



Information Paper

Experimental Price Index for Retail Trade Margins

Australia

2003 to 2006

New
Issue

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AUSTRALIAN BUREAU OF STATISTICS

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PREFACE

The Australian Bureau of Statistics (ABS) has a long history of compiling and publishing price indexes that inform the community about price changes over time. The Consumer Price Index (CPI) and Producer Price Indexes (PPIs) are the most well known of these indexes.

The CPI is specifically designed to provide a general measure of inflation for the household sector as a whole. It measures changes over time in the prices of consumer goods and services acquired by Australian households. The PPIs, on the other hand, measure the rate of change in the prices of goods and services bought and sold by producers. An *output* PPI measures the rate of change in the prices received by producers for their output. An *input* PPI measures the rate of change in the prices paid by producers for the goods and services they purchase.

The PPIs produced by the ABS cover virtually all goods but relatively few services. The lack of coverage of services by PPIs is by no means unique to Australia. The measurement of price change for services tends to be far more difficult than for goods and the construction of price indexes for service industries is a relatively new development internationally.

This paper presents an experimental index measuring price change for the service provided by retailers. The development of this experimental index represents one of the first attempts by a national statistical agency to construct such a measure.

The ABS could not have completed this project without the cooperation of members of the Australian retail industry. The ABS would like to take this opportunity to thank those businesses and individuals for their considerable contribution of time and effort.

This information paper is provided as a starting point for consultation with users to:

- (i) obtain a sense of the value these statistics offer to users;
- (ii) obtain feedback on the methodology used to construct the indexes; and
- (iii) seek input into the future presentation of work in this area.

The ABS welcomes feedback on this experimental price index for retail trade margins. Comments or questions can be addressed to:

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
COGS	cost of goods sold
CPI	consumer price index
PPI	producer price index
SOP	stage of production
SUPC	supply and use product classification

INTRODUCTION

1.1 The Producer Price Indexes compiled for Australia provide good coverage of the output of the goods producing industries. However, coverage of the output of service industries is relatively poor. This is not something unique to Australia as the construction of price indexes for services are particularly difficult compared to those for goods and the PPIs of very few countries have good coverage of services. However, with the increasing significance of services relative to goods, national statistical offices are turning their attention to solving the conceptual and methodological problems involved in the construction of service price indexes.

1.2 In this context, the ABS has been working on the development of a price index for the service provided by retailers. In contrast to businesses that produce goods, economists view businesses that purchase goods for resale with no more than minimal processing as supplying a distribution service rather than goods to their customers. It therefore follows that a price index for retail trade services has to be concerned with the price of this distribution service rather than the prices of the goods sold by retailers per se. In simple terms, the total value of the service provided by a retailer is the difference between total sales and the cost of goods sold (a retail margin).

1.3 The construction of a measure of price change for the retail service is not a straightforward process. While the prices of goods sold by retailers are directly observable it is not possible to directly observe prices for the associated distribution service. However, the ABS believes that it has sufficiently resolved the methodological issues, and has produced an experimental index series for retail trade margins. The concepts and methods used for this index are outlined in chapter 2 of this paper, while the index series is presented in chapter 3. Chapter 4 examines issues in incorporating retail margins data into the suite of ABS price indexes. Chapter 5 presents proposals for the future.

1.4 The availability of these new experimental price indexes also has the potential to improve the quality of the retail industry volume estimates in the national accounts. The ABS will be investigating the opportunities to make such improvements.

TRADE MARGINS DEFINED

2.1 This chapter describes the conceptual and methodological issues relevant to the construction of price indexes for retail trade margins.

2.2 The term *trade margin* is used to refer to the value of the service provided by institutional units when they engage in the activity of purchasing goods for resale (retailing or wholesaling). The 1993 System of National Accounts (SNA93) describes the conceptual basis for the measurement of the output of wholesale and retail distribution as follows:

"Although retailers actually buy and sell goods, the goods purchased are not treated as part of their intermediate consumption when they are resold with only minimal processing such as grading, cleaning, packaging, etc. Wholesalers and retailers are treated as supplying services rather than goods to their customers by storing and displaying a selection of goods in convenient locations and making them easily available for customers to buy. Their output is measured by the total value of the trade margins realised on the goods they purchase for resale. A trade margin is defined as the difference between the actual or imputed price realised on a good purchased for resale and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of. The margins realised on some goods may be negative if their prices have to be marked down. They must be negative on goods that are never sold because they go to waste or are stolen."¹

