

Independent Pricing and Regulatory Tribunal  
New South Wales

## NSW Container Deposit Scheme

**Monitoring the impacts on container beverage prices and competition**

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## Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

### **Submissions are due by 8 June 2018**

We would prefer to receive them electronically via our online submission form <[www.ipart.nsw.gov.au/Home/Consumer\\_Information/Lodge\\_a\\_submission](http://www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission)>.

You can also send comments by mail to:

**NSW Container Deposit Scheme Review**

Independent Pricing and Regulatory Tribunal

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We may choose not to publish a submission - for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. However, it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

If you would like further information on making a submission, IPART's submission policy is available on our website.

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# 1 Executive Summary

The NSW Government has introduced a Container Deposit Scheme (CDS) known as Return and Earn to reduce the number of drink containers ending up as litter, and help cut the state's total litter volume by 40% by 2020.<sup>1</sup> Under this scheme, consumers who return empty eligible beverage containers to Return and Earn collection points receive a 10-cent refund per container. Businesses that supply beverages in eligible containers into NSW pay monthly fees to cover the costs of the scheme and can increase the price of eligible container beverages to recover these costs.<sup>2</sup>

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is monitoring the effects of the CDS in its first year of operation at the request of the Premier. The Government's concern is to manage the risk that suppliers may seek to raise the price of beverages above the costs of the scheme. To that end, our terms of reference ask us to:

- ▼ monitor and report on the effect of the CDS on prices of container beverages and competition for container beverages, and any other market impacts on consumers
- ▼ recommend any actions required by government to address adverse effects or behaviours arising from the operation of the scheme, and
- ▼ recommend whether price monitoring should continue beyond the initial one-year period.

This Progress Report outlines our preliminary findings and recommendations based on the first three months of the scheme's operation (ie, December 2017 to February 2018). It also explains our framework for monitoring and assessing the impacts of the CDS and seeks comments from stakeholders to inform our monitoring over the rest of the year.

We emphasise that, given the market for container beverages is competitive (and therefore not subject to price regulation), the full impact of the CDS on prices and competition may not be apparent at this early stage of its operation. Therefore, our preliminary findings should be seen as indicative only.

## 1.1 Overview of preliminary findings and recommendations

Our preliminary findings suggest that the price impacts of the CDS have been consistent with the estimated 'direct' costs of the scheme.<sup>3</sup> Since the scheme has only been in operation

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<sup>1</sup> Return and Earn, Media Release, 18 August 2017, p 3, available at [http://www.exchangeofchange.com.au/ReturnAndEarn\\_MediaRelease.pdf](http://www.exchangeofchange.com.au/ReturnAndEarn_MediaRelease.pdf), accessed on 20 April 2018.

<sup>2</sup> The prices suppliers and retailers charge for container beverages are not regulated, so they may increase or decrease prices at any time in response to changes in their costs, and other factors such as changes in consumer preferences or competitive pressures from other suppliers.

<sup>3</sup> The 'direct' costs include the fees levied on first suppliers to recover the costs of operating the scheme and paying the 10-cent refund per container. We note that some suppliers may also have incurred other 'indirect' costs as a result of the scheme such as IT and reporting system upgrade, administration and reporting costs. These costs vary from business to business and so we are unable to estimate a typical additional 'indirect' costs.

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since December 2017, we consider it is too early to draw conclusions about its impacts on competition and other market impacts on consumers. However, there may be issues emerging for some businesses that have the potential to restrict competition. Retailers located close to NSW's border may face a competitive disadvantage if the bordering state does not have a similar scheme – as is the case in the Albury Wodonga area. In addition, we found that payment of the direct scheme costs monthly in advance with seven day payment terms and a flat fee per container approval place cash flow pressures on some businesses, particularly small businesses and boutique beverage suppliers.

We have identified several possible ways to address these issues, but each has costs as well as benefits. We are seeking further comments from stakeholders on potential remedies and which of them best balances the costs and benefits to consumers, businesses and taxpayers. We will undertake further analysis of these issues and report on them in our Draft Report.

## **1.2 Increases in container beverage prices as a result of the CDS are consistent with the direct costs of the scheme to suppliers**

We examined price data for eligible container beverages in the non-alcoholic beverage market and the alcoholic beverage market separately. We compared NSW data for the November 2017<sup>4</sup> to February 2018 period with data for previous years and Victoria – which does not have a CDS – to estimate how much of the overall price increase in the November to February period is attributable to the CDS.

