.

The mills that are integrated with plant bakeries tend to have a technical advantage. For example, due to technical knowhow they can have the flexibility to use lower quality wheat through the application of bread improvers. Given that the typical price spread between Australian Wheat Board wheat grades ASW and APW (standard and premium white grades) or AH (hard grade) can be $40 or higher, then this is a significant saving. All mills try to maximise use of APW grade wheat.

The Australian flour milling industry has undergone significant rationalisation of milling capacity and upgrade of technology. This has led to a reduction in like-for-like conversion costs and there may have been some shift downwards in the overall cost base.

Industry risk

The major issue for the retail sector of the flour milling industry is that it is a declining market with little prospect for this to turn around. Thus the business is likely to become increasingly cost-competitive, particularly if private label product continues to increase market share.

The industry has attempted to manage this risk over previous years through improving the efficiency of milling operations, maximising the use of lower value wheats and focusing on other market segments, such as hot bread shops. This latter issue has seen increasing integration between millers/consumer food companies and hot bread businesses.

Broader actions that the flour milling and baking industry have taken to maintain margins include:

- reducing costs through substitution of cheaper ingredients, for example, APW wheat; and
- shifting away from single ingredients to premixes which can include complete flour mixes, semi-finished products, frozen dough or pre-baked bread. By utilising such ingredients, the baker obtains benefits of time and cost-efficiency and reduced production errors.

Value-adding

There is little, if any, value-adding occurring in the retail flour market. The private label market just wants lower costs and there is little action in the branded segment given the declining market due to less cooking in the home. Cake mixes and bread mixes for use in the home are also declining or may even be approaching a state of redundancy and thus, no-one is investing money in this market segment.

The major activity is in the bread mix market for the hot bread shops. However, even there the use of specialty flours is small in total. It may be 5 per cent of total flour usage.

More broadly across the flour and bakery sector, strategic responses have included:

- consolidation, in particular to gain access to new and growing market segments such as the sacking market – where flour is sold in larger packs (sacks) to industrial users or bakeries;
- new product innovations mostly aimed at health including:
  - grab and go products – breakfast bars;
  - functional and fortified products;
  - reduced sugar products;
  - organic products;
  - ethnic and exotic products – for example, the flat bread market is the fastest growing segment in the Australian bread market and has prompted strategic responses from the large players such as Westons' 'breads of the world' range; and
  - bake-off products such as pre-frozen pies, breads, pastries and desserts.

OILSEEDS – OVERVIEW

Background

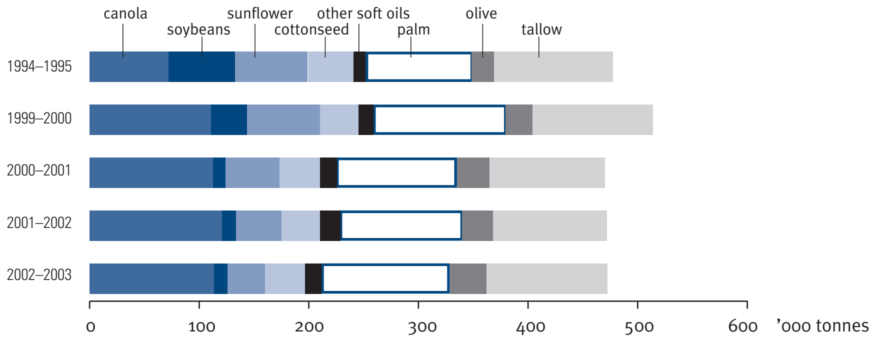
The oilseed industry is predominantly export-focused, although this varies between crops. The main commodity used in retail cooking oil and margarine is canola, with smaller quantities of sunflower and soybeans. This report focuses on canola because it represents over 50 per cent of the oils and fats used in the domestic retail market.

Australia produces on average 1.6–1.8 million tonnes of canola annually, of which around 400,000 tonnes is used in the domestic crushing sector almost exclusively for products for the domestic industry. As such, international price movements of both canola and the competing oils and fats crops are the major factor influencing raw material prices. As in other agricultural businesses, because the raw material is the major cost component, the influence of international prices is felt right through the value chain.

The industry's product mix and use

The industry uses a range of oils and fats in its product range (see graph below). However, many of the more important in terms of total volume are not used in retail products, namely tallow, palm and cottonseed.

Figure 84. **Industry's use of oils and fats**



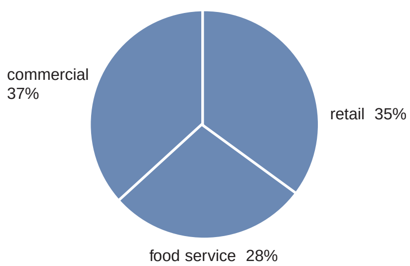
Source: Australian Oilseeds Federation

All palm and most olive oil is imported, with both these commodities growing their share of the market. For palm oil this growth is price-based and for olive oil it is lifestyle and image-based.

The graph above illustrates that canola has steadily increased share as production has increased (except for the impact of the 2002–03 drought). Canola has now replaced all other soft oil usage that does not have an intrinsic demand.

The retail market is an important segment for the oils and fats industry in terms of value but is less important in terms of volume – see graph below. The retail market is not growing other than for the olive oil and value-added segments, such as plant sterol-enhanced margarines. The food service and food manufacturing sectors are growing by around 2 per cent per annum.

Figure 85. **Market mix of the industry's use of oils, 2002**



Source: Australian Oilseeds Federation

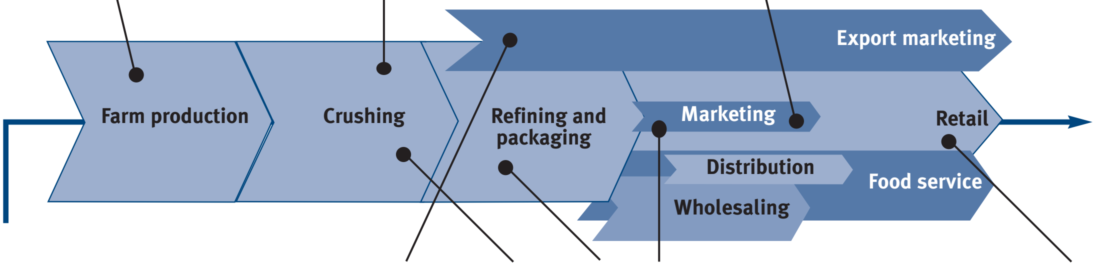
In addition to imports of crude or refined oils which are further processed in Australia, there are imports of finished products which have a significant impact on the retail market and prices.

Figure 86. **Oilseeds: Major drivers of prices and costs**

1. Farm production factors
- Can be significant volatility in production which affects price and quality – oil content can range from 36–48% which effects the profitability of crushing.
- Production variation greater for summer-grown oilseeds.

2. Value-chain integration
- High level of integration from farmgate to consumer, with high levels of concentration at primary and secondary processing and retail.
- Industry is characterised by very low economies of scale, in particular compared with international competitors, and this has significant impact on the cost base.
- The ability to expand the crushing sector is constrained by domestic demand for oil and lack of competitiveness in international markets.

3. The marketing approach
- There is a high brand presence with two of the largest consumer food companies involved in the marketing of oils and fats – Goodman Fielder and Unilever.
- There has been increasing differentiation of products initially around poly and monounsaturated oils and seed type but increasingly on special health properties, for example, plant sterols.
- The market is one in decline at the retail level and thus the focus has been on brands and product differentiation to lift margins.



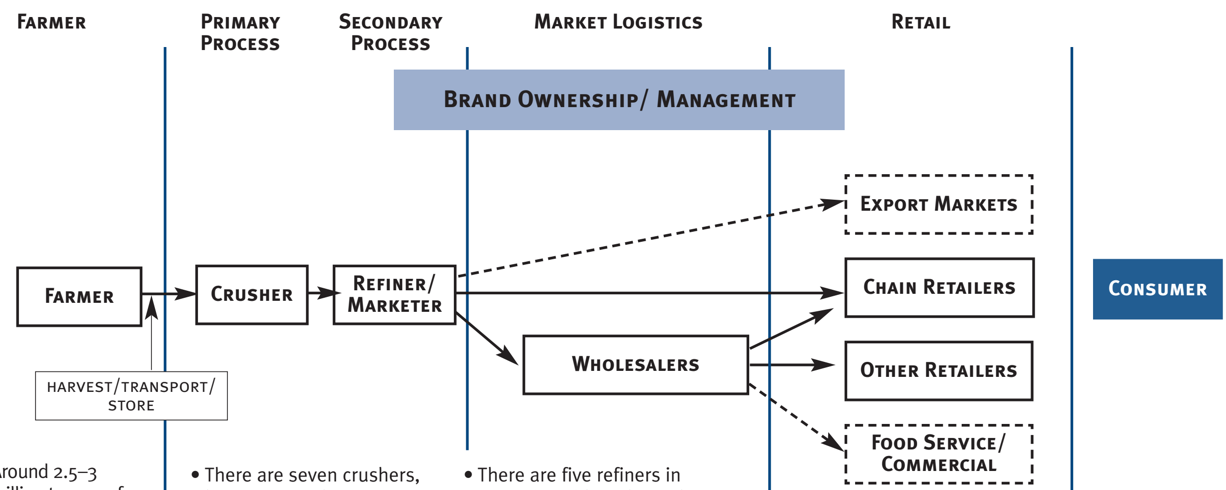
4. Regulation and compliance
- There are no major regulatory issues. There are still single desk arrangements in place in New South Wales and Western Australia for canola but this does not have a significant impact on the industry.
- As many of the plants in the industry are old, they tend to be located in or close to metropolitan areas and thus, environmental compliance is an ongoing issue.
- Increasingly food safety is an important issue and most plants would have a hazard analysis critical control path (HACCP) and/or ISO accreditation.
- A key issue facing the industry at present is the potential introduction of genetically modified canola. This could potentially increase the cost base of the industry if segregation for genetically modified and non-genetically modified is required.

5. Trade impacts
- The influence of exports is significant in canola and cottonseed but sunflower oil is regularly imported to fulfil requirements.
- High levels of imports of palm oil for the low-cost end of the industrial market and olive oil at the high end of the retail market.
- The influence of imports of finished products from developing countries has a significant impact on retail prices in Australia and the subsequent profitability of local processors.

6. Technology and innovation
- The crushing industry is characterised by old technology with inefficiencies occurring in equipment operation and configuration. Australian plants have a high labour ratio compared to large overseas plants.
- There has been one new greenfield crush site developed in recent years which is state-of-the-art but still small-scale.
- There has been a move to a more diverse product range to meet consumer needs and the industry is likely to see further development of specialised products, such as high oleic canola. This will require investment in segregation and identity preservation systems.

7. Retail market dynamics
- Private label products are a major part of the market (50% of the market for cooking oil) and put downward pressure on prices.
- Changing consumer patterns are having a major impact on demand. Consumption of margarine is declining as people substitute other sorts of spreads on sandwiches or go without.
- The supermarkets demonstrate significant influence and in the case of cooking oil use the threat of imported finished product as a means of keeping prices down.

Figure 87. **Oils and fats, supply chain map**



- Around 2.5–3 million tonnes of oilseeds produced annually.
- Canola winter crop grown in southern and western Australia.
- Other oilseeds mostly summer grown and predominantly in northern New South Wales and Queensland.
- Main drivers of price are global commodity prices.

- There are seven crushers, however, one has 85% market share. There are two players servicing the mainstream refiners and a number of smaller ones producing niche commodities or servicing non-grocery markets.
- Yield varies by seed type – high oil varieties have around 40% oil: 60% meal and low oil varieties have 20% oil:80% meal.
- However, oil is in most cases the economic driver.

- There are five refiners in Australia, although two have 90% of capacity. These players – Goodman Fielder and Unilever – are the predominant suppliers to the retail market along with imports.
- These players purchase crude oil from crushers and recover around 95%.

- There is little sale of consumer pack oil into food service, yet sales of spreads into this sector includes retail pack sizes for ease of use in sandwich preparation.
- Major supermarkets account for majority of retail sales.
- Branded product is about 50% of retail pack sales of oil.

OILS AND FATS RETAIL MARKET

The Australian retail market

The margarine segment has been undergoing a period of decline while the cooking oil segment has been growing, although this is primarily in the olive oil segment.

Value and volume of grocery sales of spreads and oils

	Margarine 2000	Blends 2002	Butter 2002	Cooking Oil 2002
Value $m	266	63	61	218
Volume	83,193t	14,221t	14,402t	527 M litres

Note: the above figures only represent the grocery trade of major supermarket groups and do not capture sales through independents, convenience stores and food service. For example, total margarine production is around 150,000 tonnes.

Source: Australian Oilseeds Federation

The retail yellow spreads market is declining at around 3 per cent per annum. Within the yellow spreads segment, butter is seeing a rise in popularity. While margarine use is declining, it still accounts for 66 per cent of the total spreads market. Generics have won a greater share of the market as consumers recognise that the quality is comparable. Polyunsaturated margarines continue to dominate the segment with 63.4 per cent of margarine sales. Monounsaturated margarines account for 29.2 per cent of margarine sales.

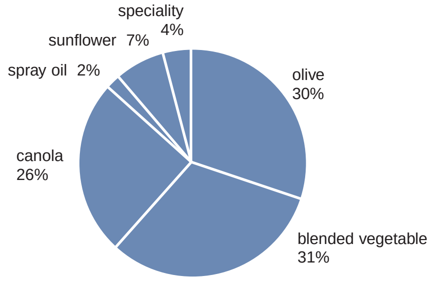
While the number of households consuming margarine remains constant, the oil content of vegetable oil spreads has dropped with the move to low-fat products and the use of other ingredients (including dairy fat in blends). Spreads offering unique positioning – for example, cholesterol lowering – and olive oil have been introduced in an attempt to reinvigorate the market.

Bottled oils are also seeing growth. Olive oil accounts for most of this, growing by around 10 per cent per annum and representing 37 per cent of the total market. Non-olive oil use is declining by 4.5 per cent per annum. Private label product accounts for around 50 per cent of total sales.

The premium-priced segment is mostly canola (but would also include sunflower and specialty oils) and trades at a significant premium to the blended vegetable oil category. Monola (low-linolenic canola) has done well but is heavily supported with marketing. Olive oil continues to increase, primarily driven by a strong marketing image. Canola oil dominates this category accounting for 26 per cent of the total segment by volume and is a major ingredient in the blended vegetable oils category, which accounts for 29.6 per cent by volume.

The shares of all categories are shown below. However, as a single oil category, olive oil has grown significantly to now hold 30 per cent of the segment by volume and almost half by value.

Figure 88. **Market mix of cooking oils, 2002**



Source: Australian Oilseeds Federation

In terms of trends in individual oil types, there has been:

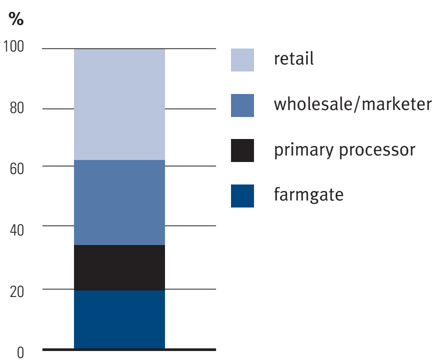
- a significant increase in canola oil consumption (up from 14 per cent in 1987 to almost 60 per cent today);
- growth in specialty oils such as peanut and sesame oil;
- substantial growth in olive oil consumption with extra virgin and extra light olive oils driving growth; and
- a decline in soybean oil consumption linked with trans fatty acid and genetic modification issues.

COOKING OIL AND MARGARINE – ANALYSIS OF PRICING

Retail pricing

Represented below is our analysis of the share of the current returns for each major sector engaged in the oils and fats value chain as it relates to bottled cooking oil (note that the farmgate to wholesale component includes both primary and secondary processing).

Figure 89. **Share of retail price of cooking oil, 750ml bottle**



Source: Industry sources

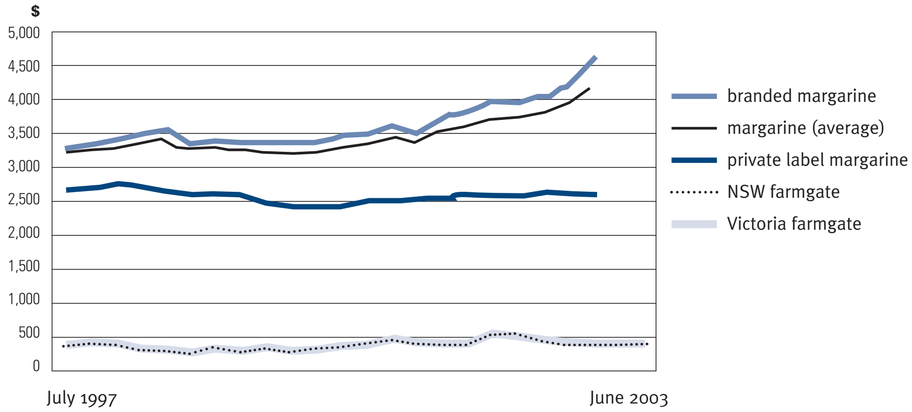
The amount represented by the retail sector reflects margin and any costs they have in centralised warehousing and administration. Margins for the retail sector are estimated to be 20 per cent of the wholesale price. In the wholesale sector, there are margins for both the crusher and refiner. The refiner appears currently to be struggling to recover full overheads and any margin. This is due to the competitive pressure from imports and the behaviour of retailers to maintain their margins.

A major driver of prices in the retail sector is the price of bottled oil from nearby Asian countries such as Singapore. Products from these markets are competitively priced in the Australian market and the retailers use this as a major influence on their buying price, rather than the cost of production within the Australia market. The domestic refining industry has in the past successfully brought anti-dumping action against the imported product and currently has another anti-dumping application before the government.

This has been accompanied by a steady increase in share held by private labels to the point where they now hold around 50 per cent of the market.

Retail versus farmgate prices over time

Figure 90. **Retail and farmgate returns for margarine, $ per tonne equivalent, quarterly 1997–2003**



Source: Industry sources

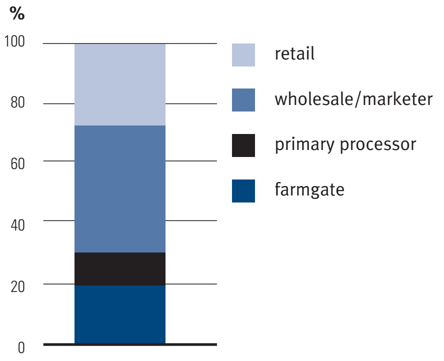
The farmgate numbers above are based on the delivered port price adjusted to a farmgate value. The graph shows that the movement in retail prices for branded product is influenced by a range of factors other than raw material prices. However, the farmgate price has more direct relativity to the crusher prices and margins which are influenced by both meal and oil. The meal price is set by the import parity price for soybean meal (canola meal trades at a discount to soybean meal due to its lower protein value). In the case of oil, the value is between the import parity price for oil and the export parity price for seed. The relative contribution of oil and meal to the crusher margin varies between years and within a year depending on the world oils and fats complex and the crop cycles in other parts of the world. Generally the crusher margin will be higher earlier in the crop season and decline over the year.