2.3 In practice, the value of the output (trade margin) of wholesaling or retailing activity equals:

- the value of sales, including sales at reduced prices
- plus* the value of other uses of goods purchased for resale
- minus* the value of goods purchased for resale
- plus* the value of additions to inventories of goods for resale
- minus* the value of goods withdrawn from inventories of goods for resale
- minus* the value of recurrent losses due to normal rates of wastage, theft or accidental damage.²

Or put more simply, Output = Sales – Cost of goods sold

MEASURING PRICE CHANGE

2.4 In constructing a price index the objective is to measure *pure* price change. In other words, the aim is to construct a measure of price change that abstracts from any change in the quality of the goods and/or services that are priced. This is referred to as *pricing to constant quality*. The starting point is to measure price change for specific individual items (to constant quality) and then to weight these measures together to arrive at an aggregate or summary measure of price change.

1 System of National Accounts 1993, Section 6.110, p137.

2 *ibid.*

MEASURING PRICE
CHANGE *continued*

What to price

2.5 This leads to the identification of the three fundamental questions that must be answered in respect of any price index. What items are to be priced? How is constant quality to be maintained (or what procedures are to be employed to identify quality change and adjust for it)? How are the individual measures to be weighted together?

2.6 The unobservable trade margin price is derived as the difference between the price at which the good is sold and the cost, to the retailer, of the good sold. While collecting information on the prices at which goods are sold is relatively straightforward, the collection of information on the cost of goods sold is less so, as in concept they should be valued at their replacement cost at the time of sale. This would prove difficult to achieve in practice. Although most businesses are able to report the cost of goods sold, the pricing basis is almost universally based on the purchase price rather than the current replacement cost. The extent to which a measure based on purchase price will deviate from the conceptually preferred measure will depend on the length of time goods are held in inventory and the rate at which their purchase price changes. In a contemporary Australian context, these two issues are not considered to be significant due to typically rapid turnover of inventories and relatively low rates of inflation.

2.7 Typically, price indexes are based on prices for a sample of very narrowly specified items (e.g. 1 kilogram of Granny Smith apples) and a similar approach could be advocated for a retail margin index. This would involve selecting a representative sample of goods from each sampled retailer and collecting a selling price and purchase price for each with the margin price derived as the selling price less the purchase price. However, there are problems with this approach. The practice of periodic heavy discounting is likely to result in at least some selling prices (and hence margin prices) being highly volatile.³ Also, it is not uncommon for individual items to record negative margin prices. This would be the case where retailers use certain products as ‘loss leaders’ or are prepared to temporarily meet competition with unsustainably low prices. Negative prices are particularly problematic for index construction. In order to construct reliable measures of average price change from data that includes highly volatile and/or negative prices, it would be necessary to collect data in respect of a large number of individual items from each sampled retailer – with a potentially high burden on data providers.

2.8 Fortunately, the use of narrowly specified items may not be necessary for the purpose of measuring retail margin prices. In a typical price index the selection of narrowly defined items for pricing is designed to achieve the objective of pricing to constant quality. The quality of the items produced or purchased can be seen to be embodied in their physical characteristics, so preserving these characteristics over time serves to ensure that measures of price change are based on comparisons of like with like. The argument for following this approach is less compelling when the objective is to measure the price of the distribution service. While it is a matter of fact that there must exist a margin for each item (positive or negative), it is less clear that the distribution service itself can be meaningfully disaggregated to this level. It can be argued that the quality of the distribution service is more closely related to the range of similar goods provided for sale. In other words, the distribution service associated with the provision of fresh fruit and vegetables as a whole is a more meaningful concept than the

³ To the extent that retail price volatility is unrelated to changes in purchase prices, any percentage change in the selling price results in an amplified percentage change in the margin price.

What to price continued

distribution service associated with Granny Smith apples. This view would also appear to align better with the pricing practices of businesses which tend to set selling prices of individual items with the objective of maximising a margin across a range of items.