We found that prices increases are in line or less than the estimated direct costs of the scheme. However, both the size and timing of the increases varied between non-alcoholic and alcoholic container beverages:

- ▼ Soft drinks and water prices were around 10 to 14 cents per container higher in December to February, and fruit juice prices were around 6 cents per container higher in January and February.
- ▼ Beer prices were around 2 to 3 cents per container higher in December 2017 and January 2018 increasing to around 6 cents per container higher in February 2018, and cider prices were up to 7 cents per container higher in February 2018.

A comparison of these price increases with the estimated direct costs of the scheme suggests that on average, most of the estimated costs of the CDS have been passed through in non-alcoholic container beverage prices, but only around half of these costs have been passed through in alcoholic container beverage prices. We found that the estimated direct costs of the scheme for non-alcoholic and alcoholic beverages were around 12 to 15 cents per container over the period December 2017 to February 2018.<sup>5</sup>

We note that these findings are best-estimates only as isolating the price impacts attributable to the scheme from other price variations in the market is not straightforward.

We also found that there has been some volatility in the scheme's direct costs to first suppliers, as a result of the 'true up' mechanism (see Box 1.1). During the first three months

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<sup>4</sup> Exchange for Change bills suppliers monthly in advance with the first invoices issued 1 November 2017 for the scheme commencing on 1 December 2017.

<sup>5</sup> Including GST



of the scheme, Exchange for Change (the Scheme Coordinator) invoiced suppliers using forecasts of volumes of containers returned through TOMRA Cleanaway (the Network Operator). Exchange for Change's forecasts were substantially higher than the actual volumes observed once the scheme commenced. As a result, substantial true up amounts were required from February 2018. Further volatility is possible in June, as Exchange for Change will apply a further 'true up' for the actual volumes of containers returned through Material Recycling Facilities (MRFs).<sup>6</sup> Another true up may be needed if there is a difference between the forecast and actual volumes returned through these facilities.

### **Box 1.1 Overview of the Exchange for Change True Up mechanism**

Exchange for Change issues invoices to first suppliers monthly in advance.

The invoiced amount reflects 1) Forecast volume of eligible containers supplied to NSW in next month and 2) Forecast volume of eligible containers returned and recycled through the Network Operator (TOMRA Cleanaway) and Material Recycling Facilities (MRFs).

Exchange for Change pays (or charges) first suppliers a 'true up' amount in the subsequent months, once actual volumes of containers supplied and containers returned and recycled are known.

The true up amount reflects the difference between 1) the amount the supplier was invoiced for the month and paid for in advance and 2) the amount the supplier actually owes for that month.

This 'true up' ensures that suppliers pay scheme costs only for containers that are actually returned.

Exchange for Change has begun to provide additional information to suppliers on its forecasts of container volumes and costs in monthly newsletters. We consider it should also publish monthly forecasts of container volumes and scheme costs in advance of issuing invoices each month, to help improve the transparency of forecasting and reduce the volatility in the direct costs of the scheme.

Several stakeholders raised concerns about the efficiency of the scheme's direct costs, including those of the Environmental Protection Agency (EPA), Exchange for Change and TOMRA Cleanaway. As the EPA appointed the latter two companies using a competitive market-testing process, their costs are likely to be reasonably efficient given the scheme's design. However, we will engage a consultant to review the efficiency of the EPA's costs, including its Scheme Administration fee and container approval fee. We will include our findings in our Draft Report.

### **1.3 It is too early to tell the impact on competition but issues may be emerging for some market participants**

We are assessing the impact of the CDS on competition in the container beverage market using a similar approach to 'competition tests' included in regulatory impact statements. As for price impacts, we are looking at competition in the alcoholic beverage and non-alcoholic beverage markets separately. We are also looking at competition in the beverage manufacturing, wholesaling and retailing markets separately.

<sup>6</sup> MRFs process containers collected through existing kerbside recycling programs and also receive a 10-cent refund for each container.

Since the scheme has only been in operation since December 2017, we consider it is too early to draw conclusions about its impacts on competition. But we have identified three issues that may potentially affect the competitiveness of some market participants, and therefore need to be monitored:

1. As a result of the scheme's \$80 container approval fee, businesses that supply a wide range of different container beverages in small volumes have incurred higher costs than those that supply large volumes of a small number of products. This may ultimately constrain product innovation in the industry.
2. Smaller businesses may have encountered greater difficulties in paying the direct scheme costs monthly in advance with seven day payment terms on the invoices Exchange for Change issues to recover the direct costs of the scheme.
3. Retailers on the NSW side of the border in areas such as Albury Wodonga may have difficulty competing with those on the other side of the border where there is no CDS.