MARGARINE – ANALYSIS OF PRICING

Retail pricing

Represented in Figure 91 is our analysis of the current share of the returns for each major sector engaged in the oils and fats value chain as it relates to margarine (note that the farmgate to wholesale component includes both primary and secondary processing).

Figure 91. **Share of retail price of margarine, 500g tub, average across category**



Source: Industry sources

The amount represented by the retail sector reflects margin and any costs they have in centralised warehousing and administration. Margins for the retail sector are estimated to be 35 per cent of the wholesale price. In the wholesale sector, there are margins for both the crusher and refiner.

The refiner is recovering full overheads and margin in this segment, although margins vary significantly between branded and private label product. Margins on private label product are estimated to be around 10 per cent or less while they could be double this on branded product.

The increasing share being won by private labels is putting pressure on the refiners' margins as there is little opportunity to differentiate product based on quality and competition is purely based on price.

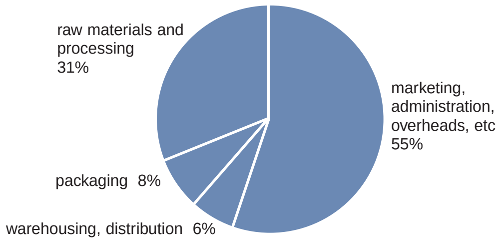
Drivers of cost

The major factor causing variation in the cost base from year to year is the price of canola seed. This is largely determined by the size of the domestic and international crop. The major cost in the production of cooking oil and margarine is the raw material – approximately 60 per cent of the wholesale price and similar at the crusher door. The industry's cost base has been relatively static for the past four to five years.

Canola is viewed as premium oil on world markets, where soy and palm oil are the low-cost commodity oils. However, in Australia, where there is little production of soybeans and no palm oil production, canola is the core of the industry. As the industry has grown and with 75 per cent of the crop exported the refiners are looking to purchase oil priced from export parity for seed rather than import parity.

The cost breakup for the sector is shown below.

Figure 92. **Cost dissection for cooking oil products**



Source: Industry sources

The raw material cost is the cost into the refinery. The equation is complex because at the crush level the crusher processes seed to produce oil and meal. The relative contribution of oil and meal to the crushing return is driven by the relative prices for oil and meal and this relationship varies between years and within a year.

Industry risks

The key area of risk for the industry is the ability to maintain margins due to:

- competition from imports;
- the high cost base of the processing sector;
- the low level of growth in the category; and
- increasing share being captured by generics.

In relation to imports, a potential area of risk relates to the development of free trade agreements such as that with Singapore. These may pave the way for increased imports of bottled oil. To date, the refiner industry has used its skills in management of inward logistics to provide a competitive advantage particularly in the food service and commercial sectors.

The high cost base of the processing industry – both crushing and refining – is a key issue when compared to the very competitive South American industry. The economies of scale obtained by these plants and increasing shipment sizes allow crude and refined oil to be landed in Australia at very competitive values.

To combat this, the crushers have continued to focus on pushing costs down through:

- controlling core costs of steam, electricity and repairs and maintenance – these account for about 20 per cent of processing costs;
- increasing volume to reduce per unit fixed costs; and
- reducing origination costs, for example, the joint venture by Cargill with Graincorp and Allied to form Australian Grain Accumulation.

Another way for the crusher to improve margins is vertical integration of both oil and meal. This is common practice globally where crushing, refining, packing and even consumer marketing are integrated into the one operation. This has not yet occurred in Australia.

For the crusher, managing price risk on raw materials is a key issue. The crusher can do this by hedging oil against Chicago, meal against Chicago, seed against Winnipeg or a combination. However, all have inherent difficulties.

Another area of risk for the industry is the increased focus on reducing fat in the diet. This tends to have greatest impact in the retail sector as consumers cut out fat that is visible – such as margarine on bread – but continue to eat invisible fat – such as fast food and processed foods. The fat used in the retail products sector tends to be price driven and therefore palm and tallow – both high in saturated fats – are the largest volume players in this market.

Value-adding

The industry has looked to product innovation to drive growth in margins and reinvigorate the market. This has included:

- products targeted to the functional food market in the form of margarines that are enriched with plant sterols to provide health benefits. Since entering the market these products have quickly increased sales and now account for 3 per cent of the market. These products retail at around three times the value of the standard product;
- margarine blends with olive oil to create improved image and health awareness. This segment of the market is growing strongly and retails at a premium to the standard product;
- margarine blends with butter; and
- blends in cooking oil – for example, olive/canola and specialty products such as monosun and monola – as ways of adding value and expanding markets. This has also included product variations such as Asian oils suited to particular uses such as stirfrying.

EGGS

Analysis of the determinants of prices and costs in product value chains

EGGS – OVERVIEW

Background

The industry has been undergoing structural change since production and marketing was deregulated, commencing in the 1980s. This saw a reduction in production, lower margins in the early supply chain and a greater share of returns in the retail sector.

Of egg production output, 65–70 per cent is consumed in the household sector which is showing no growth. Other sectors of consumption – food service and industrial and commercial uses – are showing slow growth. The domestic egg market has suffered as the egg has lowered its profile as a major source of protein and other sources have gained important ground. The fresh egg category is also under pressure from the increasing demand for health and convenience foods, which the egg sector has not been able to successfully overcome.

The industry structure

It is estimated that 40 per cent of eggs are sold through major retail chains, 35–40 per cent through the box market and the rest into the route trade and convenience retail segments.

The box market is characterised by small retailers who have the ability to make the local decision on purchase terms and prices.

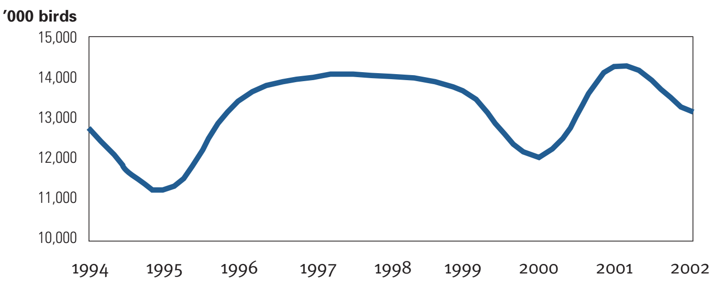
There are seven major egg marketing groups in Australia, employing a range of different business models in terms of integration of production, grading, packing and marketing. The national industry has progressively evolved from state-based supply regulation. Today, despite rapid expansion of certain packing and marketing enterprises, none of the groups is capable of servicing retail on a national basis.

Cage eggs are 83 per cent of retail grocery sales. Free range represents 11 per cent and barn eggs the remaining 6 per cent.

Major factors affecting prices

- Egg prices in the domestic retail market are strongly driven by the interaction of supply and demand over time.

Figure 93. **Birds in egg production, 1994–2002**



Source: Australian Egg Corporation Ltd

- The major cost faced by egg producers is feed. This represents approximately 60 per cent of costs of production in normal conditions.
- Whilst the general level of retail and wholesale prices have been historically driven by a cost-plus approach, since deregulation of the supply and pricing of eggs, fluctuations in pricing have been determined largely by variations in available egg supply.
- In recent times, the level of retail prices has been strongly influenced by greater use of private label product by major retailers – leading to minimal increases in prices to the consumer.
- Major chain retailers have driven an increase in the market share held by private label product to combat competition for their egg sales from the non-integrated box market which sees discounting at independent outlets.

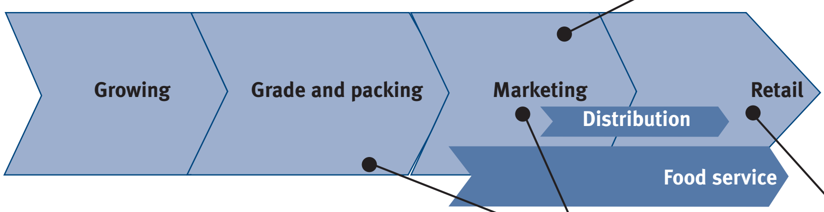
Figure 94. **Eggs: Major drivers of prices and costs**

Cage eggs are a major grocery category where over time the production industry has gone through substantial change and restructure, with strong rationalisation of growing and marketing sectors.

1. Farm production factors
- Production has tended to be volatile due to movements in supply in response to price signals.
- Product is perishable with a limited shelf life for optimum freshness.
- There are long lead times to scale up production yet flock reductions can be immediate through culling.
- Production profit is sensitive to fluctuations in feed costs.

2. Value-chain integration
- Instability of price and return for growers and marketers due to an inability to maintain a stable match between demand and supply.
- Increasing scale efficiency in egg farms, grading and packing operations.
- Strong concentration of ownership in the collection, grading, packing and marketing stages.
- Consolidation of egg marketing into a small number of companies operating in different zones has enhanced bargaining power of marketers.
- Box market remains a large share of market – in disaggregated form where packers supply direct to retail.

3. The marketing approach
- Limited differentiation and de-commoditising at retail.
- Brand presence still strong in major retail sectors with strong price competition against box market and private label.
- Packaging and presentation is reasonably generic.
- Marketing approach based on the relative cost of eggs as a protein source.
- Small niches carved out for free-range egg lines in all forms of retail, but supply lines less reliable.



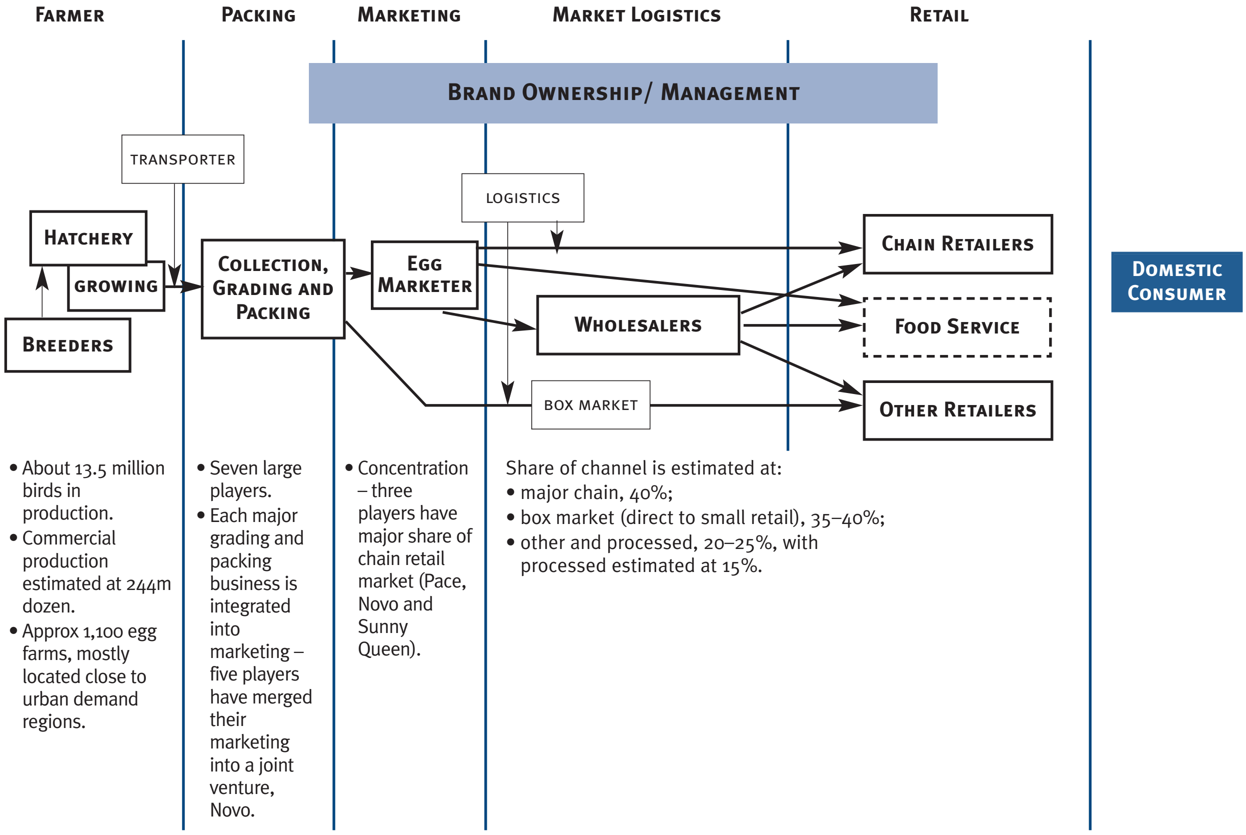
4. Regulation and compliance
- Major challenge facing producers is compliance (over any time up to 2008) with new cage size regulations. These will require re-equipping across the sector.
- Uncertainty over the extent of the future impact of that capital requirement on production levels and accordingly on temporal matching of supply and demand.

5. Trade impacts
- Limited exports of powdered eggs helps remove small market surpluses.
- Small volume of shell egg exports out of Western Australia has minimal effect on east coast market.
- No shell egg imports are permitted under Australian Quarantine and Inspection Service rules.

6. Technology and innovation
- Increasing capital intensity is improving cost structures in grading and packing sector.
- Limited transparency of market prices and costs through the box market channel chain, yet retail market is highly visible.
- Limited new product development over recent years.
- Limited scope to diversify core product due to its uniform, consistent nature – yet development of powdered egg products and pre-cooked products for food service has occurred.

7. Retail market dynamics
- Diverse retail market with major chains only having about 40% of market.
- The growth of the private label in eggs has been strongly based on price competition in order for retailers to gain greater share of total market.
- Greater demand for convenience and lifestyle solutions in meals and foods has put pressure on the egg as a fresh food option.
- Prices deemed sensitive at retail point of sale.
- Growing diversity of consumer needs will see increasing demand for processed products in food preparation solutions.

Figure 95. **Cage eggs, supply chain map**



EGGS – ANALYSIS OF PRICING

The levels of prices and costs

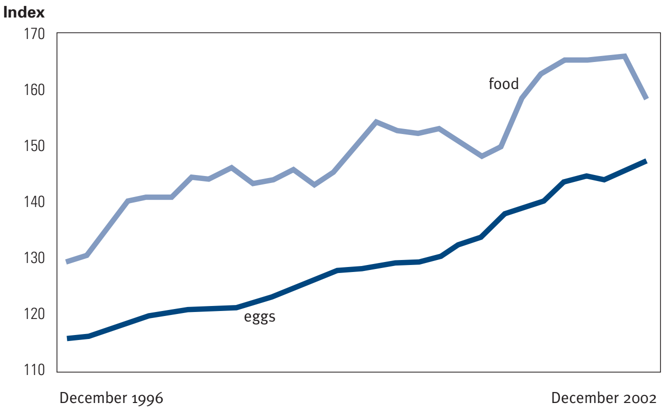
- Egg production features high barriers to entry. Production – once committed – is relatively inflexible.
- Industry is typically asset-rich and cash-poor in view of the major capital requirements for production and packing, the investments in flocks and feed, and the fluctuating selling prices.
- Fluctuations in supply exist but face lead times. A flock lays for 76 weeks but it can take up to 50 weeks to get a hatchling into production. Yet production can be cut very quickly (by killing the layer).
- Cage egg production systems, which provide about five-sixths of total output, provide scope for better scale efficiencies and greater integration than other systems which are in use. These provide greater animal mobility and perceived better welfare for the birds.
- It is estimated that the costs of production (for a 700g dozen eggs) are:

cage eggs	$1.25 per dozen
barn eggs	$1.70 per dozen
free range eggs	$2.15 per dozen

Source: RIRDC 2002

- It has been estimated by industry analysis that the sustainable retail price differential for barn and free range eggs is approximately 60c a dozen.
- Over time, the retail prices for eggs have been held at levels below the increases in the cost of living.

Figure 96. **Consumer price index, food and eggs, 1996–2002**



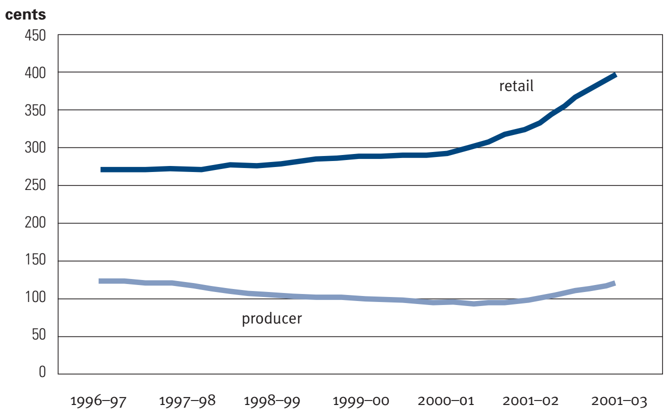
Source: Australian Egg Industry annual statistics 2002

- The low price of eggs has been achieved through a combination of factors including:
  - the passing to consumers of the benefits of the gradual consolidation of the industry in production and packing sectors; and
  - the use of supermarket brands to compete with independent operators who face lower cost regimes than the emerging major suppliers of supermarket and proprietary brands.

Retail versus farmgate prices over time

The comparison of retail and farmgate returns over time is as follows.

Figure 97. **Retail and producer prices for eggs, cents/dozen, 1996–2003**



Source: Australian Egg Industry annual statistics 2002

The farmgate numbers above are based on industry estimates.

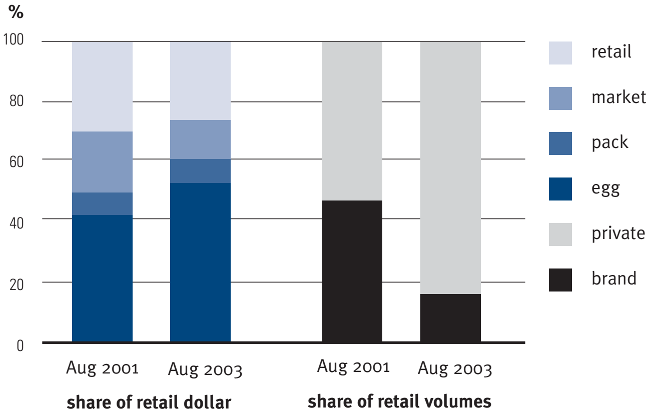
The rise in both values in 2003 was due to the effects of drought, where the egg marketers set higher selling prices (about 30c per dozen at wholesale) to assist in recovering the sharp increase in the cost of feed grain. Retail prices rose by a larger amount.

The sharp rise in feed costs has not yet been reversed in production cost structures. It is expected that the full cost of greater future security of feed grain supply to the poultry industry will see feed costs do not return to reliable pre-drought levels.

Margins in the chain

Our analysis of the margins captured by each function in the cage egg value chain is represented as follows.

Figure 98. **Shares of retail price and volume of eggs**



The average retailer margin as a percentage of retail value has changed in recent years with the rapid move to dominance of the category in major retail by private label product. This is a higher volume, lower margin product for the retailer compared with proprietary brand due to the significant retail price differential that has developed in the past two years. Aggregate retail return has increased with the volume growth through supermarket retail. The chart under 'Private label as a weapon' illustrates the increasing difference in retail prices for each private and proprietary branded line.

The concept of a farmgate is less applicable to a standalone sector in the larger scale end of the industry. This is due to the greater incidence of integrated production, grading and packing operations, and more use of in-line systems that reduce egg handling.

The cost of packaged egg products costs vary considerably with the scale of production systems that are employed, the extent of integration between laying, grading and packing, and the degree of automation that is used in the process.