2.9 This 'range of items' view underpins the retail margins price index developed by the ABS. Accordingly, this index is based on collecting sales and cost of goods sold data for categories of items rather than for specific items. The problem then becomes how to define the various 'item categories'? If the level of item aggregation is too broad, the price measure is likely to be overly influenced by any shifts in sales between items that have naturally different margins. For example, the measured margin for a commodity grouping that includes both dairy products and fresh fruit and vegetables is likely to vary depending on the relative value of sales of dairy products compared to fresh fruit and vegetables - that is, the measured aggregate margin price could vary from period to period due to changes in the relative volume of sales rather than any change in individual margins. An index displaying this characteristic is normally referred to in the price index literature as suffering from compositional shift. The challenge is to define item categories that are self explanatory in terms of coverage while minimising the risk of compositional shift. For this purpose the ABS has settled on the Supply Use Product Categories (SUPCs)⁴ used in compiling the supply use tables underpinning the annual Australian national accounts.

2.10 So the decision about what to price was resolved in favour of aggregate data for each SUPC. Sampled businesses are asked to report aggregate sales and cost of goods sold (COGS) for selected SUPCs. The dollar value of the retail margin is then obtained by subtracting COGS from sales and a percentage retail margin is derived as the ratio of the retail margin to sales.

Pricing to constant quality

2.11 The quality of the distribution service provided by a retailer is a somewhat nebulous concept and generally defies measurement. However, an attempt to measure it would need to consider characteristics such as opening hours, numbers of checkouts, floor space, general ambience, temperament of staff, ease of parking, range of goods on offer, proximity to other stores etc. While these characteristics may not lend themselves to ready measurement, it is clear that they are linked to the specific outlet providing the goods. Therefore, although it may not be possible to make explicit adjustments for any changes in the quality of the service, steps can be taken to minimise or control for quality change.

2.12 Given that the quality of the service can be considered to be unique to each outlet, it follows that the measurement of margin prices is best done at the outlet rather than the enterprise level in the case of multi-location enterprises. This results in a further refinement of the data requirements in respect of multi-location enterprises. In addition to providing enterprise level data for the selected SUPCs, these enterprises are also asked to provide data in respect of one or more selected (specific) outlets.

2.13 While this control mechanism has proved effective, it does not control for any quality change that may take place within a particular outlet. To assist in identifying any changes in outlet specific quality characteristics the ABS maintains a close relationship with all data providers. When a quality change is identified, the results for the specific

⁴ See the Appendix for the Supply Use Product Categories (SUPC).

*Pricing to constant quality
continued*

location are excluded from that period's calculation (with price change for that outlet being imputed from the remaining outlets in the sample).

*Weighting and index
construction*

2.14 The approach adopted by the ABS for the measurement of prices for this index has some important implications for the way that the index is put together. Construction of the overall index is done in three stages. In the first stage, enterprise specific SUPC indexes are constructed using the reported data. In stage two, the enterprise SUPC indexes are combined to produce an aggregate SUPC index. In the third and final stage, these SUPC indexes are combined to produce an aggregate retail margins price index.

2.15 Because respondents supply aggregate sales and cost of goods sold data at the SUPC level both for selected outlets and the enterprise as a whole, indexes for both stage 1 and stage 2 can be calculated as chained Fisher indexes (using the supplied values to calculate weights). The aggregate retail margins index is constructed as a fixed weighted (Laspeyres type) price index using data from the ABS' Supply-Use tables as weights.

2.16 Table 1 below illustrates the stage 1 calculations for an enterprise with two sampled locations. An explanation of the calculations follows.

Table 1: Calculation of enterprise level SUPC index.

Panel 1: **Observable data**

	Period t-1				Period t			
	Sales	COGS	Margins	Margin	Sales	COGS	Margins	Margin
	\$	\$	\$	%	\$	\$	\$	%
Location 1	3696	3579	117	3.17	3715	3596	119	3.20
Location 2	2096	2027	69	3.29	1805	1726	79	4.38
Location sum	5792	5606	186	3.21	5520	5322	198	3.59
Enterprise total	10537	10149	388	3.68	10049	9541	508	5.06

Panel 2: **CPI data corresponding to SUPC:**

Period t-1 210.5
Period t 203.3

Panel 3: **Computed data**

	Period t-1				Period t			
	Sales	COGS	Margins	Margin	Sales	COGS	Margins	Margin
	\$	\$	\$	%	\$	\$	\$	%
Location 1	3847		122	3.17	3570		114	3.20
Location 2	1869		62	3.29	2024		89	4.38
Location sum	5715		183		5594		203	3.63

Panel 4: **Indexes**

Laspeyre $(203/186)*100$ 109.1
Paasche $(198/183)*100$ 108.0
Fisher **108.6**

2.17 The first step is to use the supplied sales and cost of goods sold data to calculate dollar and percentage margins at the location, sum of sampled locations and enterprise level. The results are shown in the panel 1 above with derived values in italics.