First suppliers are required to register and pay an \$80 approval fee for each class of eligible container they supply in NSW. In addition, they also face costs associated with obtaining approval. In January 2018, the NSW Government introduced an annual cap on this fee by limiting it to the first 40 containers approved per year. This means the maximum fee to first suppliers for container approvals is \$3,200 in 2017-18. The nature of this approval fee means that it will have the biggest impact on small businesses and have a relatively large number of eligible containers. This is often the case for craft beer manufacturers or small beverage importers that offer a large variety of products and regularly introduce new products. As a consequence product innovation may be discouraged under the CDS, particularly for small business that produce boutique beverages. If businesses are discouraged from innovating this would impact on the competitiveness of markets, on costs and productivity.

We will undertake further analysis and investigate the feasibility of registering container types rather than individual products, noting the impact particularly on boutique beverage suppliers, and given the NSW Government's objective to maintain the integrity of the scheme and to reduce the potential for fraud. In addition, we will engage a consultant to review the level of the approval fee to ensure that it reflects efficient costs.

First suppliers are required to pay invoices from Exchange for Change in advance and within seven days for their share of the direct costs of the scheme. These payment terms are out of step with standard industry practice, which is to allow 30 days for payment. We consider this may cause financial stress for smaller businesses, particularly as they are invoiced for this cost in advance. We have made a preliminary draft recommendation that Exchange for Change provide all suppliers 30 days to pay these invoices.

Retailers located close to NSW's border may face a competitive disadvantage due to the CDS if the bordering state does not have a similar scheme – as is the case in the Albury Wodonga area. A CDS will commence in the ACT from 1 July 2018 and in Queensland from 1 November 2018. Victoria has not announced a scheme.

We have identified two options to address cross-border issues - exempting certain towns from the CDS and providing transitional hardship payments to businesses experiencing financial hardship due to the CDS in border areas. But each of these options has costs as well as benefits. In addition, as these businesses operate in competitive markets, any hardship due to the CDS would need to be isolated from the normal operation of business

competing to maintain market shares. We are seeking further comments from stakeholders to understand the size of the impact in border areas as well as feedback on any potential remedies and which of these best balances the costs and benefits to consumers, businesses and taxpayers.

We are also proposing to further examine TOMRA Cleanaway's partnerships with retailers in establishing collection points, to consider how these arrangements might affect competition.

#### **1.4 It is too early to observe significant changes in consumer behaviour**

We have engaged the Centre for International Economics (the CIE) to estimate whether the introduction of the CDS has had any other market impacts on consumers including:

- ▼ the quantity of beverages purchased for consumption in NSW, and
- ▼ the amount spent by consumers on beverages in NSW.

Using household level consumption and expenditure data from the Nielsen Homescan Consumer Panel, the CIE has compared the behaviour of households before and after the introduction of the CDS in NSW with a control group (namely Victoria which does not have a CDS in operation). There are challenges with this approach, due to volatility in beverage consumption trends and consumer patterns of alcoholic beverage purchases. While modelling is able to account for these issues to an extent, we note that the scheme is at its early stage of operation and results should be interpreted with caution.

Bearing these issues in mind, the main results from this analysis are that:

- ▼ The CDS may have reduced consumption of non-alcoholic beverages by around 900mL per household per month, driven by reductions in soft drink and bottled water. This represents a reduction of around 6% in average household non-alcoholic beverage consumption.
- ▼ There has been little change in expenditure on non-alcoholic beverages due to the CDS, suggesting that the price increases have been offset by reduced consumption.
- ▼ At this stage no clear conclusions can be drawn about the impact of the CDS on the consumption or expenditure on alcoholic beverages.

We will continue to monitor the impact of the CDS on consumer behaviour, and will update results in our Draft and Final Reports.

#### **1.5 Our process for this review**

Our review process to date has involved detailed analysis and public consultation:

- ▼ Since the CDS started, we have collected information from consumers and suppliers (including manufacturers, wholesalers and retailers) on individual changes in prices, and unfair or unjustified supplier behaviour through our website feedback form. We received 26 comments, although most of these related to operational elements of the scheme that are outside the scope of this review.