Cage regulation

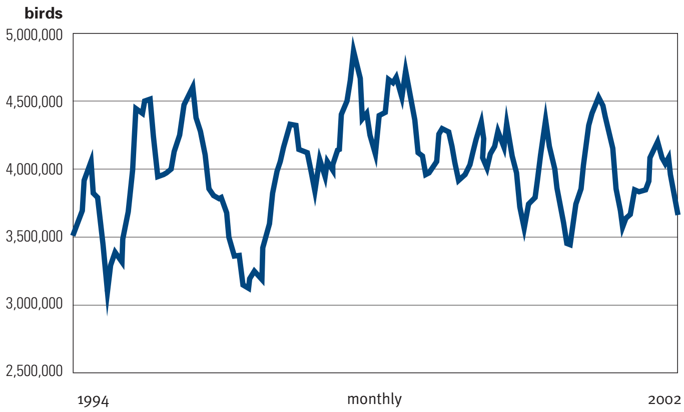
- The largest issue facing the future of the industry is the change in production systems.
- Cage egg producers face a mandatory requirement to ensure cages comply with animal welfare standards as agreed by government ministers at the Agricultural and Resource Management Council of Australia and New Zealand. State governments have indicated their intention to enforce requirements for cage egg production to switch to larger cages on or before 31 December 2007.
- The change in production systems requires substantial capital investment by industry.
- Major integrated producer-marketing groups have committed to such investments. Some are currently underway.
- There is ongoing price competition in the retail marketplace between major retail chains and independent retailers – in the latter case where local store operators can make individual decisions regarding sourcing of eggs.
- Independents are largely serviced by operators in the box market – where smaller and/or non-aligned producer-packers supply direct to the store offering significant price advantages over major marketers.

- Many such operators have indicated to the industry that they do not intend to invest in cage improvements as:
  - they do not believe that governments will mandate the requirements and close their businesses if they do not meet cage requirements; and
  - they cannot afford the capital costs of overhauling their operations.
- The industry faces a challenge: those committed long-term to the industry face direct price competition with those who do not intend to comply with welfare requirements.
  - however as of September 2003 five jurisdictions (Queensland, Tasmania, Western Australia, Northern Territory and Australian Capital Territory) have implemented the Agricultural and Resource Management Council of Australia and New Zealand decision to increase the minimum floor space to 550 square centimetres per bird.

Supply and demand

- Egg production and supply fluctuations are an inherent feature of the industry. Fluctuating prices in the marketplace and fluctuating costs of feed tend to create volatility in the number of birds brought into production.
- The chart below shows the monthly birds committed to production as at the end of each month over the past eight years.

Figure 99. **Birds added monthly to egg production, 1994–2002**



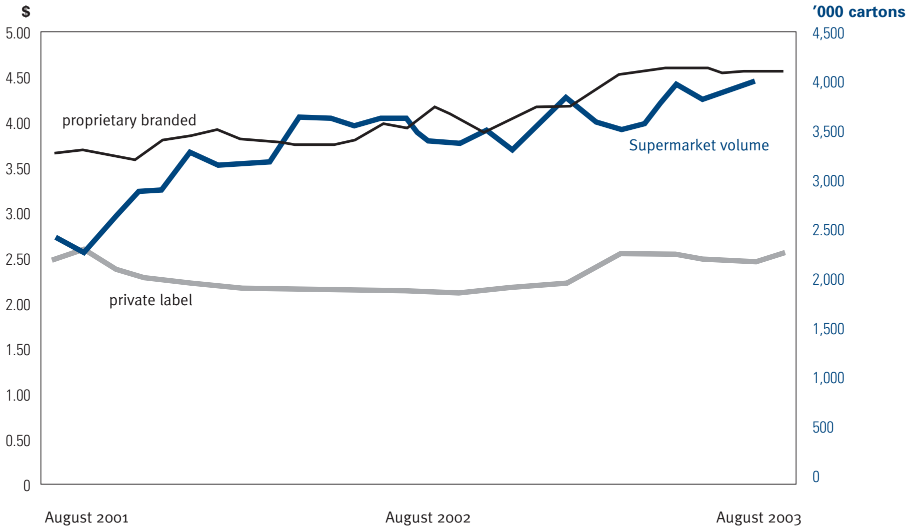
Source: Australian Egg Industry annual statistics 2002

- The industry is presently emerging from a shortage in supply which was brought on by the extended drought and its impact on feed costs. This rendered some operations unsustainable at prevailing wholesale prices.
- The ongoing short-term fluctuations in output creates the need for producers to seek markets for their eggs through direct sales channels – offering prices which frequently undercut the prices offered in major retail.

Private label as a weapon

- The industry expects price competition in the future where businesses not intending to comply with welfare standards see advantage in marketing using price as a lever. However this will be limited as the welfare standards will be enforced by state legislation.
- In response, in order to continue growth in market share, major chain retailers are using their private label lines to compete on price with the independent retailers.
- The effect is being achieved by positioning private label at two or three price points, depending on the voracity of local supply competition being faced by individual stores in the major chains.

Figure 100. **Supermarket egg sales by price, $/dozen, and volume, '000 cartons/month, 2001–2003**



- The effect of this situation is that, due to the domination of the sector by private label, egg pricing is being driven by the short-term pressures facing suppliers to the box market, many of whom do not intend to supply eggs in the long term and do not have the potential to offer major retailers reliability and consistency of supply.

Future challenges

- The state of the production-marketing sector is such that major suppliers are not in a position to offer national supply to each of the major chain retailers.
- The national industry effectively operates with supply broadly in keeping with demand, subject to short-term fluctuations. This provides suppliers with a degree of leverage which would not be the case where significant excess capacity existed. This leverage was recently exercised to achieve a price increase to cover the cost of feed grain.
- To overcome this leverage, retailers have attempted to fragment their buying zones to ensure there is greater contestability for their supply contracts.
- The ongoing power of major chain private label as the dominant volume line at retail level may place increasingly more pressure on industry profitability in the run-up to the mandatory change in cage requirements. Whilst the conditions to meet the supply requirements of the major chains require significant investment in scale efficiency and logistics, this higher business cost may have little impact on factors and considerations driving retail and wholesale prices.
- The major retailers are using their muscle to engage in competition on price, whilst meeting required targets on product margins. This situation ignores the higher business costs faced by large egg marketers in doing business with major retailers.
- The industry faces a huge challenge in managing production and supply forecasts so that there is not a major dislocation of supply and demand ahead of and after the new production systems take effect. This will require better knowledge management of the supply and demand signals and the smoothing of investment cycles.

SUGAR PRODUCTS

Analysis of the determinants of prices and costs in product value chains

SUGAR – OVERVIEW

Background

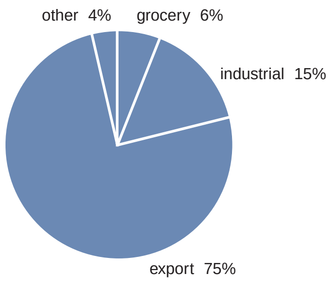
Sugar commodity returns from the world market are based on global demand and supply. The supply onto the world market is influenced significantly by government policies in major developed economies of the United States and the European Union. They support domestic production through production and export subsidies. Returns are also affected by the significantly increasing output of large-scale, low-cost producers such as Brazil.

In Australia the early stage of the value chain of this industry has been highly regulated in the past and the industry retains a single export marketing desk. Whilst the industry has in the past enjoyed a position as one of the world's low-cost producers, this position has been eroded by the surging production from Brazil. As a result, Australia's share of global trade in sugar has fallen.

While sugar and other sweeteners compete in highly overlapping food manufacturing markets, new technologies and product developments enable sweetener manufacturers to provide branded products to specific food use segments through retail and food service outlets.

The inability to make swift changes in cost structures, particularly in the cane production and milling sectors, has undermined the position.

Figure 101. **Markets for Australian sugar**



Source: Queensland Sugar

Drivers of price

- Markets for refined sugar in developed consumer markets on a global and national basis are mature, with demand very steady and slowly declining on a per capita basis. Growth in the world market is available from developing Asian economies in line with the general increase in consumer prosperity, trends towards the consumption of manufactured food products and the lack of competition from substitutes. The global sugar market has been in a condition of oversupply for several years.
- Industry returns are driven by the level of international prices available to Australian exports. These are affected by prevailing levels of subsidies and import protection provided to producers in the United States and the European Union and the level of output onto the world market from Brazil which has supported its sugar production through cross-subsidies from its ethanol production sector. World market conditions have been volatile in recent years due to the economic turbulence that has affected many developing economies, the maintenance of high levels of protection in the European Union and the United States, and the policies of other major producer countries.
- Domestic sugar market returns have minimal effect on total industry returns but nonetheless are affected by the demand from industrial users manufacturing food and drink and the cost-competitiveness of substitute products such as artificial sweeteners and starch. The domestic

grocery market consumes a relatively small percentage of sugar in retail and food service products.

- Sugar competes with a range of other natural and artificial sweeteners at retail level. Competition is based on price and will continue to remain a strong force while consumers express a preference to reduce their per capita sugar intake.
- Total consumer demand has been static over the past 10 years due to increasing consumer consciousness of health and dietary concerns. While sweeteners fail to replicate the wide range of functional properties of sugar (colour, aroma, texture, shelf life), some offer a range of economic and functional (dietary and taste) advantages over sugar.
- The cost of sugar to local users (refiners and manufacturers) is effectively set at import parity prices. Almost all domestic sugar consumption is sourced from local production.

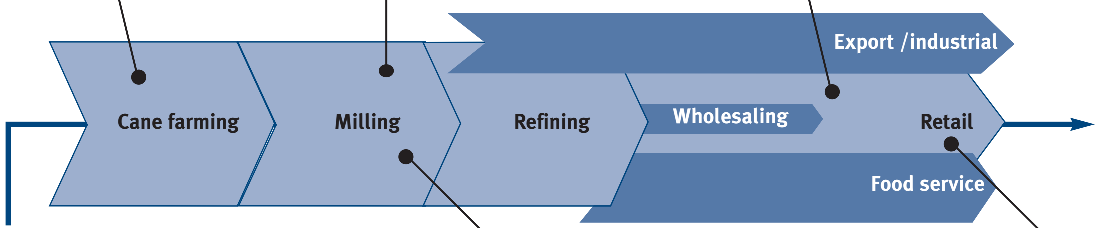
Figure 102. **Packaged refined sugar: Major drivers of prices and costs**

Refined sugar is a commodity consumer product in a category where sales growth has been limited over the past 10 years. Industry returns are strongly affected by international market conditions.

1. Farm production factors
- Production output may be volatile due to seasonal conditions such as pests, disease and rainfall.
- Production is seasonal and cane must be cut at appropriate times to avoid loss of content. Cane is cut and crushed according to mill schedules to ensure a smooth milling season.
- Production sector retains elements of traditional culture in many regions with small farm size and a resultant higher cost of production.

2. Value-chain integration
- Most integration is from the mill back to the farm.
- Millers are buying strategic cane farms to guarantee a minimum throughput for their factories.
- There is increased interest in millers controlling the harvesting systems to maximise cane quality delivered to the mill.
- Greater concentration and rationalisation of mill ownership has occurred over recent years.
- The early stage of the supply chain retains high logistics costs from farm to processing due to historic transport systems.

3. The marketing approach
- Limited differentiation of packaged sugar products.
- Growth in café society has increased demands for serve packed sugars in food service and home use.
- Marketing dominated by major retail, a commodity-based, price-driven market.



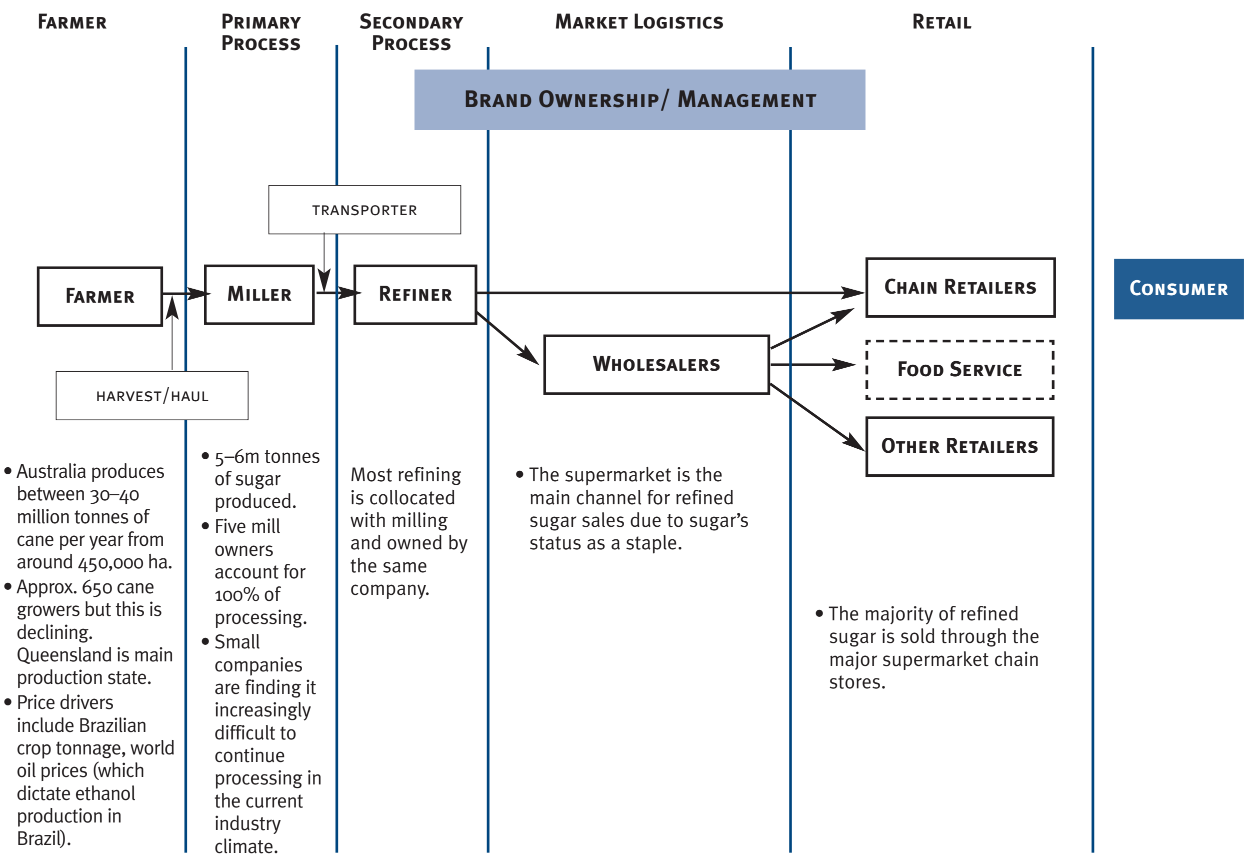
4. Regulation and compliance
- Environmental compliance in the use of nutrients on cane farms is becoming more costly and more necessary.
- High barriers to further value-chain profitability exist in the limited scope for further rationalisation of milling and refining capacity, and cultural barriers to horizontal aggregation of farming businesses.

5. Trade impacts
- Australia exports around 75% of raw sugar output.
- Price is largely determined by world commodity prices.
- Domestic prices for consumer and industrial uses are effectively import parity prices.

6. Technology and innovation
- Highly capital-intensive industry in cane production, harvesting, logistics and milling.
- Much capital equipment is aging and not being replaced, so there is limited new technology or improved efficiency entering the industry, especially at prevailing market prices for sugar.
- There has been much interest (but limited tangible progress) in developing other products from the sugar-growing process to enhance industry stability, for example, ethanol, plastics and electricity co-generation.

7. Retail market dynamics
- Strong competition in sweeteners market from artificial sweeteners.
- Consumer concerns about sugar content in foods and drinks has capped sugar consumption.
- Consumers are spending decreasing amounts of time cooking at home and are demanding premix solutions to baking.
- Growth in snack market has reduced home baking sector.
- Retail concentration (limiting retail price rises and putting pressure on margins of sugar miller/marketer).

Figure 103. **White sugar, 2kg, supply chain map**



SUGAR – ANALYSIS OF PRICING

Retail versus farmgate prices over time

The comparison of retail and farmgate (equivalent) returns over time is set out in Figure 104.

The cane-growing sector is paid a cane return which is based on a weighted average pooled return derived from on the average returns achieved by millers from export and domestic markets in each season. This is mostly driven by export returns. Payments to individual producers are based on agreements with millers based on formulas which include sugar content and cane quality.

The net average return to the cane farmer has steadily been driven down to the level of the cost of production.

Retail prices

Though volumes have been static, the average value of the grocery retail market in the last 10 years has steadily increased across all packaged sugar product lines.

Retailers often use 2kg white sugar product as a loss leader. This reflects strong competition for the basic 2kg sugar product from a mix of factors, including a higher share of the market being taken by specialty sugar and sweetener products. It also reflects the sluggish demand in the retail market and the frequent use of discounting to stimulate sales. Recently, sugar has been used as an 'every day low prices' product by major retailers.

Value-adding in sugar products

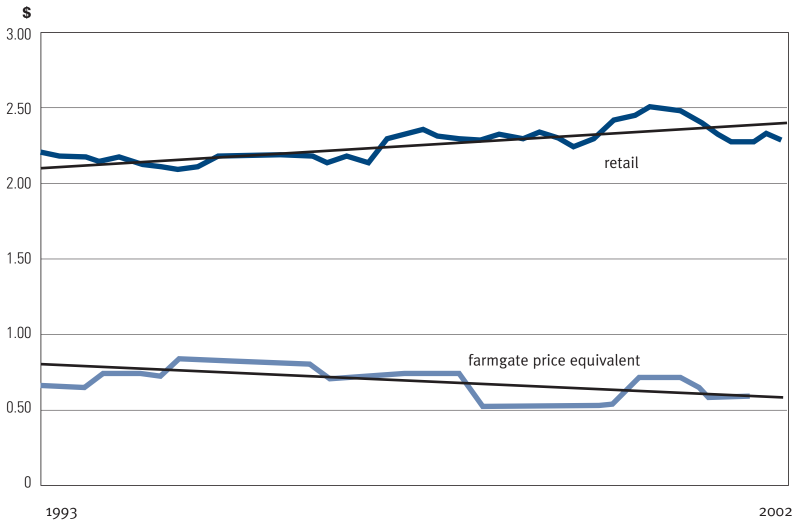
There has been limited value-adding to the refined sugar product, with the exception of the marketing of convenience single-serve portions for home and food service use.

Assumptions

Our analysis of the prices at retail and farmgate are based on the following:

- retail prices compiled by reference to the average retail value of sugar product in the Australian market (per ABS data); and
- farmgate prices in the chart reflect the equivalent value per 2kg of sugar which the cane producer is paid for the cane supplied to a mill. The conversion of cane value to a processed sugar value is based on industry averages in terms of the yield of sugar derived from cane.

Figure 104. **Retail and farmgate sugar price, white, 2kg, 1993–2002**



Source: ABS and Macarthur Agribusiness

Farmgate returns

- In the context of the world market environment, production in the Australian industry has little or no impact on the prevailing world market returns, which are set by the factors set out earlier.
- The overall costs of sugar production are affected by a large number of variables:
  - total volumes of supply are governed by overall planting area, tonnes of cane produced and the prevailing sugar content that is achieved in growing areas;
  - scale efficiency and integration of individual farm units. There is a consistent trend towards lower costs of production through larger average farm sizes and integration of harvesting, transport and milling operations. This improves asset utilisation and minimises overhead costs;
  - production factors such as climate, disease and pest levels while cane is either growing or being harvested play a role in cane production levels and the quality and content of cane produced; and
  - cane is a ratoon crop and therefore farmers are, to a certain extent, locked in for a complete crop cycle regardless of cane prices. Otherwise they face significant crop losses.