Weighting and index construction continued

2.18 The second step is to compute the values required to construct Laspeyres and Paasche indexes from the data supplied in respect of the sampled outlets. The computed values are shown in panel 3 above (computed data) and are obtained as follows. The objective of the computed data for period t-1 is to calculate the dollar value of margins that would have been received in period t-1 based on the volume of sales in period t and the percentage margins in period t-1 (for the Paasche Index) – with the answer being 183 [(3715 x 210.5/203.3 x 3.17/100) + (1805 x 210.5/203.3 x 3.29/100)].

Similarly, the computed data for period t is intended to answer the question "what would the dollar margins have been in period t based on the sales volumes in period t-1 and percentage margins in period t" (for the Laspeyres Index) – with the answer being 203 [(3696 x 203.3/210.5 x 3.2/100) + (2096 x 203.3/210.5 x 4.38/100)].

The sales shown in panel 3 are 'preserved' volumes of the actual sales, and this is achieved by revaluing reported sales by movements in a component of the CPI matching the item coverage of the SUPC.

2.19 The third step is to calculate the price indexes for the matched locations. The Laspeyres index is derived by the ratio of computed margins for period t (203) to actual margins in period t-1 (186) multiplied by 100. The Paasche index is derived by the ratio of actual margins in period t (198) to computed margins in period t-1 (183) multiplied by 100. The Fisher index is simply the geometric mean of the Laspeyres and Paasche indexes.

2.20 Table 2 illustrates the calculation of an SUPC level index from a sample of two enterprises. For clarity, enterprise 1 corresponds to that used in the first stage process.

Table 2: Calculation of an SUPC index

Panel 1: Input data				
	Period t-1		Period t	
	\$ margins	Index	\$ margins	Index
Enterprise 1	388	100.0	508	108.6
Enterprise 2	763	100.0	1276	115.6
Total	1151		1784	

Panel 2: Computed \$ Margins		
	Period t-1	Period t
Enterprise 1	468	421
Enterprise 2	1104	882
Total	1572	1303

Panel 3: Indexes		
Laspeyres	(1303/1151)*100	113.2
Paasche	(1784/1572)*100	113.5
Fisher		113.4

2.21 The procedure is similar to that employed in stage 1, except that here the enterprise level actual dollar margins are used as weights. The dollar margins computed in the second panel make use of the enterprise level margin Fisher indexes (e.g. Enterprise 1 = 108.6) to revalue margins from period t to period t-1 (508/108.6) and period t-1 to period t (388 x108.6) respectively.

*Weighting and index
construction continued*

2.22 The final stage aggregation of SUPC indexes is a relatively straightforward process utilising a standard Laspeyres type formula with margin weights derived from the Supply-Use tables. Additional technical information on the construction of these indexes can be provided on request.

SCOPE AND COVERAGE

3.1 The scope of the index relates to "those units engaged in the purchase and onselling of goods to the general public".⁵ Businesses are selected for pricing on the basis of market influence and the individual items they retail or sell. When businesses are enrolled the ABS conducts a personal interview to communicate data requirements as well as provide an opportunity to discuss data collection methods. This enrolment approach has resulted in a high level of cooperation from businesses. In addition the majority of businesses provide data electronically in their own formats, minimising data reporting burden.

3.2 While all retailing activity is in scope, the ABS has not been able or has not attempted to construct measures for every SUPC. Indexes have been constructed for 20 SUPCs out of a total of 98. However, these 20 SUPCs account for 59% of total retail margins (see the Appendix for details). Extending coverage beyond this level is unlikely to occur in the short term due to data collection difficulties or the relative insignificance of SUPCs.

3.3 Of the non-covered SUPCs, one area warrants special mention. In seeking data from supermarkets it was found that a number of SUPCs were subsumed in internal accounting systems into a broad 'groceries' category and that it would prove prohibitive to disaggregate this data on a quarterly basis. Although the precise coverage of groceries varied from retailer to retailer, it generally corresponds to some 15 SUPCs accounting for approximately 14% of total retail margins (see the Appendix).

3.4 The ABS assessed the feasibility of constructing a reliable margins index for groceries in aggregate. However, given the diversity of items covered, the ABS was not satisfied that the measure did not suffer from significant compositional shifts. Accordingly, this measure is not included in the experimental index presented here.