- ▼ In February 2018 we released an Issues Paper that set out our proposed approach for the review. We received 61 submissions.
- ▼ We have met with and received information from with Exchange for Change, TOMRA Cleanaway, and the EPA.<sup>7</sup> We have also held discussions with the Small Business Commissioner and the Cross Border Commissioner.
- ▼ We appointed the CIE to provide expert advice on whether the CDS has had an effect on market shares or household expenditure on container beverages. The CIE's Progress Report is available on our website.

In our Issues Paper, we proposed seeking comments on the Progress Report only and holding public hearings in July/August before delivering the final report to the Premier in December 2018. However, we have now decided to release a Draft Report in September 2018 in addition to this April Progress report. This will allow us to present draft findings and recommendations based on a longer monitoring period, as well as conduct further analysis to address stakeholder concerns on the costs of the scheme and impacts on competition. We propose to hold public hearings in October – one in Sydney and one in Albury – after we release our Draft Report. Table 1.1 sets out an updated timetable for the review.

**Table 1.1 Review timetable**

Key milestone	Updated timing
Released Issues Paper	13 February 2018
Submissions to Issues Paper due	13 March 2018
Release Progress Report	24 April 2018
Submissions to Progress Report due	8 June 2018
Release Draft Report	September 2018
Public hearings (Sydney and Albury)	October 2018
Submissions to Draft Report due	November 2018
Provide Final Report to Premier and Minister	December 2018

## 1.6 How you can have your say

We are seeking written submissions on this Progress Report and encourage all interested parties to comment on the matters it discusses, or any other issue relevant to the review. Page iii of this report provides more information on how to make a submission. Submissions are due by 8 June 2018.

## 1.7 How this paper is structured

The rest of this Progress Report provides more information on our framework for monitoring the CDS and more detailed discussion of our preliminary findings and recommendations from applying the framework to the first three months of the scheme's operation:

<sup>7</sup> IPART required Exchange for Change, TOMRA Cleanaway and the EPA to provide information under section 22 of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act).

- ▼ Chapter 2 provides contextual information on the CDS and the container beverage industry.
- ▼ Chapter 3 explains the framework we are using to monitor and report on the impact of the CDS, including adjustments we have made in response to stakeholder feedback.
- ▼ Chapters 4 discusses our preliminary findings on the impacts of the CDS on container beverage prices and the costs of the scheme.
- ▼ Chapter 5 explains our preliminary findings and recommendations on the impacts of the CDS on competition for container beverages and other market impacts on businesses and consumers.

## 1.8 List of our preliminary findings and recommendations

### IPART preliminary findings on container beverage prices

- |   |  |    |
|---|--|----|
| 1 | On average, the retail prices of container beverages in NSW have increased in line with or by less than the estimated direct costs of the scheme.  | 31 |
| 2 | For non-alcoholic container beverages, most of the estimated direct costs of the scheme appear to have been passed through to consumers on average:  | 31 |
|   | – Soft drinks and water prices were around 10 to 14 cents per container higher as a result of the CDS in December to February.   | 31 |
|   | – Fruit juice prices were around 6 cents per container higher in January and February as a result of the CDS.  | 31 |
| 3 | For alcoholic container beverages, less than half of the estimated direct costs of the scheme appear to have been passed through to consumers on average:  | 31 |
|   | – Beer prices were around 2 to 3 cents per container higher as a result of the CDS in December 2017 and January 2018, increasing to around 6 cents per container higher in February 2018.        | 31 |
|   | – Cider prices were up to 7 cents per container higher as a result of the CDS in February 2018.  | 31 |
| 4 | The estimated direct costs of the scheme for non-alcoholic and alcoholic beverages have been around 12 to 15 cents per container (including GST) over the period December 2017 to February 2018. | 31 |

### IPART preliminary findings on competition

- |   |  |    |
|---|--|----|
| 5 | It is too early to conclude whether the CDS has had a material impact on competition by examining market outcomes.   | 48 |
| 6 | There is potential for the costs of entering the market, or remaining in the market, to have a detrimental impact on competition where those costs disproportionately affect particular types of supplier or particular locations. | 48 |
| 7 | The EPA's regulatory compliance costs and fees charged to first suppliers per container approval should reflect the efficient costs.   | 53 |