Costs

The level and behaviour of total costs of cane production have been analysed in a number of industry studies that have been associated with issues regarding deregulation of industry arrangements and the need for adjustment assistance.

The evidence is mixed as to the relationship between farm size and costs of production (Hildebrand 2003). Economic studies have suggested no evidence of such a correlation and commercial studies of industry practices have suggested that large-scale operations provide a lower unit cost of output.

The most recent estimates of the total average costs per tonne have been compiled through ABARE studies in 1996. These derived an estimated cost of $30.80 per tonne of cane, of which about $23 relates to cash costs.

Projected export returns for the coming seasons – taking account of supply and demand trends in world markets and expected currency exchange rates – will not allow producers to cover the cash costs of production. This is expected to see further declines in production through farm exits.

An analysis presented by the Centre for International Economics to the review of industry arrangements in 2002 suggested that the industry will only be capable of restoring past profitability levels through the chain if it can achieve productivity gains of around 37 per cent (Cleaning Up the Act, CIE 2002). That work suggested that gains can be made in:

- labour productivity;
- land productivity;
- harvesting productivity and practices;
- cane movement logistics post-harvest; and
- milling efficiencies.

RICE

Analysis of the determinants of prices and costs in product value chains

RICE – OVERVIEW

Background

- The rice industry is predominantly export-focused with much of the industry managed by a single integrated grower-owned cooperative, Ricegrowers, which trades as Sunrice.
- The industry structure has historically been production driven, with processing and marketing mostly grower-owned but in the past five years the industry has developed a strong market focus aimed at maximising industry value.
- The industry presently retains a single desk export regime in New South Wales (where the vast majority of rice is produced) under the direction of the Rice Marketing Board.

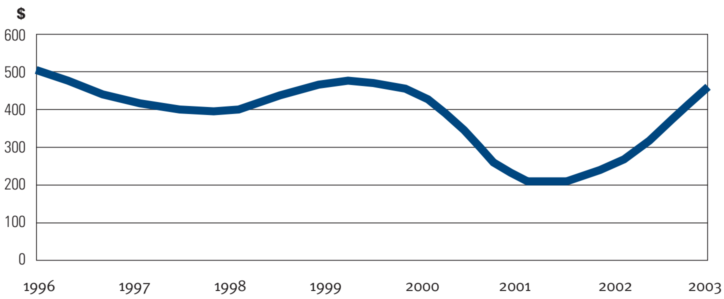
The industry's product mix and use

- The industry has experienced a steady upwards trend in production over the past 30 years with the growth in export markets demonstrating the competitiveness of the Australian production sector.
- The market mix of the industry in 2002 saw only 18 per cent of the Australian crop consumed in the domestic market using a range of market channels, including grocery retail.
- Whilst medium grain is the major crop variety produced, the majority is exported.
- Australia supplies about 20–25 per cent of the traded world market for medium grain rice into discerning consumer markets.
- Australia imports a range of rice varieties with no trade barriers in place except quarantine restrictions on brown and paddy rice.
- Demand for quality medium grain rice has risen in recent years as markets such as Japan have opened with more liberal trade.

Major drivers of pricing

- Rice is a globally traded commodity. Returns to the Australian industry and therefore net farmgate returns are heavily influenced by the returns from the international market for rice. This reflects the high proportion of exports coupled with the effectiveness achieved in milling and marketing.

Figure 105. **Indicative price of rice, medium grain, US$/tonne, bulk 4% ex-Spout Sacramento, 1996–2003**



Source: Creed Rice

- Export prices are driven by global supply and demand. Unlike other globally traded commodities, rice trade is based on customer specifications encompassing quality, packaging and delivery. This produces a range of price outcomes.
- Total recorded Australian retail market volumes of main table packet rice varieties have been steady over recent years. Overall consumption of rice however has been estimated as having grown, as there has been increased consumption by the food service and food processing sectors, and an increase in the volumes of imported fragrant and specialty rices.
- Sales by the major grocery retail chains have increased in recent times to be close to 80 per cent of retail grocery market share, yet this estimate does not include all outlets retailing rice (such as Asian market outlets).

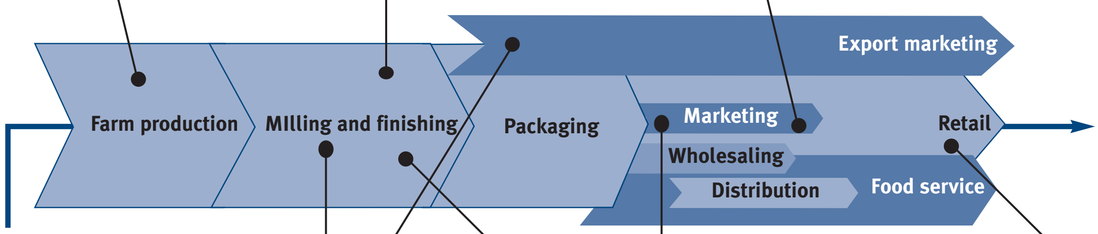
Figure 106. **Rice: Major drivers of prices and costs**

The rice industry is a closely integrated industry that retains a managed single desk for export markets. This dominates consumption of Australia's rice output. Domestic consumer products are subject to analysis in this study.

1. Farm production factors
- Production volume is highly dependent on water supplies.
- Most paddy rice businesses are mixed farm businesses and therefore rice competes with other crop options based on return outlooks.

2. Value-chain integration
- Close integration between rice production, milling and marketing.
- Increasing scale efficiency and automation in milling plants to closely match crop production.
- Farmer-owned business dominates domestic milling and marketing.

3. The marketing approach
- Standard product is a staple food item differentiated by variety, packaging, quality and service elements.
- Category is being diversified away from exposure to commodity markets.
- Increasing differentiation of a range of rice food products tailored to different meal and snack solutions, and food service markets.



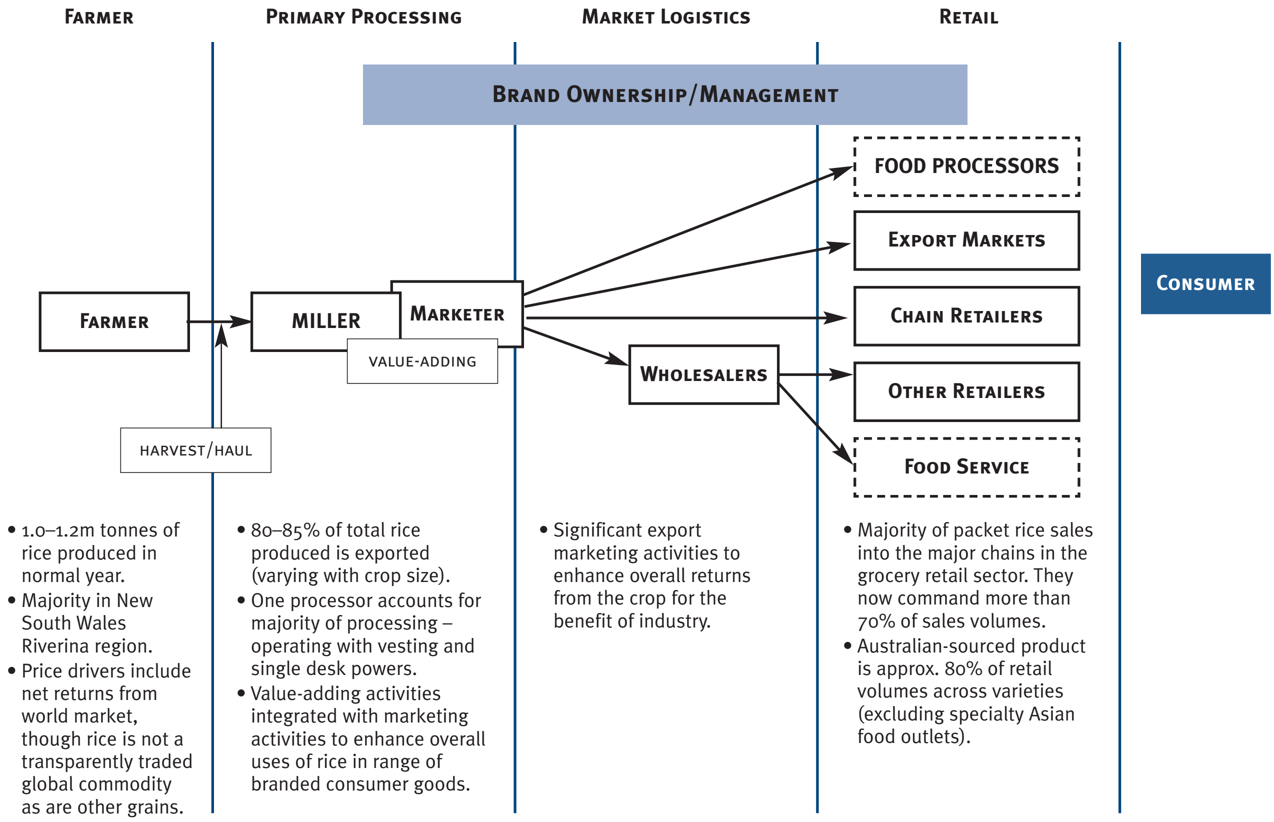
4. Regulation and compliance
- Single desk export marketing of rice maintains stability in management of domestic and export markets.
- Meeting ethical and product integrity demands.
- Highly focused on meeting food standards legislation.

5. Trade impacts
- Strong influence of rice exports which account for 80–85% share of primary production (varying with crop size).
- Industry returns are driven by the success by which the marketer manages the sale of rice into various export markets in the context of the tradable world market for the commodity.
- Export marketing dominated by branded products.
- Open domestic market for imports of commodity and specialty rices.

6. Technology and innovation
- Increasing capital intensity is improving cost structures.
- Transparency of market prices and costs in the chain are provided in pricing and returns signals to producers.
- Greater investment in innovation to diversify core rice food products and extract value from co-products.

7. Retail market dynamics
- Growth in specialty varieties (cuisine driven).
- The growth of the private label has increased the share of the market governed by low-priced products.
- Greater demand for convenience and lifestyle solutions in meals has created strong niches for pre-prepared meals and snack foods based on rice.

Figure 107. **Packet rice, supply chain map**

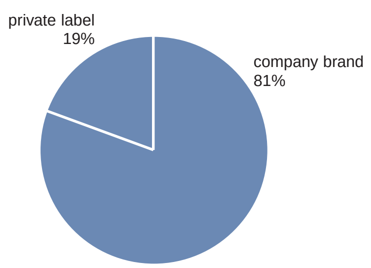


RICE – ANALYSIS OF PRICING

The Australian retail market

- Domestically grown regular long grain and medium grain packet rice products make up about 66 per cent of the domestic retail grocery market volume – a declining proportion with greater market share being gained by specialty products and imported lines.
- These specialty varieties (for example, jasmine and basmati) have been aided in sales by the increased consumer interest in cuisine and awareness of the versatility of different rice styles.
- In the past five years, sales of Australian-grown proprietary branded retail product have increased through promotional efforts of the domestic rice marketer.
- However, in more recent times a greater market share in the total Australian retail rice market has been won by private label products drawn by retailer desires to launch new products and offer the consumer greater choice. Sourcing of supply to private label products is split between local supply and imports.

Figure 108. **Share of supermarket sales volumes, 2003 annual turnover**

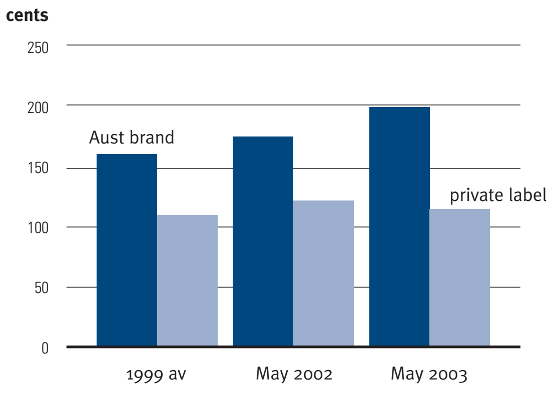


Source: Industry sources

Retail prices

- The average retail value of the total grocery retail market in the last three years has increased from $1.56/kg to $1.76/kg.
- This reflects a mix of factors including a higher share of the market being taken by specialty product, offset by a greater volume of private label.
- In the past four years, competitive policies of the major retail chains have restricted the increases in retail prices of private label rice products.
- The chart below shows average national retail prices for 1kg white long grain product between branded and private label product.

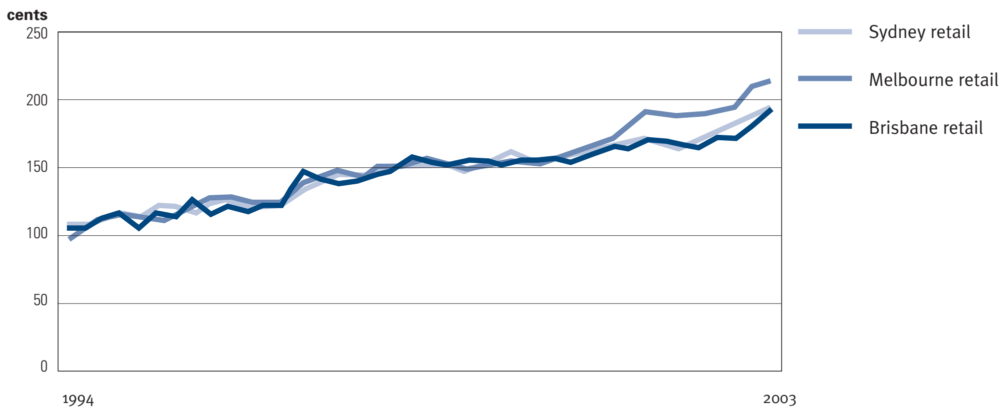
Figure 109. **RETAIL PRICES FOR RICE, WHITE LONG GRAIN, 1KG, CENTS/KG**



Source: Industry sources

Retail prices over time

Figure 110. **RETAIL PRICES FOR RICE PACKS, LONG GRAIN, 1KG, CENTS/KG, QUARTERLY 1994–2003**



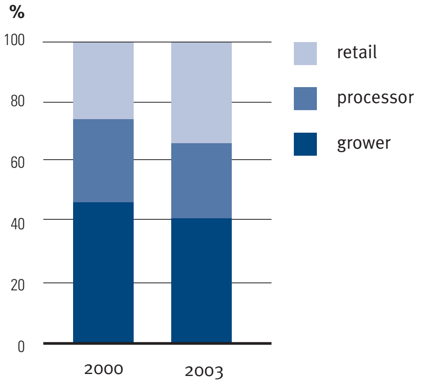
Source: ABS

- It is not meaningful to provide a time series comparison of retail prices and farmgate returns in a single chart.
- The farmgate returns to rice growers are based on the derived farmgate return from a combination of markets serviced by the industry. Rice growers are paid a weighted average return per variety, based on the average returns from export and domestic markets in each season. This bears no relationship to the level of the retail sales dollar on a long grain product alone.

Margins in the chain

- Our analysis of the margins captured by each major sector engaged in the rice value chain is represented below.

Figure 111. **Share of retail sales value of rice, long grain, 1kg, average all grocery retail sales**



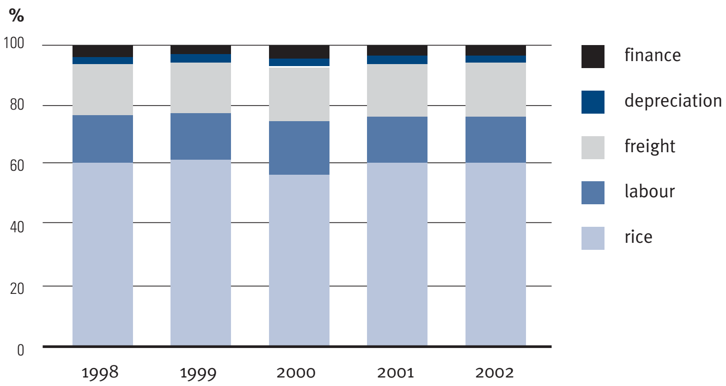
Source: Industry sources

- This has been compiled by reference to the average retail value of long grain product in the Australian market (per ABS data), the calculation of the apparent average net wholesale selling price and the calculation of a derived farmgate return gained from the retail products market.
- The past several years have seen a gradual increase in the share of the retail sales dollar (per kg) captured by the retail sector through a combination of increasing retail selling prices, increasing use of private label products and a greater investment in trade spending and promotional activities by marketers.

Drivers of cost

- Variation in the major costs in the rice value chain are largely determined by the annual size of the rice crop.
- The major cost in the production of bulk milled rice is the raw material which is essentially struck as a residual amount after the industry meets major costs of milling, marketing and distribution.

Figure 112. **Share of rice milling costs**



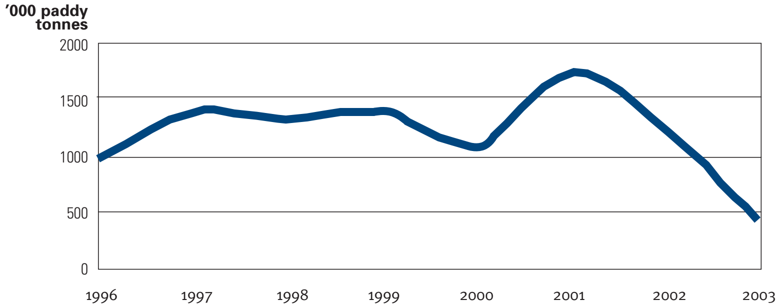
Source: Sunrice annual report 2003

- The Australian industry has undertaken significant rationalisation of milling capacity and upgrading of technology in an ongoing drive to deliver best practice and lower cost.
- The local industry, unlike its competitors in most major rice growing regions around the world, receives no production subsidies.
- This has led to a reduction in like-for-like conversion costs.

Industry risk

- The overall returns to the national rice industry are influenced by the size of the rice crop.

Figure 113. **Rice crop size, '000 paddy tonnes**



Source: Sunrice annual report 2003

- The future uncertainty over access to sufficient water supplies is a significant challenge faced by the domestic rice industry. Drought has severely restricted the size of the 2003 crop and will limit 2004 output.
- Industry has attempted to manage this risk over previous years through a variety of strategies:
  - improving the efficiency of milling operations;
  - improving water-use efficiency in the industry;
  - investing in value-added products for the domestic market;
  - increasing the use of rice in co-products;
  - increasing the diversity of markets into which the industry supplies rice; and
  - building global supply alliances.

RICE – VALUE ADDING TO THE PRODUCT

The scope for value-adding

Rice is a staple food. Traditional regular long grain and medium grain products have long been the backbone of the retail product offering in the market but these lines have been steadily losing market share over recent years to a range of specialty rices and other more convenient foods.

Efforts by the industry to add value to the returns from the rice crop are below.