3.5 The residual weight, representing non-sampled SUPCs, is incorporated into the calculation of the retail margins index by allocating non-sampled SUPC weights across the sampled SUPCs based on an assessment of *similarity*.⁶ The global retail margin index is therefore calculated based on weights corresponding to the total value of retail margins.

RESULTS

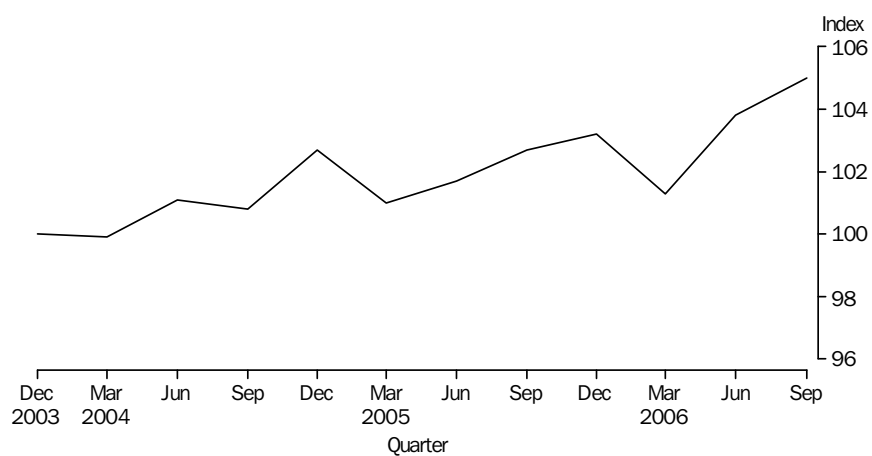
3.6 Table 3 presents the experimental retail margins index numbers for Australia from December quarter 2003 to September quarter 2006. The table also presents percentage changes from the corresponding quarter of the previous year and from the previous quarter.

5 ANZSIC 2006, ABS cat. no. 1292.0, p244.

6 *Similarity* reflects an expectation that margin price behaviour is likely to be similar across multiple SUPCs.

RESULTS *continued***Table 3: Experimental retail margins index numbers and percentage changes**

Quarter	Index number	Percentage change from corresponding quarter of previous year	Percentage change from previous quarter
2003			
December	100.0
2004			
March	99.9	..	-0.1
June	101.1	..	1.2
September	100.8	..	-0.3
December	102.7	2.7	1.9
2005			
March	101.0	1.1	-1.7
June	101.7	0.6	0.7
September	102.7	1.9	1.0
December	103.2	0.4	0.5
2006			
March	101.3	0.3	-1.8
June	103.8	2.1	2.4
September	105.0	2.3	1.2

GRAPH 1: INDEX NUMBERS, Total retail margins price index, Australia

CHAPTER 4

INCORPORATING A RETAIL MARGINS PRICE INDEX INTO THE SUITE OF ABS PRICE INDEXES

INCORPORATING A RETAIL MARGINS PRICE INDEX INTO THE SUITE OF ABS PRICE INDEXES

4.1 A retail margins price index is an *output* producer price index. It measures the rate of change in the prices received by retailers for the distribution service they provide. The valuation basis for the retail margin price index is *basic prices*.⁷

4.2 The ABS currently compiles a suite of quarterly producer price indexes for different sectors of the economy. The PPIs compiled by the ABS provide good coverage of the output of the goods producing industries. However, price indexes for the output of service industries are a relatively new development and to date measures have been constructed for only a small number of service industries. The compilation of a retail margins price index will contribute to the expansion of price index coverage for the services sector of the economy.

4.3 In addition to publishing standalone indexes for defined activities, producer price indexes are also published in a 'Stage of production' (SOP) framework which endeavours to provide comprehensive coverage of the supply side of the economy.

4.4 The SOP framework categorises all goods and services into three stages: Stage 1 (preliminary stage), Stage 2 (intermediate stage); and Stage 3 (final stage). The indexes for each stage cover both domestically produced and imported commodities. The SOP indexes are compiled from data used to construct industry sector price indexes, the international trade price indexes and some additional data collections. The SOP framework allows for analysis of price changes as goods and services flow through the production process.

4.5 The retail margins price index could also be incorporated into the SOP framework. Because the vast majority of retail distribution services are supplied to resident households, the greatest impact would be on the Stage 3 (final stage) index which covers goods and services flowing to final domestic consumption (and capital formation).

4.6 Before this measure could be incorporated into SOP Stage 3 a couple of important issues need to be addressed. The first is the weight to be assigned to the measure and the second is the impact on the publication schedule.