## IPART preliminary draft recommendations

- 1 Exchange for Change publish the following information prior to issuing its June invoice and all subsequent invoices: 31
  - forecast container volumes for the next three months for both Network Operator volumes and MRF volumes 31
  - a description of how container volumes were estimated 31
  - forecast costs per container for the next three months 32
  - costs per container for previous months based on actual container volumes recovered via the Network Operator and MRFs (once known) (ie, what the costs would have been if forecasts were 100% accurate). 32
- 2 NSW Environment Protection Authority and Exchange for Change amend the payment terms for first supplier contributions to the CDS from seven days to 30 days, consistent with the payment term requirements for NSW Government agencies. 51
- 3 That the EPA publish a contract summary for each of the agreements with the Scheme Coordinator and the Network Operator. 56

### 1.9 Issues we seek comment on

- 1 What are your views on the costs and benefits of different options for addressing the impacts of the CDS on businesses in the NSW/Victoria border region? 55
- 2 Are there any aspects of the NSW Government's CDS that could be changed to reduce the costs of the scheme whilst maintaining the contractual arrangements that support the scheme and achieving the NSW Government's policy objectives? 60

## 2 CDS and its context

To monitor the impacts of the CDS on prices and competition, we need to understand the details of the scheme and the context in which it operates. The sections below outline the key context, including:

- ▼ how the scheme works
- ▼ what beverage containers it covers
- ▼ the key participants and their roles and responsibilities in the scheme, and
- ▼ the beverage industry's regulatory and market environment.

### 2.1 How the scheme works

The CDS aims to help reduce the volume of litter in NSW by encouraging people to collect and return beverage containers for recycling. It does this by paying consumers (or others) who return empty eligible containers to an authorised Collection Point a 10-cent refund per container.

Under the scheme, the beverage industry is required to pay fees to recover the costs involved. The beverage industry can increase the price of beverages sold in eligible containers to pass these costs on to consumers.

Existing kerbside recycling programs will continue to operate, but consumers who recycle eligible beverage containers through these programs will not receive the 10-cent refund. Instead, the operators of Material Recycling Facilities (MRFs) that process containers collected by local councils can claim this amount.

We note that in many cases kerbside recycling programs are provided on a contractual basis, with councils and their ratepayers paying service providers to provide a kerbside collection and recycling service. The scheme is intended to provide an incentive for local councils and recycling services (including MRFs) to come to an arrangement about how the 10-cent refund will be shared.<sup>8</sup> We also note that local councils are obliged, under the *Local Government Act 1993*, to charge only for the reasonable cost of domestic waste and recycling services.<sup>9</sup> Thus they would need to pass back their negotiated share of the refunds to residents in the form of a reduced management service charge or the provision of increased waste management services.

The details of the scheme and its operation are set out in the *Waste Avoidance and Resource Recovery Act 2001* (the Act).<sup>10</sup>

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<sup>8</sup> Waste Avoidance and Resources Recovery Amendment (Container Deposit Scheme) Bill 2016, First Reading, p 5.

<sup>9</sup> *Local Government Act 1993*, section 504(3).

<sup>10</sup> As amended by the *Waste Avoidance and Resource Recovery Amendment (Container Deposit Scheme) Act 2016*.

## 2.2 What beverage containers are covered

Most beverage containers between 150 mL and 3 L are eligible for the 10-cent refund, including those made from:

- ▼ glass
- ▼ plastic (eg, PET, HDPE)
- ▼ aluminium
- ▼ steel, and
- ▼ liquid paperboard (eg, certain milk and juice cartons).<sup>11</sup>

However, some beverage containers are not covered by the scheme (see Table 2.1). The beverages in these containers are generally consumed at home and so the empty containers rarely end up in the litter stream.<sup>12</sup>

**Table 2.1 Beverage containers *not* eligible for a refund under the CDS**

Plain milk or milk substitutes containers	Wine and water casks of 1L or more
Flavoured milk containers of 1L or more	Wine sachets of 250 mL or more
Pure fruit and vegetable juices containers of 1L or more	Cordials, concentrated fruit juice and vegetable juice containers
Glass wine and spirits bottles	Registered health tonic containers

Source: Return and Earn, at <http://returnandearn.org.au/eligible>, accessed 16 April 2018.

## 2.3 Key participants and their roles and responsibilities

The key participants in the CDS are the NSW Environment Protection Authority (EPA), the Scheme Coordinator, the Network Operator, and the ‘first suppliers’<sup>13</sup> of eligible beverage containers in NSW.