Efforts to add value to rice	
Diversifying end market mix	• increasing the penetration into destination export markets with a focus on discerning markets; • increasing the investment in brand presence in export market destinations to position the product; • protecting the overall business by sourcing high quality rice from other supply sources to ensure the reliability of supply.
Expanding taste and food styles	• packet specialty rices; • flavoured rices.
Expanding the application of rice	• rice cake snacks; • companion animal products.
Reducing preparation times	• quick cooked products; • convenience meal kits; • convenience snack cups (just add water).

The returns from value-adding

Whilst these products use a minimal portion of the crop that is sold into the domestic market, the contribution from new products to total sales and margins of the domestic industry is growing in significance.

These products consume a very small percentage of the total crop, provide a higher gross value of rice per tonne consumed, and add a suitable margin over the higher costs of product transformation, packaging and marketing.

Value-adding has also entailed the marketing of specialised rice varieties which have shown better returns to the farmer.

4. The performance of Australian food companies

THE PERFORMANCE OF AUSTRALIAN DAIRY COMPANIES

Company performance analysis

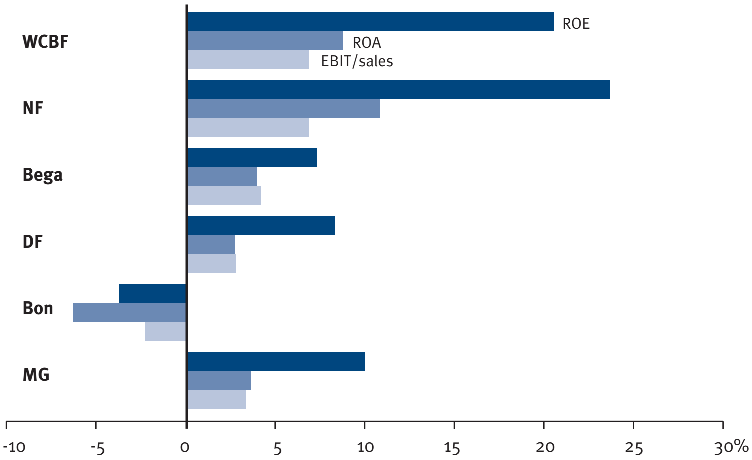
We have set out a comparison of the recent historical performance of dairy companies in the Australian industry that are engaged in the cheddar cheese manufacturing and marketing business.

There are a number of dairy companies engaged in processing and manufacturing in the Australian industry. The majority of these enterprises, with the exception of National Foods, are cooperatives.

The summary indicators give a limited appreciation of the relative performance of these companies in the cheese category for the following reasons:

- the majority of companies that are involved in the dairy sector are cooperatives;
- cooperatives typically structure their affairs such that milk payments to suppliers are a balancing item after withholding an appropriate amount for capital improvements, working capital and unforeseen fluctuations in returns;
- whilst the resulting value of milk is closely related to movements in international prices, as noted earlier in this report, the net value from world market returns effectively sets prices for suppliers to the domestic market;
- dairy companies operate either:
  - across the spectrum of dairy commodities (Bonlac, Murray Goulburn)
  - with a focus on consumer branded products (National Foods); or
  - with exposure to both (Dairy Farmers); and
- the company with the greatest degree of specialisation in cheese production is Bega Cheese, which owns a small cheese plant and a major cut-and-wrap facility.

Figure 114. **Returns of Australian dairy companies, three-year average**



Source: Whitehall Associates' analysis of financial statements

Abbreviations

WCBF	Warrnambool Cheese and Butter Factory Ltd (in Victoria)
NF	National Foods
DF	Dairy Farmers
Bon	Bonlac
MG	Murray Goulburn
ROE	return on equity capital employed
ROA	return on assets
EBIT	earnings before interest and tax
SHF	shareholders' funds

- There is a strong contrast in the return profile between cooperatives and public companies (National Foods and the unlisted WCBF). National provides the best returns on assets and on invested equity capital of those selected and has limited commodity manufacturing.
- Bonlac Foods lost money in 2002 and 2000 when it hit difficulties in exposure to currency movements and had poor overhead recoveries from declining milk volumes. The effects of an attempt to a dual strategy of commodity manufacturing and brand management left the business with shortages of capital and an inability to compete for milk supplies with other Victorian manufacturers.

Financial position of dairy companies

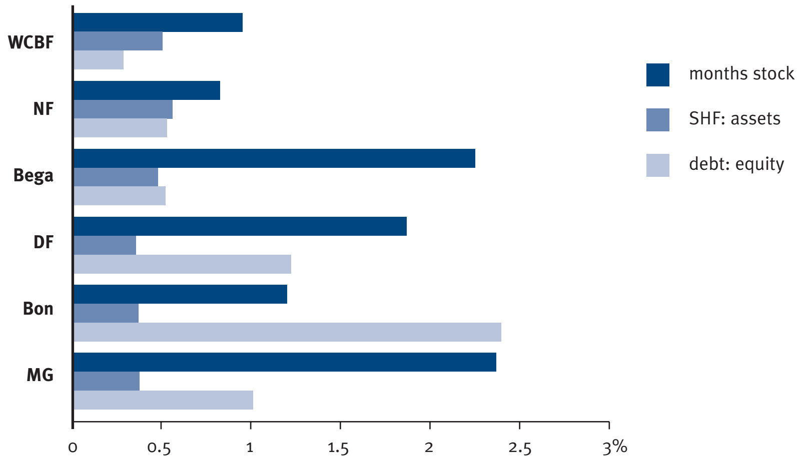
We have set out a comparison of the recent historical financial position of dairy companies in the Australian industry, in terms of:

- the turnover of inventory (latest reported in 2002), expressed as months of stock on hand;
- the ratio of shareholders' funds to total assets; and
- gearing (the ratio of debt:equity).

A variety of situations can be explained by the different strategic positions taken by the Australian companies and/or the way in which they have responded to changes in the industry.

- Dairy Farmers and Murray Goulburn have followed the traditional cooperative model in funding their businesses, operating at or above a debt:equity ratio of 1.0.
- Cooperatives such as Murray Goulburn, Dairy Farmers and Bonlac raise capital through deductions from the gross milk returns paid to their members, though members are allowed to increase share investments at any time.
- Bega operates as a traditional cooperative but has restructured in 2001 using the proceeds of a sale of its brand licences to reduce its overall debt levels and reduce the exposure of its business to cheese manufacturing.
- Bonlac Foods has, since 2000, operated a hybrid corporate structure to accommodate the investment in the Bonlac business by Fonterra. It retains high debt levels in this comparison – since reduced through the further acquisition of shares by Fonterra. Bonlac's financial position worsened in the late 1990s due to currency exposure and heavy investments in branded consumer goods businesses.

Figure 115. **Financial position of Australian dairy companies**



Source: Whitehall Associates' analysis of financial statements

- National Foods has operated with low levels of debt, given its good cash flows and recent focus on being the lowest cost milk processor in the domestic industry.
- Different companies have adjusted very differently to deregulation of the industry.

THE PERFORMANCE OF AUSTRALIAN VERSUS WORLD DAIRY COMPANIES

Profitability

We have compared the best in class from the Australian information (mostly based on the results of National Foods) with a number of dairy companies from the world dairy industry. These companies include:

Glanbia (Glan) – an Irish-based cheese and dairy ingredients group;

Friesland Coberco (FC) – a major Dutch cooperative;

Saputo (Sap) – a listed Canadian cheese maker;

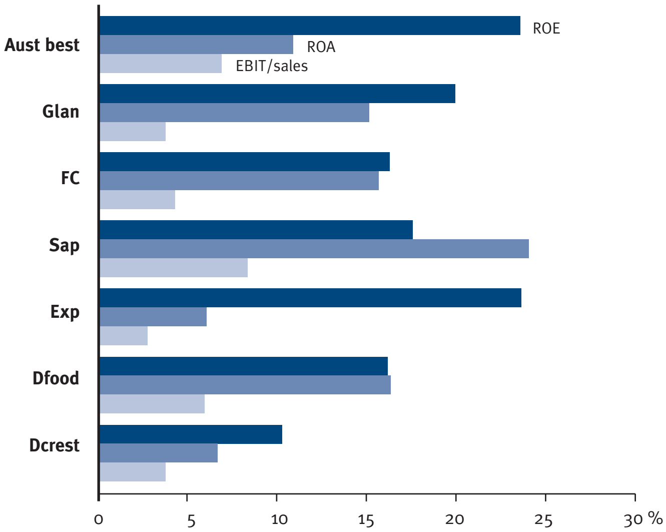
Express Dairies (Exp) – a listed United Kingdom milk processor;

Dean Foods (Dfood) – a listed major United States processor and manufacturer;

Dairy Crest (Dcrest) – a leading United Kingdom milk processor and cheese business.

In this analysis, Australian dairy companies performed well against these international companies in terms of margins and return on assets. Australia's best of class compare favourably with listed dairy companies from North America and the United Kingdom.

Figure 116. **Returns of dairy companies, three-year average**



Financial structure

The combined financial position of the Australian dairy cooperative sector has been compared to the major cooperatives in the global dairy industry.

Arla – a major Scandinavian cooperative;

Friesland Coberco – a major Dutch cooperative;

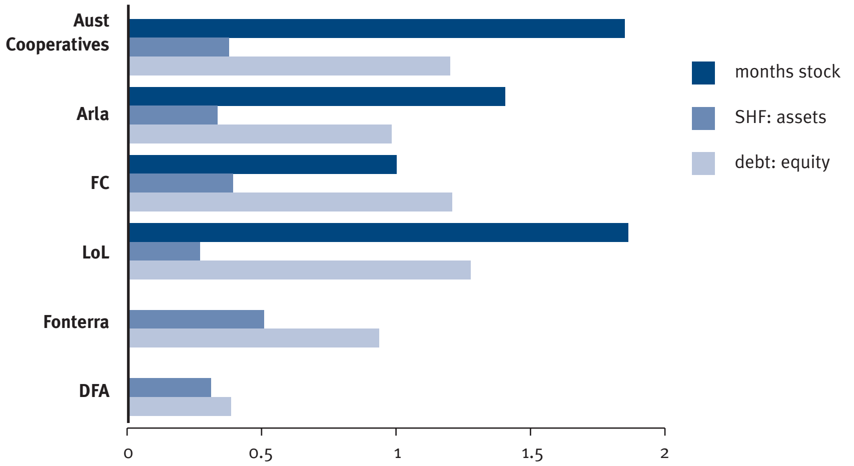
Land o Lakes (LoL) – a large United States cooperative;

Fonterra – the major New Zealand manufacturer/exporter;

Dairy Farmers of America (DFA) – the largest cooperative in the United States and the world.

Again the financial structures of the Australian sector are not significantly different from those of the overseas cooperatives, yet there are major differences in the nature of the businesses covered in this sample. The management by cooperatives of their cash flows, financial position and supplier payments is broadly similar. Northern European cooperatives are engaged in brand management as well as commodity manufacture, whereas United States cooperatives are primarily engaged in manufacturing.

Figure 117. **Financial position of dairy companies**



Source: Whitehall Associates' analysis of financial statements

BRAND MANAGERS IN THE GROCERY FOOD INDUSTRY

Foreign domination of brands

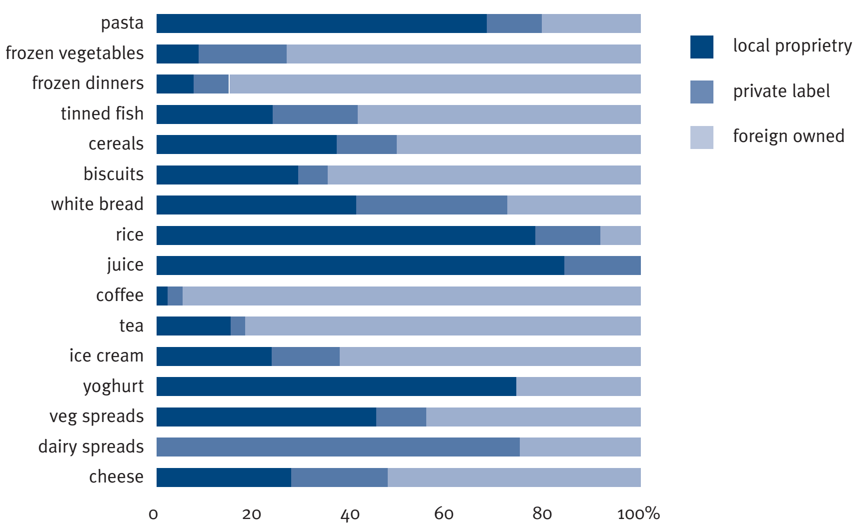
We have set out in the chart below a comparison of the ownership of brands in major branded grocery food categories in the retail sector. Many categories in the grocery sector are now dominated by a limited number of foreign-owned multinationals and local dominance is restricted to those which are based on fresh food industries (some categories of dairy, citrus, bread) and aspects of grains and oilseed products (pasta, spreads).

The analysis below retains Goodman Fielder as a local public company, even though it recently passed into the control of a New Zealand-based group.

An evaluation of the performance of Australian food companies based on reported financial information is therefore somewhat difficult, as this requires reliance on:

- the publicly reported results of the few large listed Australian food companies which remain independent;
- a review of documents lodged by Australian subsidiaries of multinational food groups with significant local interests; and
- a review of the reported results of global food groups with significant operations in the Australian food industry.

Figure 118. **Control of brands, share by value, 2002**



Source: Foodweek 2003

THE PERFORMANCE OF GLOBAL BRAND MANAGERS

The major players

We have extracted a comparison of the recent performance (over the past two full financial years) of major multinational food companies.

In recent years these global players have shifted more of their emphasis towards brand management than food manufacturing, preferring strong alliances with suppliers of ingredients or finished products to heavy ongoing investments in plant and other fixed assets. These tend to perform less favourably as investments compared with investments in brand equity.

Hence there is evidence of businesses with dominant brand positions in most markets in which they operate providing strong cash flow, high balance sheet gearing (the ratio of debt to equity) and a high proportion of investment in intangible assets including goodwill in acquired businesses. Goodwill is required to be carried on the books according to global accounting laws.

Each of these groups is now firmly locked into strategies which take advantage of global sourcing of inputs to reduce exposure to the high-cost operating environments in their countries of origin.

Reported growth rates of the major food groups loses meaning due to the extent of their geographic spread and the fluctuating influence of currency on their home-reported results.

Figure 119. **Returns of global food companies, two-year average**

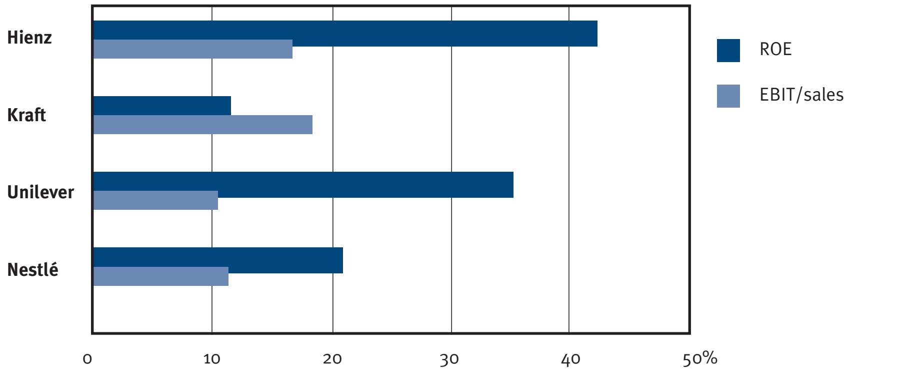
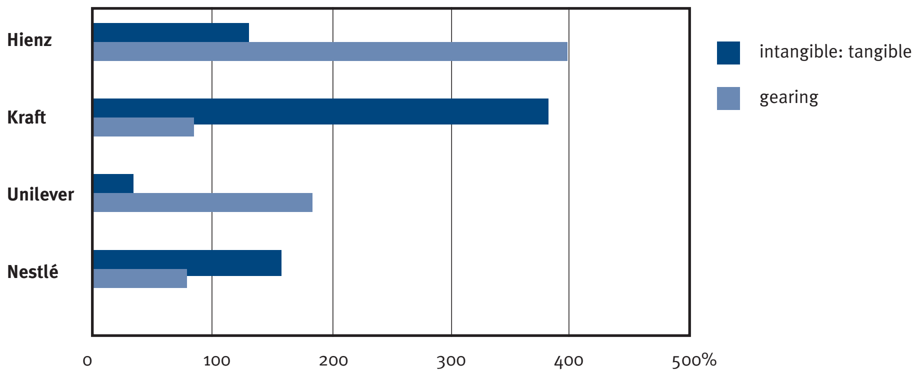


Figure 120. **Balance sheets of global food companies, %**



Source: Whitehall Associates' analysis of financial statements

THE PERFORMANCE OF AUSTRALIAN BRAND MANAGERS

Comparison

We have compared the reported performance of listed and other major Australian brand managers with the ratios of the major players in terms of margins and overall returns on equity capital.

In this analysis, comparisons are made with:

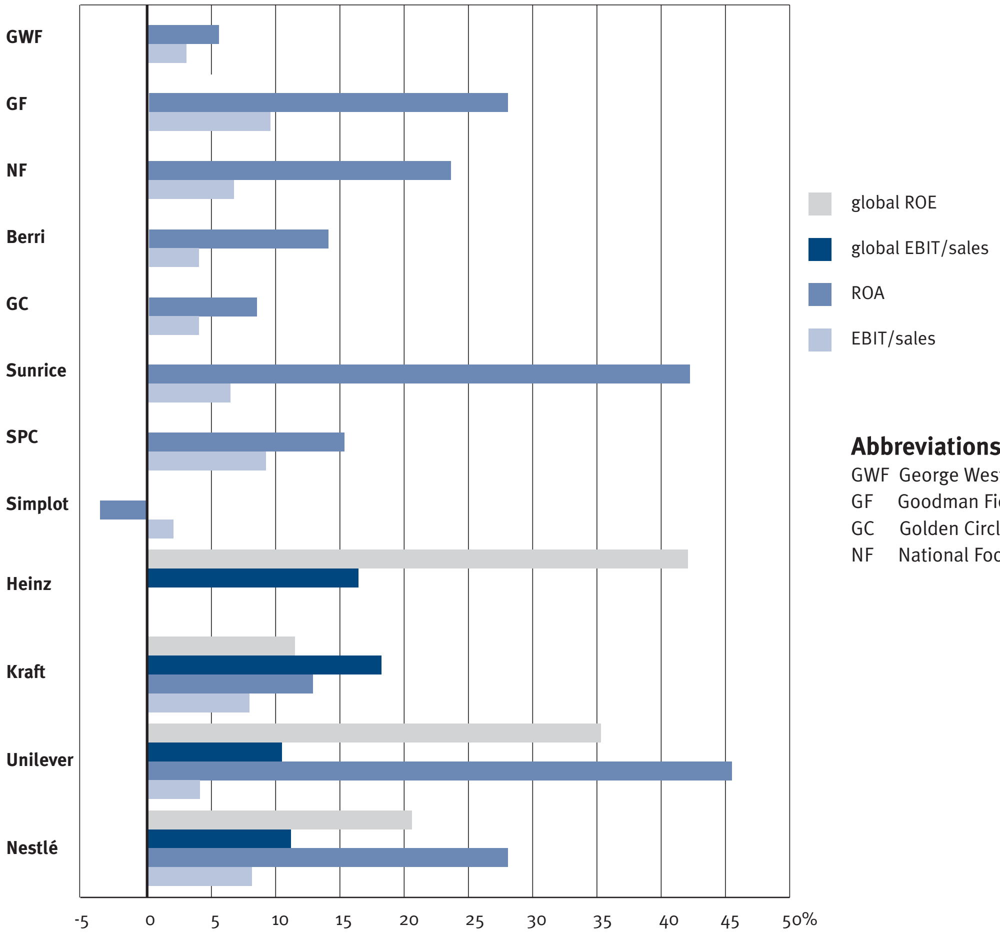
- the stated global margins of the major multinational food companies; and
- the reported margins made in the Australian-based subsidiaries of global brand managers.