4.7 As far as the weight is concerned, there are two strong candidates. One option would be to include the series on a self weighting basis while the other option would be to assign it a weight representing either retail trade margins or both retail and wholesale trade margins. The implications of these alternatives are as follows. Under the second of the assigned weighting options, it is explicitly assumed that the unmeasured prices of wholesale distribution services are more likely to behave similarly to those of retail distribution services (or that the movement in prices of retail distribution services are

⁷ Basic prices are the amounts received by a producer from the purchaser for a unit of good or service produced as output. They *include* subsidies on products and *exclude* taxes on products, and separately invoiced transport and insurance charges (System of National Accounts 1993).

INCORPORATING A RETAIL
MARGINS PRICE INDEX
INTO THE SUITE OF ABS
PRICE INDEXES
continued

representative of the movements in prices of wholesale distribution services). Under the first assigned weighting option the assumption is that the non-included wholesale distribution prices are more likely to behave like the average of all items in the SOP index (which reflects the prices of consumption goods, activities such as the outputs of building and construction industry and the prices of a range of other services that may behave quite differently to distributive services).^{8,9} The self-weighting option which reflects only that 59% of retail margins explicitly priced is considered less desirable, as it would be at odds with the practice generally adopted in price indexes where weights for broad categories of items are assigned to a subset of sampled items which are selected to be representative of the broader categories as a whole.

4.8 The basic input data required for the construction of the trade margins price index (quarterly aggregate sales and cost of goods sold data) is such that it cannot be collected until at least some time following the end of the quarter. By comparison most price indexes for goods are based on point in time prices prevailing at selected dates during the quarter. Further, computation requires the latest period CPI data for revaluation purposes. The consequence of this is that the trade margin price indexes cannot be compiled with the same timeliness as the producer price indexes for goods. The option of including trade margins on a lagged basis is not considered practical as this is likely to distort any messages about downstream impacts on the CPI. The logic for this view is based on the fact that while there might be a lag in the transmission of price changes for goods from the point of production to final consumption the same cannot be said for services which cannot be stored.

4.9 It is clear that the inclusion of retail margins into the suite of PPIs is not without its difficulties. The key options would appear to be to:

- (i) maintain the current publication schedule and coverage for SOP and publish retail margin indexes as standalone measures,
- (ii) to expand the coverage of SOP to include trade margin indexes at the cost of timeliness, or
- (iii) to decompose SOP into a goods component and a service component and maintain the current publication schedule with only the goods component being available for the latest period.

The ABS is particularly keen to ensure that the right decision is made and strongly encourages users to contribute to the discussion.

4.10 A further key issue is the level of detail at which the retail margin price index is published. The ABS proposes to publish a single measure for total retail margins only as the design objective was to construct a fit for purpose aggregate retail margins index and not fit for purpose SUPC level indexes for which generally larger samples would be required.

⁸ The behaviour of the existing SOP Stage 3 index and the experimental trade margins index is shown in Table 4.

⁹ Adding retail trade margins would increase the coverage of goods and services in SOP Stage 3 from 57% to 74%. The addition of wholesale trade margins would increase the coverage to 81%.

INCORPORATING A RETAIL MARGINS PRICE INDEX INTO THE SUITE OF ABS PRICE INDEXES
continued

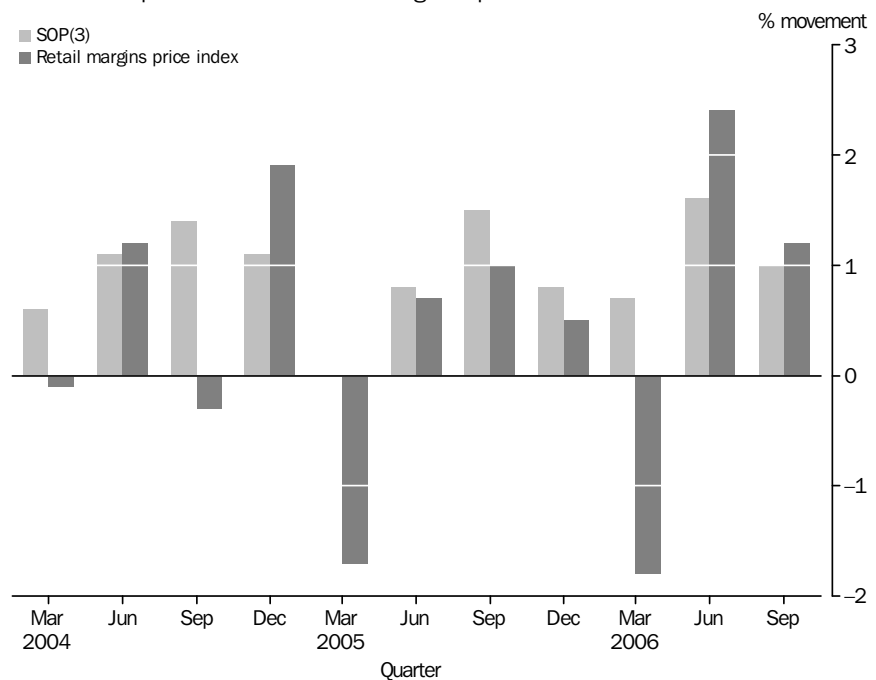
4.11 Table 4 below presents the SOP stage 3 and the retail margin price index numbers together with quarterly percentage movements for the period December 2003 to September 2006.