### 2.3.1 EPA, Scheme Coordinator and Network Operator

The EPA is responsible for regulating the CDS, including designing and developing the scheme, and managing registration of all eligible beverage containers supplied in NSW. It has appointed other organisations to perform the key roles in the scheme’s day-to-day operation – that of Scheme Coordinator and Network Operator.

The Scheme Coordinator role is performed by Exchange for Change. It is responsible for administering the scheme, including:

- ▼ entering into Supply Arrangements with the first suppliers of eligible container beverages in NSW
- ▼ calculating and collecting fees from the first suppliers to cover the cost of the scheme
- ▼ distributing these funds to operate the scheme, and

<sup>11</sup> Return and Earn, at <http://returnandearn.org.au/eligible>, accessed 16 April 2018.

<sup>12</sup> Return and Earn, at <http://returnandearn.org.au/eligible>, accessed 16 April 2018.

<sup>13</sup> Section 2.3.2 explains who first suppliers are.



- ▼ auditing and marketing the scheme.

The Network Operator role is performed by TOMRA Cleanaway. It is responsible for establishing and managing a network of Return and Earn collection points across NSW and managing collected containers. It can build or operate the collection points itself or contract other organisations to do so. Its role also includes contracting with recycling companies to recycle the collected containers.

### 2.3.2 First suppliers

The supply chain for beverages in NSW includes the following participants:

- ▼ **manufacturers**, who produce and package the beverages in NSW
- ▼ **importers**, who supply beverages produced in other states or countries to wholesalers or retailers
- ▼ **wholesalers**, who supply beverages from manufacturers or importers to retailers, and
- ▼ **retailers**, who supply beverages to consumers.

The ‘first supplier’ is the participant that first supplies beverages in eligible containers to the NSW market. In most cases, this is either the manufacturer or the importer.<sup>14</sup> However, because the supply chain operates differently across the beverage industry it can also be the wholesaler or retailer, as the examples in Table 2.2 show.

**Table 2.2 Examples of first suppliers**

Beverage is:	Supplied from:	First supplier in NSW is:
Manufactured in NSW	Manufacturer to wholesaler or retailer in NSW	Manufacturer
Manufactured in NSW	Manufacturer to wholesaler or retailer in another state	None (as no supply in NSW)
Manufactured outside NSW	From manufacturer to wholesaler outside NSW then to retailer in NSW	Wholesaler
Manufactured outside NSW	From manufacturer to retailer outside NSW then to that retailer’s outlets in NSW	Retailer

**Source:** EPA, NSW Container Deposit Scheme Information Session, 4 August 2017, pp 20-21.

Under the CDS, first suppliers of beverages in eligible containers are required to enter into a Supply Arrangement with the Scheme Coordinator and contribute to the costs of the scheme (which includes the Network Operator’s costs) under this arrangement. This Supply Arrangement requires the first supplier to:

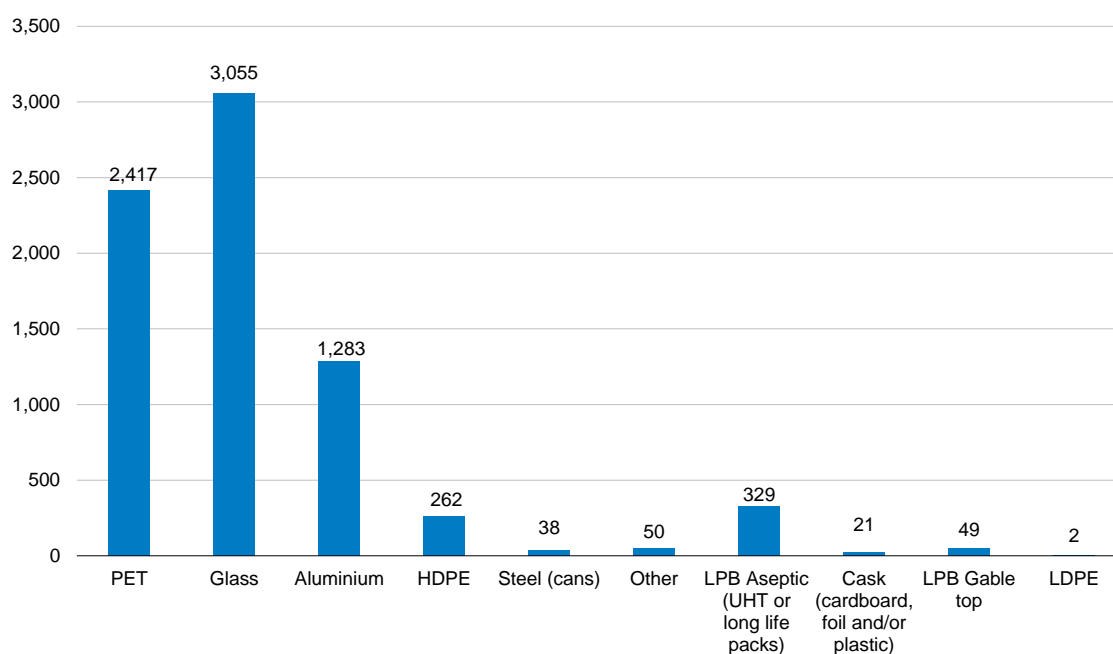
<sup>14</sup> Exchange for Change, Container Deposit Scheme Update for Australian Beverages, 25 August 2017, slide 12.