Australian data on global companies has been taken from the most recently available IBIS reported information and Australian Securities and Investments Commission search results.

In this analysis:

- although the diverse businesses that are based in the Australian industry have an exposure to different market segments from global counterparts, the earnings before interest and tax of Australian companies are not significantly out of step with the returns their foreign counterparts earn within the Australian food industry;
- earnings before interest and tax in this industry on average are lower than the levels that multinationals can earn in total in their business;
- returns on equity capital employed are generally lower than those seen in the global context. This has much to do with the mix of capital investments made by global players; and
- Australian companies listed in this comparison have a greater involvement in primary manufacturing alongside management of their brands compared to the mix of on-balance sheet investment focus of the global majors. The Australian companies do not have the critical mass of market in the Australian food industry to adopt the brand investment and acquisition strategies followed by the larger companies.

Figure 121. **Returns of global and Australian food companies, two-year average**



Abbreviations

GWF George Weston Foods
GF Goodman Fielder
GC Golden Circle
NF National Foods

Source: Whitehall Associates' analysis of financial statements

THE PERFORMANCE OF PRIMARY MANUFACTURERS/CONVERTERS

Comparison

We have also compared the reported performances of a number of primary manufacturing businesses and industries.

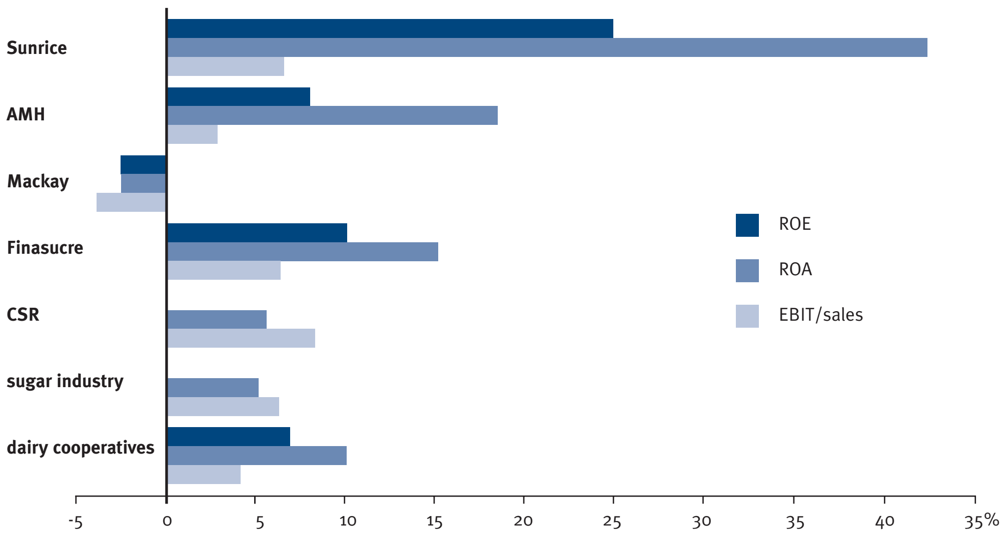
In this analysis a comparison is made between:

- **rice** – providing the analysis of Sunrice (Ricegrowers Cooperative);
- **meat** – showing the reported performance of Australia Meat Holdings (AMH);
- **sugar** – showing each of the major sugar companies (Mackay, Finasucre and CSR), as well as an industry average; and
- **dairy** – showing the aggregate performance of the major dairy cooperatives.

In this analysis:

- The primary driver of returns in each of these sectors is the export market, which dominates the end markets for each of these commodity groups.
- Comparatively low equity and asset returns are being earned in the sugar and dairy sectors due to low world prices in the period of this analysis.
- While the major meat processor has low earnings before interest and tax, it is on a high throughput and the business (Australia's largest meat processor) earns a higher return on equity compared with others.
- The major rice processor and marketer earns a high return on equity and assets compared to other sectors. This has been due to a rationalisation of industry assets in recent years which has improved the cost-competitiveness of the industry's value chain.

Figure 122. **Returns for primary manufacturers, three-year average**



Source: Whitehall Associates' analysis of financial statements

5. Grocery retail

Determinants of prices in the retail sector

GROCERY RETAIL – OVERVIEW

Background

This section of the report provides an overview and analysis of the determinants of food pricing in the grocery retail sector.

Grocery food retailing takes place in a number of retail formats with a small number of publicly listed supermarket chains, wholesaler controlled chains and international operators entering the Australian market. These compete with over 30,000 specialty food businesses ranging from single shopfronts to multiple franchise operators.

The Australian grocery retail market is characterised by a relatively small market, large distances and low growth in population. This requires economies of scale for national retailers to deliver food and other grocery items to consumers across that market in a consistent manner.

Major retailers compete with other investment options for access to investor capital. They strive to achieve critical mass of infrastructure, business and profit growth while delivering suitable returns on investment to their shareholders in a small consumer market. The retail sector is among the least profitable sectors.

The increasing concentration is not only an issue in the retail sector as several branded food categories are dominated by a limited number of largely internationally controlled brands and manufacturers. Australia cannot hope to stay immune from these pressures. They have been a major result of the changes in food retailing internationally, as retailers seek to achieve better economies of scale and asset utilisation in order to provide consumers with a better service offering.

It is important to consider that price is not the only means by which retail outlets compete. Consumers consider a range of factors when purchasing food and grocery products. These include price, store location, product range and quality, queuing time, opening hours and access to car parking. For stores such as supermarkets, price plays an important part in this mix.

However, smaller stores often compete on the basis of convenience, with many consumers prepared to pay higher prices for hassle-free shopping. This creates a nexus between price and convenience that underpins competition across competing retail outlets despite price differentials. Consumers increasingly have the opportunity to weigh a range of price and convenience factors when deciding the type of food products they purchase and the retail outlet from which those products are bought.

Concentration of retail

In the preceding section of the report there were several instances noted where major chain retailers have been increasing their market share in the retail food sector over recent years.

Australia has a concentrated grocery retail sector but not relative to countries, like the Netherlands, or regions, like California or Florida in the United States, with similar populations.

In measuring shares of the retail food market, the major retailers contend that the definition of the 'food market' is much wider than grocery retail and that the major chains hold less than 50 per cent of the food-liquor-groceries market. Industry analysts vary in their recognition of the relevant dimensions of the market and some see it differently, preferring a definition based on the mode and format of grocery retail as distinct from other forms of food sale. Concentration is horizontal as well as vertical, with greater integration leading to cost savings in logistics and inventory investment.

Our purpose in preparing this section of the document was not to enter or inflame the debate about which is the correct way to describe and quantify the market share of major grocery retailers. We wish however to make note of the significant trends over time towards major retailers taking a greater share of the grocery food retail market, as is relevant to this study.

Grocery retail – developments

There are a number of key developments in the food retail sector which are important in any analysis of the role that food retailers play in determining prices.

Customer intimacy

Successful retailers focus on the importance of intimacy with the customer – the customer is the greatest asset that a retailer has, not the store itself. Investments in display, storage and technology are made with a strong sense of purpose to enhance the durability of the connection with the customer.

Beyond the consistent me-too approach that characterises the behaviour of the Australian majors, the micro-strategies adopted by different groups towards greater customer intimacy are diverse and complex, built around core themes that promote care for food safety, freshness, variety and price consciousness. Loyalty programs have aimed at achieving repeat visitation.

Category management

Retailers focus on category management strategies in order to generate shopper enthusiasm for a product category. In this way, the retailer can mine the overall retail sales value potential of the product line by effective use of shelf space, promotional support and price competition where necessary.

Leverage

Recent innovations in Australian retail have followed trends in the European Union and the United States where retailers have sought to expand their retail offer into areas such as liquor, fuel, newsagency, pharmacy and other segments previously the domain of specialty businesses. This has altered the effective wholesale market shares in the grocery food market in certain areas and changed the dynamics for suppliers to certain food sectors.

The fuel strategy has the added purpose of enhancing the customer loyalty to each retailer – whilst points of difference remain with different retail offerings.

Points of difference

Retailers compete on many planes for the loyalty of the consumer. Whilst 'sales', 'specials' and 'lowest prices across the store' are common marketing tools used by all retailers, each also strives for a non-price point of difference based on a combination of service, quality goods, convenience, range and so on. The consumer ultimately makes the shopping decision on these variables. Major chain retailers offer the convenience of a one-stop shop for all food and grocery lines and hence their consumer appeal. Food retailers each seek to offer a fresh product image – illustrated by Woolworths being the 'Fresh Food People'.

For new international entrants such as Aldi, their point of difference is being a low cost, limited range retail outlet characterised by a cheaper supply chain and low store-operating costs.

Convenience retailers offer local convenience in shopping for emergency lines or smaller volume shopping needs without the fuss of a major shopping mission – though there is aggressive competition from the majors in this area backed with faster checkouts and front of store access to newsagency lines.

Supply chain management

Over the years, the major chain retailers have adopted different strategies as to how to manage logistics through their businesses from point of delivery to back of store.

Both major retailers in the Australian industry have announced efforts to take control of the logistics costs from the supplier's factory gate into the back of the retail store, through respective central warehousing systems. These innovations are planned to take significant costs out of the value chain – mostly the costs incurred by suppliers and their distributors in the delivery of orders direct to store and in the cartage from supermarket warehouse to store. Major retailers have indicated that they will seek a sharing of cost savings with suppliers.

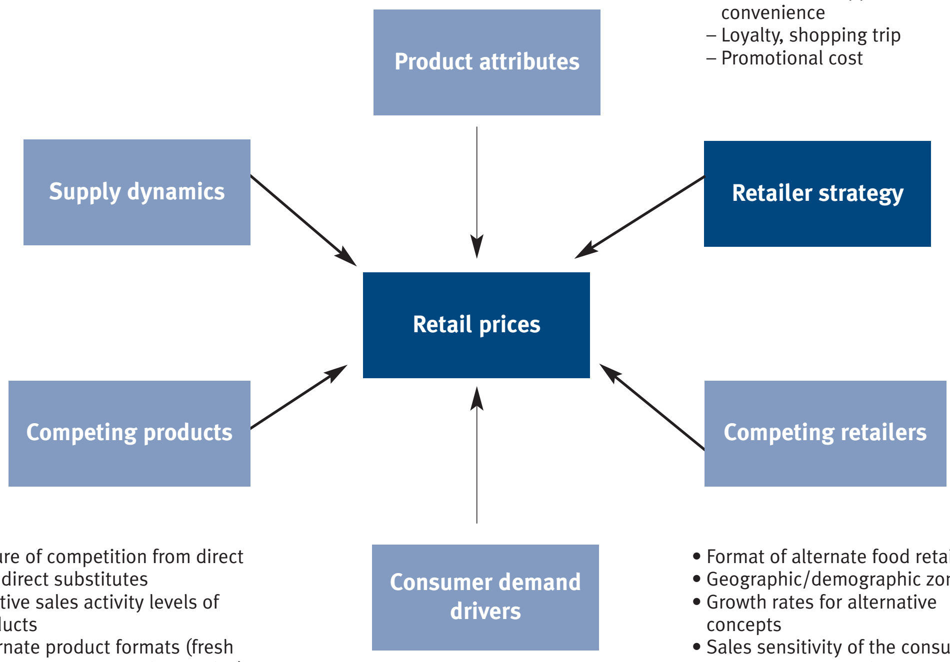
Figure 123. **GROCERY RETAIL – WHAT DETERMINES PRICES?**

There is a set of factors that determine prices of food in the grocery retail sector, at retail and wholesale points. These concepts are discussed in the following pages.

- Industry structure – concentrated versus fragmented
- Seasonality of availability
- Supply chain efficiency
- Information volatility and quality
- Transparency of cost structures
- Rate of supply industry adjustment
- Supplier support

- Pack sizes and features
- Perishability and shelf life
- Seasonality of product availability

- Business factors
  – Overall return on investment and EBIT contribution
  – Place in price/quality perception
  – Product range/sales margin mix needs
  – Store format
- Category factors
  – Destination, support or convenience
  – Loyalty, shopping trip
  – Promotional cost



- Nature of competition from direct or indirect substitutes
- Relative sales activity levels of products
- Alternate product formats (fresh versus frozen versus shelf-stable)

- Format of alternate food retailing
- Geographic/demographic zones
- Growth rates for alternative concepts
- Sales sensitivity of the consumer to price, quality and image

- Effectiveness of advertising and promotion
  – Extent of brand loyalty and brand attributes
- Consumer product awareness
- Consumption trends (how people are eating)
- Shopping trends and characteristics (frequency and convenience)

GROCERY RETAIL – WHAT DETERMINES PRICES

Retailer strategy

Target margins

A key driver of prices that are set at wholesale and retail are the target returns sought by the retailer in order to cover the costs of doing business. For major retailers in the Australian market, business margins (or EBIT over sales) are 3–4 per cent after coverage of the costs of doing business, which is estimated by majors in Australia at 23 per cent.

Target product margins are therefore in the order of an average of 26-27 per cent across the retail product range but tend to be higher for fresh produce. This is because of high spoilage rates and stringent regulations on the sale of fresh produce as well as what is referred to in the trade as shrinkage (waste), which can be as high as 10 per cent for some fresh produce.

Figure 124. **Target returns**

EBIT target → Category target → Product target

The role that the individual category plays in meeting that overall target will vary from time to time given the conditions affecting the consumer demand in that category and supply conditions. Within the category itself, products will also play different roles from time to time in contributing to returns.

The level of that margin will be influenced by:

- competitive constraints in the market;
- the overall contribution (in absolute dollar terms) made by a product;
- the volume of sales turnover;
- the use of shelf space in making the sale – which includes the rate of turnover;
- the costs involved in managing the category in the retail store (for example, fresh food is labour intensive and involves significant additional capital costs such as refrigeration);
- the state of the supply industry; and
- consumer sensitivity to the retail price and value proposition.

Individual product target margins vary from time to time and will vary between fresh products, proprietary branded lines and private label lines.

The role of the category

In keeping with category management strategies, certain product categories and key product lines will play important roles in the overall business of the store. They are:

- destination products – a must buy product that, due to its essential or staple nature, draws customers to shop at a store;
- support products – carried to support a category or to provide a complete range within a category or within the wider store, provided they justify their shelf space; and
- convenience products – typically less frequent purchases ranged to support the one-stop location.

As noted at left, the target contribution, treatment in price positioning, product location and promotion will differ in each case.

Terms

Trade terms are an important part of the return equation for a major retailer. The level of trade terms makes a significant contribution to the net earnings of a major retailer. Again, this is a practice that is not unique to this market. The business of grocery retail is effectively financed using suppliers to provide the substantial working capital needs of the major retail business.

Over time the cost of terms (in terms of the rate per dollar) has increased across food categories, as retailers have sought greater funding and promotional support to drive increased volumes through their expanding businesses. For example, suppliers devote marketing funds to point-of-sale activities. The ability of retailers through their performance to earn a greater share of the manufacturers' available terms is crucial to being competitive with their market offer.

Use of the private label

The private label is now a major tool in the category management strategy of all major retailers, including the major groups in the Australian industry. The private label is used primarily to provide a price-competitive weapon that is essentially used in key commodity lines. There are however some different uses in the positioning of the private label between the major chains.

The private label is there to provide the customer with an option and to provide preferred suppliers with volume sales outlets. It is used by many small suppliers to gain a national market for their products and improve scale production capability and reduce overhead costs. The private label is used selectively to add to a category performance for the retailer.

The approach will vary according to:

- perceived consumer loyalty to major supplier proprietary brands;
- categories where strong potential exists to capture market share for the retailer (such as, eggs, packaged milk) as they are commodity products with low consumer involvement or excitement; and
- scope to assist with cost reduction in some products where adjustment is occurring.

Private label products are exclusive to each retailer and provide a chance to build loyalty and trust.

The pricing strategy used for private label products varies from category to category, though these products are generally priced below proprietary branded equivalent items which in many cases are of little or no difference in product quality. The role of private label lines in category management is a case by case situation and sweeping assertions regarding the tactics used with such lines run the risk of being oversimplistic.

Specials versus every day low prices

Retailers use price as the major competitive weapon. It has conventionally been used to drive market share maintenance and growth in a category through periodic discounting or 'specialling' which is funded through price support by the supplier and retailer according to a promotional program.

Major retailers have recently moved to a strategy of consistent lower prices on key lines – each retailer promoting the concept to the consumer as a different theme but essentially the concepts are the same.

Woolworths promotes 'every day low prices' while Coles refers to 'save everyday' on the same principles. Under these approaches prices have been 'rolled back' to provide lower retail prices whilst maintaining a target margin to the retailer in line with plan. Whilst this has reduced prices available to the supplier and their cost of doing business (which the supplier offers to the retail buyer), it also provides reliable sales volumes of commodity lines.

The role of food service

In 2001, the food service sector represented 31 per cent of food sales in the Australian market. It is projected to slowly grow to 35 per cent by the end of the decade (BIS Shrapnel 2002). Data further suggests that food service is growing at a faster rate than total grocery food sales with the expansion of the quick service restaurant format, the growth in the hospitality sector and the development of large integrated food service distributors to specifically service the needs of food outlets. Total food service grew by 31 per cent in the five years to 2001 (BIS Shrapnel 2002).

The consumer trend towards eating out of the home places pressure on major food retailers in achieving growth in food sales from their retail formats and will continue to cause their category managers to seek products which increase the convenience appeal to customers.

The five external factors that determine prices *(refer figure 123)*

Supply dynamics

The nature of product supply will have a major impact on pricing over time. As noted, pricing will be influenced by the seasonality of availability in fresh product lines, though major retailers attempt to smooth costs by sourcing from suppliers capable of delivering year-round supply. This approach extends to products which are affected by international trade – suppliers holding large quantities of commodity lines in times of export downturn may offer lower prices to move volumes through retail as part of a promotional program (such is the case with block cheese).

Retail buyers will have greater ability to influence buying prices in fragmented industries than in those that are concentrated. In fragmented sectors, commodity conditions prevail.

The nature and quality of information will have a bearing on pricing. Where there is room to move, transparency on the true costs of products will have a bearing on the contribution that is sought towards category targets.

Product attributes

The nature of the product itself will dictate the costs of handling and the requirements of display and in-store servicing. Higher product margins will be sought on higher cost lines such as fresh fruit and vegetables, where shrinkage, labour and capital costs require greater gross margins to cover these investments.

The effect of competing products

Competition for individual products may come inside the store from directly competing lines (for example, meat lines within red meats or between chicken and red meat cuts, or to shift buying patterns to private label from proprietary brands), from different formats (frozen versus fresh vegetables, semi-prepared packaging versus conventional basic product) or from product substitutes (pasta versus rice versus other sources of carbohydrates).

The retailer will take account of the contribution of each product to the category and store targets when setting prices.