Table 4: Index numbers and quarterly movements, SOP(3) and the experimental retail margins price index

Quarter	Stage of production – Stage 3		Experimental retail margins price index	
	Index number (a)	Quarterly change %	Index number	Quarterly change %
2003				
December	100.0	..	100.0	..
2004				
March	100.6	0.6	99.9	-0.1
June	101.7	1.1	101.1	1.2
September	103.1	1.4	100.8	-0.3
December	104.3	1.1	102.7	1.9
2005				
March	104.3	0.0	101.0	-1.7
June	105.1	0.8	101.7	0.7
September	106.6	1.5	102.7	1.0
December	107.5	0.8	103.2	0.5
2006				
March	108.2	0.7	101.3	-1.8
June	109.9	1.6	103.8	2.4
September	111.0	1.0	105.0	1.2

(a) Index re-referenced to December quarter 2003 = 100.0.

GRAPH 2, A comparison of quarterly percentage movements, SOP(3) and the experimental retail margins price index



FUTURE DIRECTIONS

5.1 The ABS believes the experimental index presented in this paper is robust and fit for purpose. In the absence of any compelling arguments to the contrary, it is proposed that the experimental label be lifted and the index continue to be compiled and published in some form.

5.2 The ABS welcomes any comments on the developments described in this paper and on any aspect of the work undertaken to date. Of particular value would be any suggestions as to how best to publish the results in future.

5.3 Queries or comments can be addressed to:

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SUPPLY-USE PRODUCT CATEGORIES AND WEIGHTS

SUPPLY-USE PRODUCT CATEGORIES AND WEIGHTS, 2002-03

Abbreviated product descriptor	Retail margin \$m	Percentage of total retail margin %	Cumulative total %
SUPCs for which experimental indexes produced			
Alcoholic beverages	1048	2.0	
Clothing and footwear	7042	13.4	
Computers	2569	4.9	
Dairy products	899	1.7	
Edible meat, offal and meat products	1545	2.9	
Fresh fruit and vegetables	920	1.8	
Furniture	2182	4.2	
Household appliances (excluding compressors; solar, gas and other non-electric hot water systems)	2031	3.9	
Jewellery and silverware & watches	692	1.3	
Liquefied petroleum gas	42	0.1	
Motor cars	2176	4.1	
Motor Vehicle parts & accessories	410	0.8	
Other petroleum and coal	1069	2.0	
Photographic, telecommunication and audio visual equipment	2390	4.6	
Pneumatic tyres	931	1.8	
Printing and newspaper, magazine and book publishing	1693	3.2	
Recorded media & publishing	431	0.8	
Textiles, fabrics & yarns; textile products nec	850	1.6	
Tobacco products	845	1.6	
Toys and sporting	1199	2.3	59.0
SUPCs for which experimental indexes not produced			
Grocery items			
Baby napkins and sanitary products; soap; perfumes	1515	2.9	
Confectionery	728	1.4	
Eggs, honey and other agricultural food products	70	0.1	
Fish; crustaceans and molluscs	257	0.5	
Fruit & vegetable products	960	1.8	
Glass and ceramic containers and tableware	178	0.3	
Grain mill products; pasta	275	0.5	
Non-alcoholic beverages	376	0.7	
Other chemicals and chemical products	735	1.4	
Other food products	683	1.3	
Other rubber and plastic products	584	1.1	
Plastic tableware and utensils	503	1.0	
Prepared animal & bird feed	115	0.2	
Refined animal oil & fats; vegetable oils and fats	98	0.2	
Toiletry papers, towels and tissues	474	0.9	73.3

SUPPLY-USE PRODUCT CATEGORIES AND WEIGHTS, 2002-03, cont.