The existence of competing retailers and different formats

Major chain retailers compete with a myriad of independent chains and specialty food retailers in buying and selling. Supermarkets use their one-stop shopping, convenience and low prices to attract the consumer at all points and negotiate the best buying prices from suppliers.

Work presented to the Senate by the Australian Competition and Consumer Commission regarding prices paid to suppliers by retailers showed that there were two levels of terms accessible by retailers and wholesalers. The commission noted that whilst the major chains did achieve better deals more often than the independent wholesalers, they did not always receive higher terms from the same suppliers. This indicates the market at work with suppliers varying their deals where they achieved best performance for the terms paid, whether the buyers were independent wholesalers or major chain retailers.

At a category level, retail products are increasingly competing with the growth in food service demand.

Consumer demand factors

All retailers are acutely aware that the consumer is very fickle in their shopping decisions and choices as to where to shop. Out-of-step pricing, poor quality of offer or service and empty shelf space each influence the choice of shopping destination.

Over time, the consumer preference for convenience and the frequency and purpose of shopping trips are changing. The shift towards a greater demand for products that reduce cooking times and simplify preparation from scratch has seen substantial product innovation and altered price sensitivity compared to the base product. This provides retailer and supplier with opportunities to improve the spread of returns (although how each shares in the make up of returns may differ greatly).

GROCERY RETAIL – RETAILER PRACTICES

The table below provides examples of how the determinants of retail prices vary, based on the factors outlined above. Retailer strategy (one of the six factors identified in figure 123) is a constant factor in each case.

	External factors					
	Supply	Product features	Competing products	Consumer demand	Competing retailers	Comment on key determinants
Packaged milk, 2 litre	★★★	★★		★★★	★★★	Milk is a destination product, located at the rear of stores for logistics access.
Block cheese	★★★	★		★★★		Cheese demand is maintained by a policy of regular discounting.
Beef steak	★★★	★★★	★★★★	★★★	★★★	Pricing of competing meat products.
Pork cuts	★★	★★★	★★★★	★★★	★★	
Fresh oranges	★★★★	★★	★★★	★★	★★★	
Frozen potatoes			★★★	★★		
Orange juice	★★★		★★★	★★		
Cage eggs, 700g	★★★★	★★★		★★	★★★★	The dynamics of egg production and supply, and the activities of competing retailers.
Packet rice	★★★		★★	★★		
Packet sugar	★★			★★★		A staple product which sees declining consumption.

(number of stars represents strength of influence)

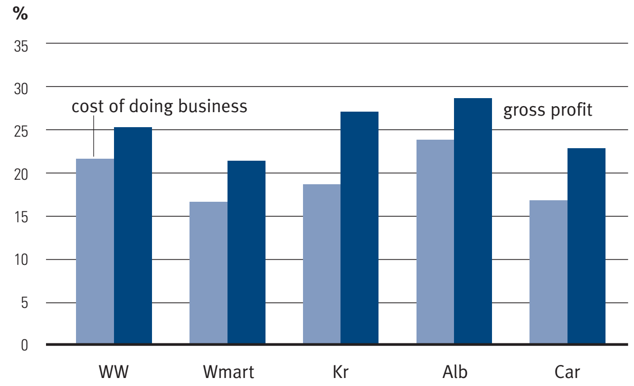
GROCERY RETAIL – PERFORMANCE OF GROCERY RETAILERS

Making comparisons

We have compared the performance of Australian major retailers to major public listed international groups, using a number of retail and financial key performance indicators.

Figure 125. **Costs of doing business and gross profit, three years, % of sales**

Our chains operate with higher costs and target margins than other majors due to the nature of this retail market.



Abbreviations

WW	Woolworths
Wmart	Wal-Mart – a United States supermarket chain
Wmart Int	Wal-Mart operations outside the United States
Kr	Kroger – a United States supermarket chain
Alb	Albertsons – a United States supermarket chain
Car	Carrefour – a French hypermarket and supermarket chain
CML	Coles Myer

Figure 126. **Days in stock**

Coles do not report their investment in stocks but Woolworths is performing better than other majors in this indicator.

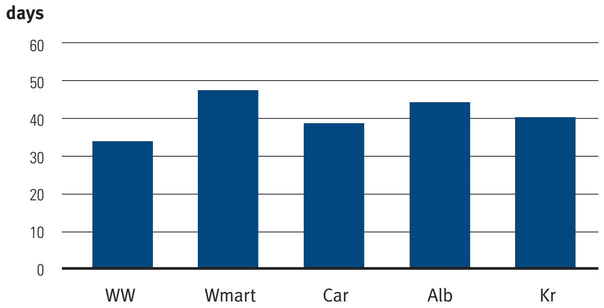
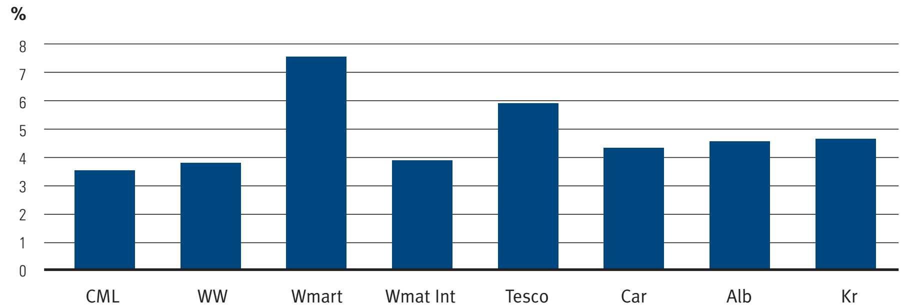


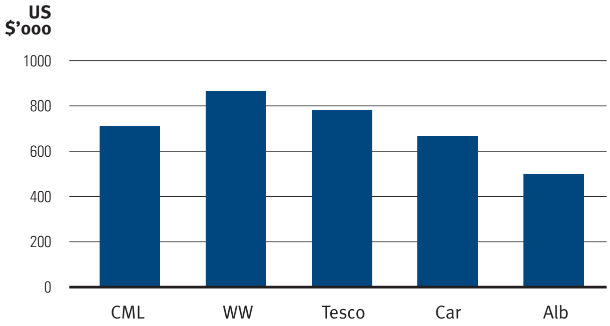
Figure 127. **Earnings before interest and tax, last three years, % of sales**

Australian retailers operate on lower overall margins than most major European Union and United States retailers.



Australian retailers are operating competitively in terms of the productivity of floor space despite the lower population concentration. These numbers vary however due to relative currency values.

Figure 128. **Sales per annum per square foot, US$'000**



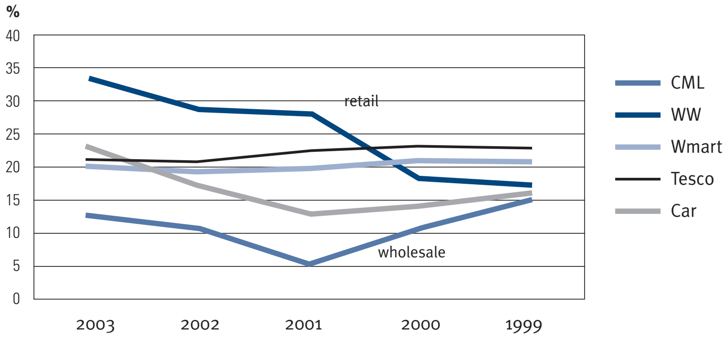
Sources: Whitehall Associates' analysis of financial statements

Financial performance of listed companies

The financial performance of retailers as major listed companies varies due to a number of factors:

- the geographic mix of business;
- the portfolio of retail operations included in the group;
- the strategy and philosophy regarding use of capital in the group – whether property ownership is a critical business requirement; and
- the importance of goals regarding shareholder wealth.

Figure 129. **Return on equity employed, %**



Source: Whitehall Associates' analysis of financial statements

6. Issues for consideration

ISSUES FOR CONSIDERATION

Purpose

The project brief requires an analysis of a number of matters which arise from the study of prices.

The subject	Issues for consideration	Conclusion/comment
Competition and market power	• What does the evidence from this study indicate regarding the effects of market power in the food sector? • Is there leverage available to producers to resist strong market power beyond the farmgate?	See figure 123. One of the major determinants as to whether there is abuse of market power is whether super-normal profits can be sustained over time. The competitive nature of retail markets and the level of returns being earned in the Australian food sector (per section 4) do not indicate that there is major abuse of market power to the detriment of food product suppliers. Producer integration in cooperatives is discussed on page 124.
Transparency and visibility in the value chain	• What has the study indicated regarding the transparency in food value chains?	There is decreasing transparency in several food industry sectors in view of the concentration in food processing and marketing, and the consequential sensitivity to movement in margins. Retailers are vigilant for opportunities to reduce costs due to the pressure on major companies to offer increasing shareholder wealth. That issue is quite distinct from a lack of visibility which hampers the effectiveness of fresh food markets.
Value-adding in the food sector	• What has the study told us about the incentive for and returns from value-adding activities?	The major value-adding activities have been identified and discussed in relation to a number of the sectors covered in the study. In this section we distinguish the main types of value-adding activities in food products and likely future directions of product and market development in food retail and food service markets.
Adjustment	• What impact is adjustment having on prices and costs in certain sectors of the food industry?	Pages 131–135 identify specific adjustment factors in the industry sectors analysed and their relevance to the study of food pricing.

COMPETITION AND MARKET POWER

Is there a problem?

There have been a number of studies undertaken in recent years to determine whether or not there is a problem with concentration of market power in the food industry and, if so, its impact on competition and pricing. This study has gained some insights into issues that influence that discussion. However it has not been undertaken specifically to address the question of market power as a primary objective.

The observations from this work include:

- A key defence used by major retailers to the charge that they command excessive market power is that they each face strong competition from more than direct retail competitors (large and small) but also from different food retailing formats in the growing food service sector.
- Retailers contend that despite the costs of doing business in this food market, prices at retail are not rising excessively and businesses are not making super profits by international standards.
- In most of the food lines studied in the project, there is significant direct and indirect competition at retail level.
- There are a number of product lines where trade affects an early supply-chain price and the retail margin fluctuates as such prices are driven by different factors and accountabilities.
- There are a number of instances where those with a command of better market intelligence take advantage of those without. Whether this creates a market failure condition is discussed later but it is the responsibility of relevant industries to ensure that sellers are aware of the commercial realities of the modern retail value chain.

What determines market power?

Market power provides a business with the ability to behave differently from the way it would in a competitive market – it can reduce input prices and raise selling prices, deter other participants from entry, take excessive margins for itself and do so over a considerable time.

From the work done, it is apparent that there are a number of determinants of market power.

Concentration of buying and selling.	Higher concentration provides scope for a major buyer to exert force in negotiations due to their dominance of purchases.
Specificity of the product – the degree to which product attributes can be specified for quality and performance.	A supplier has greater leverage if they perform to specifications in the context of contractual arrangements.
Perishability/storability of the produce.	Highly perishable lines place the supplier at risk of being left with product losses.
Levels of **sunk cost** in production.	Large sunk costs will tend to make the supplier more risk-averse.
Options open to buyer and seller at the time of committing to production by the seller and at the time of sale.	With multiple options, a supplier or buyer has greater power to choose.
Degree of vertical integration that exists in a value chain – which may be in the form of direct ownership or through the existence of co-dependent alliances.	Greater integration may provide a supplier or a buyer with greater ability to control costs – and therefore better options in pricing particular items.
Degree of transparency – the key issue being the accuracy or extent to which the available information reflects levels of supply and demand at the time of sale.	Greater transparency provides a supplier or buyer with greater understanding of market conditions and options.
Ability to **command a super profit** in on-selling.	This would require a condition of limited retail competition in short and medium-term time frames.
Whether the position of dominance is **sustainable** over time.	

PRODUCER INTEGRATION

Does integration provide better producer returns?

A debate has arisen on the issue of whether the cooperative provides a better return to its producer-members than other models of supplier integration.

What do cooperatives do for the producer when it comes to achieving a better price for the producer? Based on the evidence from the marketplace, where a cooperative competes with a non-cooperative (public or private) company in a commodity food product, there is little evidence that a cooperative adds to the price of the raw material.

The gains are necessarily in price alone. What a cooperative provides is the sharing of economies of production through the provision of market access for all production. This allows the producer to focus on reaching scale efficiency without the need to deal with finding a market for all output from the farm enterprise.

This is a significant issue in the dairy industry – the gains in productive efficiency in milk production have been achieved due to the existence of major cooperatives. They have provided scope for storing milk and converting it into dairy products which are competitive on the world market.

A greater share of the value added?

Our analysis has shown that major food lines which are of the nature of commodity grocery products are not providing significant returns to processors. The cooperative or producer-owned business provides scope to gain greater margins from value-added products which are an extension of the business from the commodity food item.

In reference to cooperatives there are many value components that combine to reward members.

These include:

- price;
- guarantees of product acceptance by the cooperative;
- dividends on shares;
- capital appreciation of shares or increases in the nominal value of cooperative stakeholdings; and
- farm-level or other member services.

In considering value-adding options, primary producers should also consider the merit of direct sharemarket investment in companies involved in their food supply chain as a way of capturing downstream returns.

Recently there have been proposals to reconfigure some agricultural cooperative models to separate discretionary or optional investment in the value-added component of the business from a member's equity share in the basic supply cooperative that exists to enhance returns for the supply of raw agricultural products.

Use of supplier capital

Some businesses will perform better at managing supplier equity capital than others. The more sustainable the differentiator, the greater the return for the producer-owner. The greater the ability of the business to leverage the contributed capital of the producer, the greater the potential gains from investments in value-adding to foods. Without such integration, it is likely that the farm sector will gain a minor if not negligible share of the benefits of value-adding reflected in the price of the raw material supplied, unless this can be provided through specific contractual arrangements.

Our analysis of certain product margin-sharing depicts a large share of the retail dollar falls under the control of the producer through a cooperative. This share is likely to turn into real price or dividend advantage where the competitiveness of these core products provides a basis for adding value in other product forms.

TRANSPARENCY AND VISIBILITY

The challenge

In future, increasing competition in the food sector and greater diversity of product and market channels will make transparency more difficult to achieve and sustain.

With strong trends towards greater concentration of retail and certain processing and marketing sectors, commercial advantage through less visibility of prices and costs will be a priority. Less transparency is often a competitive advantage, especially where parties in a relationship are in pursuit of differentiators based on quality, reliability and cost.

There is a strong need for certain information to be made public in any industry – where it aids gross national product data, research requirements and industry arguments in the development of policy. With greater integration through the value chain, industry information becomes increasingly irrelevant to those participants who take advantage of reducing the distance between farmgate and consumer.

- This will lead to increasing irrelevance of average prices from central markets – such as those seen in the wholesale meat markets.
- This will lead, if it has not already led, to a lower investment in industry benchmarking.

It is also apparent that those who bother can get the information they need. There is increasing investment by individual businesses in knowledge and intelligence and private R&D. Indeed, some have asserted that most of the noise associated with a lack of information comes from those who have not made the investment or necessary adjustment in anticipation of change.

Market failure?

In keeping with the requirements of national competition policy, governments have eliminated the regulation of industry activities including prices, supply and business conduct. At the same time however, there has been little or no regard for the retention of information systems critical to industry management in the future.

Under the discipline of national competition policy and its accompanying tests, knowledge management has rarely been given recognition as a public benefit, nor has its loss been strongly regarded as a market failure.

Threat to value-adding

The most frequent assertions of a lack of transparency come from fresh fruit and vegetable markets but the instances go much wider than these and are critical issues in sectors of the meat industry.

Investments to address these issues may include:

- education programs which:
  - enhance the use of codes of conduct;
  - improve the understanding of suppliers' rights in terms of commitment to a transaction; and
  - promote standard agreements including terms and conditions of the supplier-wholesaler relationship;
- investment in better systems;
- supply management and planning.

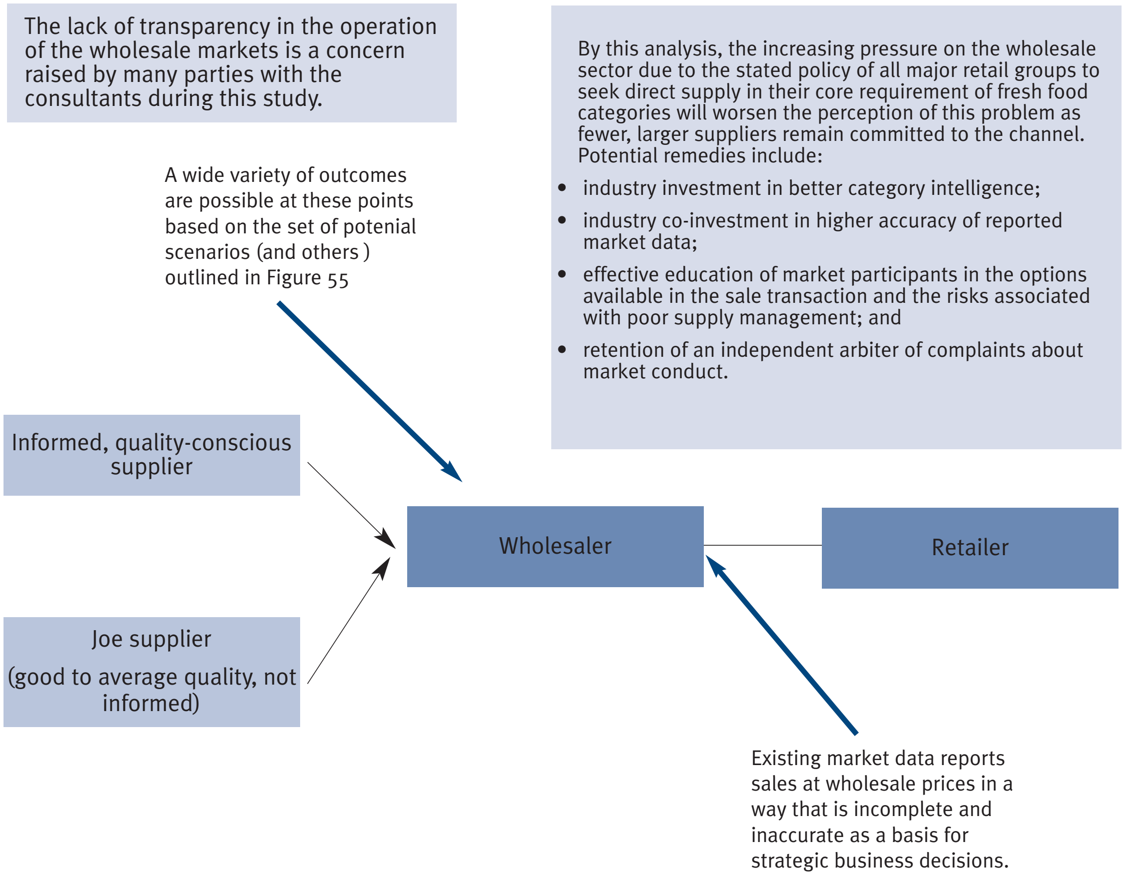
Regulation is never a solution to such issues. It creates inefficiency and fosters an expectation in the weak supplier that someone is there to take care of them (or that someone owes them a living).

Industries have in several cases taken it upon themselves to maintain or create voluntary knowledge-management functions. Alongside those efforts, private providers have developed markets for information products.

TRANSPARENCY/VISIBILITY OF PRICING INFORMATION FOR THE PRODUCER

Industry	Farmgate	Wholesale	Weaknesses/issues
Dairy products	Moderate – direct supply contracts with suppliers but knowledge of alternatives is mixed, requiring private benchmarking and anecdotal information.	Limited – export spot prices provide guidance as to product market conditions which strongly influence most milk prices.	A major difficulty is the length of the return outlook that can be established due to the international trade environment and the medium to long-term investment needed for herd and milk/feed infrastructure.
Beef and lamb	Good – market prices for carcass and OTH sales.	Limited – wholesale market data from the Sydney markets for major portions. Export prices reported through MLA. Retail price monitoring provides a guide to domestic market.	The complexities of carcass use in a wide variety of retail products and co-products makes trace-through of prices meaningless. Due to the significant volumes of business now being bought direct off farm (through feedlots and other contracted fatteners and producers), wholesale markets lose their relevance.
Pork	Good – market prices for carcass and OTH sales.	Moderate – wholesale market data from the Sydney markets for major portions reflects trade returns.	The complexities of carcass use in a wide variety of retail products and co-products makes trace-through of prices less relevant. The use of imported portions in the commodity end of the industry also provides a layer of complexity which is reflected in wholesale prices.
Fresh fruit and vegetables	Mixed – derived from wholesale data and selected industry reporting of market conditions. Direct supply contracts exist but with mixed length-of-term and price signals. Strong influence of the wholesale markets creates a moderate level of uncertainty in several sectors.	Limited – wholesale data is widely reported and accessible but subject to strong risks of error and manipulation. Limited overall industry intelligence beyond reported data, despite attempts to improve information systems.	Refer to next page. (Figure 130) Uncertainty exists from time to time due to the influence of trade in certain sectors, for example, the impact of the success of citrus marketing in certain key export markets and the impact of frozen orange juice concentrate.
Eggs	Good – producer contracts provide price signals, industry reporting of production forecasts assists with short-term forward expectations.	Limited – wholesale prices vary widely due to the unstructured nature of the box market.	The fragmented state of the industry outside of those players supplying major chains, as well as the general uncertainty regarding production levels to and beyond 2008, makes it difficult for overall intelligence on the industry outlook to be meaningful.

Figure 130. **Visibility in fresh markets**



KNOWLEDGE MANAGEMENT

ABS data

In most of the product groups that have been subject to analysis, the work has referred to data collected by ABS.

It is understood that ABS data is used primarily for the collation of consumer price index data. For these purposes it uses a wide-ranging basket of goods to ensure consistency of price samples over time.

ABS publishes a price series of food items in catalogue 6403.0, which it suggests is a selection of the items included in the broader inflation surveys.

Catalogue 6403.0 is available to industry and is widely used as a basis for publicly available retail data. Reference to these data is valid whilst the pattern of consumption in those products remains the same. Over time in certain examples, this has clearly not been the case.

It is not possible to establish the basis for which broad categories of fresh fruit and vegetable products and meat lines are collected, in view of the wide range of options and quality grades that now exist in those categories. Anecdotal evidence suggests that the collected information is a mix of loose and bagged product in some instances – the latter of which will typically be sold at a bulk (lower) price.

There are also significant risks associated with the collection of data in its inconsistent treatment of products on special at intervals during the year.

Examples include:

- **1 litre milk** – this now represents a small share of the category alongside the dominant 2 and 3 litre containers in most retail outlets.
- **Processed cheese slices** – processed cheese now accounts for about a quarter of the total category, whereas dominant product sales are made in natural cheese blocks. It is also a product that is less reflective of cheese market conditions.
- **Frozen chicken** – fresh chicken portions are now the dominant product category as a result of the gains in processing and packaging technology.
- **Oranges** – there are two major varieties of orange (valencia and navel) which are affected by very different supply and demand dynamics due to seasonal factors and the effect of the juice market as a consumer of partial output of both varieties. Greater consistency and clarity of juice variety and pack form would aid use of the published data.

There is a substantial body of unpublished ABS data which is used for various purposes. It would be advantageous to explore the possibility of making some of that data available to industries as part of a process of improving information flows regarding the size and value of industry output, pricing and value added.

VALUE-ADDING AND INNOVATION

Food manufacturers and marketers value-add to stay alive. The nature and extent of competition in the grocery food industry and the directions being taken in the domestic retail grocery market indicate clearly that enterprises will continue to innovate beyond core or staple products.

'Value-adding' is a much-misused term and has become jargonised in recent years. It is important to distinguish between the following forms of value-adding:

a) strategies to **substantially differentiate products** for sale into specific or targeted market segments;

b) strategies to **further process commodity products** to a form which is closer to the final consumer product; and

c) strategies to **enhance the recovery and return** from processing the whole commodity or its functional components, through processing lower grade, waste or by-products and managing the overall consumption of a raw material by converting a short shelf-life product to storable form.

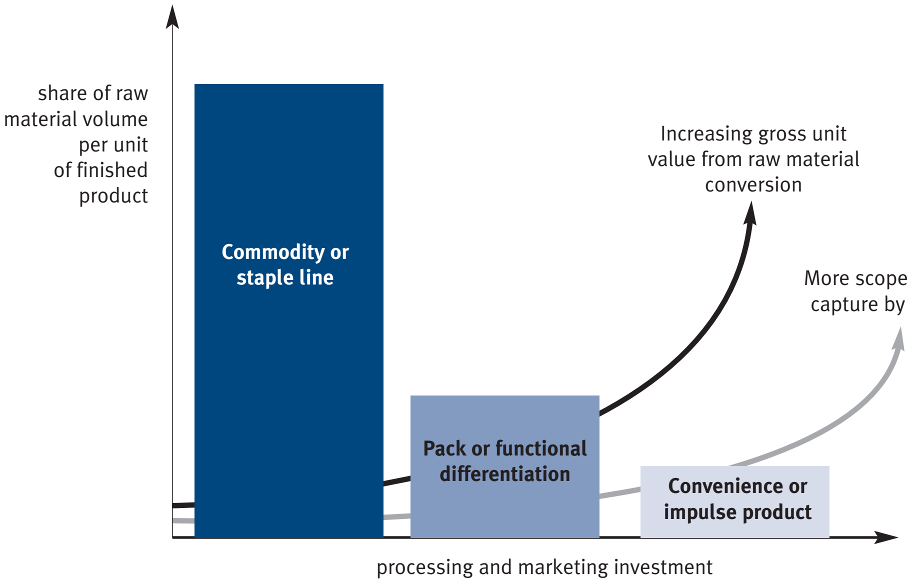
Items (a) and (b) are areas where greatest attention is paid to the concept of value-adding in the food sector.

The basic aim of these forms of value-adding is to create a substantial benefit to the next user or end user of the product – that may be saving time and/or cost, or providing some sort of incremental benefit from the product – health advantage, taste, versatility or storage life. Given the concentration in the retail sector and the strong pressure on margins for participants in commodity food lines, (a) and (b) type value-adding is vitally important to many food marketers and processors.

There is accordingly extreme reluctance to share with this project commercially sensitive information as to the destination of returns from such efforts. The analysis of the share of returns from such innovations is mostly without quantification for that reason.

Such is the nature of competition in the food retail market (domestic and international) that the competition for a sustainable value-adding product is intense.

Figure 131. **The effects of value-adding**



As the product moves further to the right and more specific processes and technologies increase the control over volume to match a given demand, the commercial imperative for advantage becomes more important. Visibility of returns and costs also diminish.

COMPETING FOR A SHARE OF THE STOMACH

There are exciting developments in the food industry in terms of the changing lifestyle needs of the consumer. The time-poor, cash-rich city consumer is working longer and harder, seeking greater leisure time when away from work and spending less time doing traditional things in the kitchen. At the same time the greater consciousness of the global village has heightened awareness of cuisine.

Food marketers are competing in new and innovative ways to take advantage of the new niches in the food market that are being created by the new and emerging differences in where people eat, how they eat their meals and in which segment of the market. Overlay that people buying in new ways: the shopping trip has changed and has become more a fragmented set of trips with different purposes.

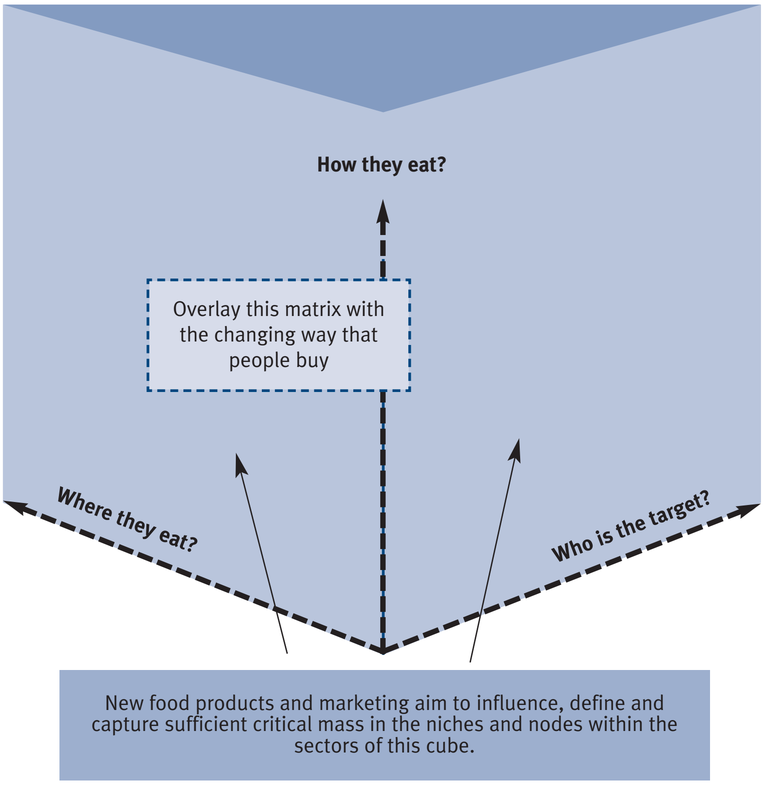
The servicing of these emerging trends forms the basis for the growing importance of the food service sector and the opportunities in that sector for the food production industries. The contest between retail grocery and food service providers for a share of the stomach is one of the greatest challenges facing the food industry in the coming years. As the price-competitiveness of the grocery market intensifies further, with retailers seeking new ways of adding to shareholder wealth, the funding of innovation to meet new delivery systems will stretch the margins and capital of food companies.

At the same time, food manufacturers will have to place increasing focus on meeting the product development and service demands of a growing food service market which potentially offers greater overall growth but sees far more diverse sources of competition.

Several examples of the value-adding drivers have been witnessed during this project. However, as outlined on the previous page, the competitive culture within the industry has prevented the study providing some form of education as to how benefits are derived and captured by the participants.

Governments have a critical role in assisting the industry in understanding and facilitating the development of innovative products to respond to the commoditisation of the food sector and the loss of opportunities for producers, manufacturers and marketers.

Figure 132. **Targeting the stomach**



VALUE-ADDING IN FRESH FOOD

Not just an elaborate transformation thing

Value-adding is not limited to the fields of development which see a raw material or a commodity form of product transformed into a different form that is easier for the next user or end consumer.

There is considerable value-adding that is undertaken through fresh food chains as product moves from picking or harvesting through to the retail stand in the store.

Fresh food intermediaries – including packers, wholesalers and retailers – are often criticised for adding margin to the final price of the product.

The table on the right identifies some of those processes and the nature of the value-adding that is undertaken.

Does the fresh chain add value?

Examples of the role of intermediaries in the fresh product chain in view of the differentials between retail prices and farmgate returns are as follows:

Stage	Value added	Costs added
Grower	• Production in accordance with growing specifications	Production costs
	• Harvesting to optimise fruit quality	
Packing house	• Grading for consistency	Packing and storage fee
	• Packing into market consignments	Freight cost
	• Storage in controlled environment	
	• Freight product to market	
Wholesaler	• Collection and presentation of product in a central location to buyers	Wholesaler's fee or deducted margin
	• Marketing produce to retailers either in market or direct to buyers in retail or food service	
	• Storage in controlled environment	Logistics costs to store
Retailer	• Presentation of product to the consumer in retail outlet	Retailer margin to cover costs of doing business
	• Storage in controlled environment	Costs of storage, display, handling

ADJUSTMENT

Purpose

This report seeks to identify and explain major adjustment challenges facing food sectors and sub-sectors – in the context of a study of the factors determining the prices of food.

There are several situations where rapidly changing market arrangements have created adjustment problems.

In this section:

- key areas are identified where strong adjustment is occurring due to commercial forces, trade impacts or other external factors;
- an illustration is provided of the ongoing and recurring impact that drought has on food supply and pricing.

MAJOR ADJUSTMENT – WHAT'S HAPPENING

The sector	The adjustments	How these have had impact	Industry response
Dairy	Deregulation of market milk pricing.	Lower revenues to processors with the reduction of retail and wholesale prices of packaged milk once the fresh milk market moved to a national arena and retailers sought and were offered lower wholesale prices on private label products. Lower average costs for producers in regions exposed to a high fresh-product mix of milk usage. This effect has been exacerbated with lower returns from the export market which have eroded values of milk used in storable dairy products and the deep impact of drought on feed access and costs.	Processor rationalisation of costs. Limited additional response for the production sector is feasible, beyond the assistance provided through the dairy structural adjustment payments to producers to adjust productive capacity and financial position. Exits from dairy production have increased as a result of the impact of drought coupled with low milk prices.
Lamb	Low supply of lambs due to drought conditions. High export prices due to strong export demand and supply shortages.	Tightening of margins for processors who are existing on smaller throughput volumes. Prices have not fully flowed through into retail due to price sensitivity in the face of red and white meat competition.	Promotion of increased lamb production (with the lure of high prices due to persisting strong export demand).
Pork	Commodity imports of pork portions.	Reduced the available returns to processors and producers from the manufacturing sector. Producers' viability is now governed by the extent to which they can produce pork at globally competitive costs (which includes access to competitively priced feed grain) and align themselves closely to export processors.	Promotion of fresh pork consumption. Taking advantage of price-competitiveness against red meat options. Product innovation in the Australian market to improve overall return from the carcass is crucial to industry profitability. Concentration on fresh chilled exports is critical to this sector.

MAJOR ADJUSTMENT – WHAT'S HAPPENING

The sector	The adjustments	How these have had impact	Industry response
Fresh fruit and vegetables	Shift to greater retail direct buying. Rationalisation of suppliers to fewer larger suppliers.	Lower volumes flowing into wholesale markets. Greater focus on wholesale sector sustaining business incomes.	Limited response at industry level on a commodity-by-commodity basis. Fresh food industries are seeking an extension of the role of the Retail Grocery Industry Ombudsman and greater meaning for codes of conduct.
	Individual lines facing declining consumer support.	Lower demand. Lower produce prices at wholesale. Pushing more fruit to co-product streams.	Improved investment in varieties and points of difference. Enhancing category management in conjunction with retailer.
Eggs	Increased use of private label by the retail sector at a significant price reduction from proprietary brands. Requirement for egg producers to meet welfare standards in cage design by 2008 will require major capital overhauls.	Consolidation of egg production, packing, and marketing has been going on for several years post-deregulation of egg production and marketing arrangements on the east coast. Investment in egg production facilities. Investment in greater automation of egg handling through to packing to offset higher fixed costs. Strong seasonal price competition remains at retail and wholesale as non-aligned marketers seek to take advantage of lower production costs.	Industry marketers sought and gained retail price increases due to higher costs.
Sugar	Significant sustained falls in international sugar prices due to changing world market dynamics coupled with poor seasonal conditions.	Lower farm incomes. No loss of certainty of supply of sugar to domestic markets due to the abundance of sugar volumes.	Industry has sought adjustment assistance through state and federal governments. There is no scope for relief through the domestic products market due to its small scale, the decline in sugar consumption and the cost-competitiveness of other sweeteners in industrial uses.

THE IMPACT OF DROUGHT

The sector	Direct impact	Background factors	Effect on prices
Dairy	Less feed available for milk production. Lower supplies at sharply higher prices of feed grain available to milk producers on a spot basis.	Weakened international market due to oversupply from the European Union and a slowing of demand in major markets. Global shortage of feed grains due to poor climatic conditions in key producing countries.	No direct impact on dairy product prices in the domestic market because milk supplies maintained to meet fresh milk market needs. Production flows in major parts of the industry fell but by an insufficient volume to put pressure on national daily milk supplies.
Beef	Producers opted for earlier turnoff rather than feed cattle through to full fattened maturity, so creating a temporary oversupply of beef on the market.	Export beef market experienced sharp decline due to the fall in consumer demand in Japan with a bovine spongiform encephalitis outbreak which depressed world prices.	Lower beef prices at wholesale – little impact on retail prices.
Lamb	Cut in sheep numbers and therefore lamb supply. Reduced volume has placed great pressure on the meat processors who face lower throughputs and tight product margins.	Continuing strong international demand for lamb.	Increased product prices through the chain. Lower increases passed through into retail product due to price competition from other meats.
Pork	Less feed available for pork production. Lower supplies of feed grain at sharply higher prices available to domestic customers on a spot basis. Pork production fell due to poor producer prices.	Increasing imports of pork into the commodity sector of the domestic manufactured meat market. Imports more competitive with the rising value of the Australian dollar.	No impact on retail prices due to retained supply lines of fresh product. Reduced wholesale and OTH prices for carcass and major portions.

THE IMPACT OF DROUGHT

The sector	Direct impact	Background factors	Effect on prices
Fresh fruit and vegetables	Lower production volumes and quality due to lower water access for feed crop production.	Retail market competition intensifying, direct buying needs of major buyers increasingly precise – requires greater certainty of supply of quality product on the shelf to give living proof of trustworthy fresh appeal.	Shortages of supply pushed up produce prices through to retail point of sale – with varying effect depending upon seasonal and geographic availability.
Flour	Grain supplies fell, prices increased.	World prices for grains rose sharply due to lower available global grain supplies and inventories.	No impact on consumer prices.
Eggs	Higher costs of feed grain (as noted in other areas).	Increasing competition at wholesale and retail levels.	Wholesale and retail prices increased to cover the higher costs of production so as to ensure security of supply to the market.
Sugar	Poor growing conditions reduced cane production.	Worsening world sugar trade position – unaffected by conditions in the Australian production industry.	No impact on sugar prices.
Rice	Less water available for rice growing. Increased costs of production to produce a season's crop.	Lower world supply of rice due to poor climatic conditions in other exporting countries, increasing overall world market prices for medium grain rice.	Higher processing costs due to lower throughput volumes. Industry was not able to take full advantage of better world market conditions due to a lack of domestic supply. Higher prices for rice flowed through into retail prices.

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Price Determination in the Australian Food Industry

A Report

The complexity of issues across the food industry sectors in Australia and the intensity of competition within the food retail market have contributed to relationships between farm-gate and retail food prices that are not well understood or easily explained.

Price Determination in the Australian Food Industry shows it can be misleading to directly compare farm-gate and retail prices because of the range of factors that determine food prices. The report provides a detailed examination of retail to farm-gate price comparisons, identifies the factors determining prices and analyses the performance of Australian food companies. It presents valuable and in-depth analysis of the price determinants across 15 food product groups.

Whitehall Associates prepared the report for the Australian Government Department of Agriculture, Fisheries and Forestry.

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