Abbreviated product descriptor	Retail margin \$m	Percentage of total retail margin %	Cumulative total %
SUPCs for which experimental indexes not produced, cont.			
Non-grocery items			
Aluminium foil	17	0.0	
Automotive wet cell batteries (excl motorcycle)	36	0.1	
Bags, sacks and packets of textile or canvas	215	0.4	
Bakery products	1803	3.4	
Bark and wood chips; other wood products	74	0.1	
Blood meal and inedible meat	12	0.0	
Capitalised machinery and equipment	495	0.9	
Caravans; trailers; boats; and aircraft	168	0.3	
Carpets & textile floor coverings	310	0.6	
Cotton, ginned; other services to agriculture	149	0.3	
Electric lights (including torches); cables and batteries (excluding automotive)	171	0.3	
Fabricated metal hand tools; fire extinguishers	19	0.0	
Fertilizers	342	0.6	
Firearms (incl parts)	3	0.0	
Forestry and logging	1	0.0	
Gas (natural and LPG)	222	0.4	
Glass and glass products (excluding glass containers and rear view mirrors); ceramic products (excluding tableware)	105	0.2	
Glycerol and candles	17	0.0	
Industrial gases (excluding acetylene); synthethetic resins	207	0.4	
Inks	51	0.1	
Insecticides, pesticides and seed dressings	157	0.3	
Kerosene (incl kerosene type jet fuel)	2	0.0	
Knitted or crocheted fabrics and products (excluding wearing apparel)	168	0.3	
Knitted or crocheted wearing apparel	766	1.4	
Leather	67	0.1	
Leather products nec	2	0.0	
Leather travelling products (including purses and wallets)	175	0.3	
Liquefied petroleum gas produced at refineries	42	0.1	
Livestock	957	1.8	
Medical aids and therapeutic appliances (including spectacles and hearing aids)	890	1.7	
Metal cutlery and sheet metal non-electric tableware	71	0.1	
Munitions and ammunition (incl cartridges)	194	0.4	
Musical instruments (incl parts and accessories)	4	0.0	
Other agriculture	556	1.0	
Other basic metals and products	52	0.1	
Other grains	4	0.0	
Other manufacturing	31	0.1	
Other meat and dairy products	20	0.0	
Other medicinal and pharmaceutical products and pesticides	2667	5.1	
Other mining	242	0.5	
Other paper and paperboard products	67	0.1	
Other sheet metal and fabricated metal household goods	314	0.6	

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SUPPLY-USE PRODUCT CATEGORIES AND WEIGHTS, 2002-03, cont.

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Abbreviated product descriptor	Retail	Percentage	Cumulative
	margin	of total	
	\$m	%	%

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SUPCs for which experimental indexes not produced, cont.

Non-grocery items, cont.

Paint brushes; precious metal products (excluding jewellery)	8	0.0	
Paper and paperboard	392	0.7	
Paper and paperboard trays, dishes, plates, cups, cones, egg containers and box files	14	0.0	
Paperboard containers and paper bags	335	0.6	
Pens, pencils, crayons and typewriter ribbons	22	0.0	
Pets; fodder and grass	82	0.2	
Plant and flowers	137	0.3	
Plastic floor coverings and tiles	42	0.1	
Plastic textile fabrics	26	0.1	
Pulp, newsprint and paper stock	20	0.0	
Raw hides and skins	61	0.1	
Sawmill products (excluding bark and woodchips); fabricated wood products; wooden tools, frames, boxes and parquetry strips	281	0.5	
Scientific equipment; electrical equipment parts; garden tools and equipment (powered)	307	0.5	
Sterilised gut surgical sutures	8	0.0	
Structural metal products; sheet and fabricated metal products nec	200	0.4	
Television antennae parts	19	0.0	
Textile tarpaulins (incl canvas), sails, tents, pneumatic mattresses and motor vehicle covers; rope, cable and products thereof (incl netting)	19	0.0	
Veterinary products	113	0.2	
Wadding, cotton wool, gauze and bandages	57	0.1	
Welded wire fabric (excl reinforcing)	9	0.0	
Wool, scoured and carbonised	5	0.0	
TOTAL	52495	100.0	100.0

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