- ▼ Register each class of eligible container it supplies with the EPA (and pay the appropriate container approval fee).<sup>15</sup>
- ▼ Report on the volume of its own first supplies of beverages in each class of container in NSW.
- ▼ Pay fees to the Scheme Coordinator to contribute to the costs of the scheme. The amount of these fees is based on the volume of the supplier's first supplies as a proportion of the total volume of all eligible containers first supplied in NSW.

First suppliers must also ensure their containers are marked or labelled with the refund marking – *10c refund at collection depots/points in participating State/Territory of purchase* – in clear and legible characters, and the required barcode, on or before 1 December 2019.<sup>16</sup>

As of February 2018, there were 537 registered first suppliers and 7,505 registered container classes.<sup>17</sup> Glass, PET and aluminium make up the largest number of registered containers (Figure 2.1).

**Figure 2.1 Registered container classes by material type (February 2018)**



**Note:** Polyethylene Terephthalate (PET), High-density polyethylene (HDPE) and Low-density polyethylene (LDPE) are types of plastic, LPB is liquid paperboard.

**Data source:** Information provided by EPA to IPART, February 2018.

<sup>15</sup> A registration fee of \$80 applies per class of eligible container. Individual container registrations are valid for five years. See <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/return-and-earn/role-of-first-suppliers-of-drink-containers>

<sup>16</sup> These requirements are set out in the *Waste Avoidance and Resource Recovery (Container Deposit Scheme) Amendment (Supply and Collection) Regulation 2017, Part 3, Division 1, Clause 22A*. See Return and Earn Update, November 2017 #3, p 1.

<sup>17</sup> Information provided by EPA to IPART, 12 February 2018.

## 2.4 Regulatory and market environment

Previous assessments of the NSW beverage industry have either not revealed substantial concerns about competition, or have found there is ‘workable competition’ in the industry.<sup>18</sup> Workable competition means there is enough rivalry between firms to ensure that, over the long run, prices are determined by underlying costs rather than any market power. In turn, this means there is no need for any government intervention in relation to prices.

Accordingly, there is no price regulation in the NSW beverage industry. All participants in the supply chain can determine how to allocate their costs and set the price of their products.

### 2.4.1 All supply chain participants are subject to consumer law

However, all participants in the beverage supply chain are subject to Australian Consumer Law (ACL).<sup>19</sup> This law aims to protect consumers and ensure fair trading. Under the ACL consumers have protections (known as consumer guarantees) and businesses have obligations and responsibilities. For example, businesses cannot mislead consumers about the price, value or quality of goods.

The Australian Competition and Consumer Commission (ACCC) and NSW Fair Trading regulate compliance with the ACL. Generally, the compliance focus for Fair Trading is on individual consumers or small business disputes and the ACCC has a broader focus on the competitive process, widespread consumer detriment and national issues.<sup>20</sup> Australian courts and tribunals (including those in NSW) can also enforce the ACL. For example, they can order that an unfair contract term is not binding.<sup>21</sup>

### 2.4.2 Aspects of the CDS are exempt from competition law

Section 45(1) of the *Waste Avoidance and Resource Recovery Act 2001* (WARRA) specifically authorises certain conduct for the purposes of competition law. It permits the following to the extent that it would, but for section 45(1), otherwise be prohibited by Part IV of the CCA:

- ▼ a Scheme administration agreement and any Scheme arrangement
- ▼ the entering into or making of a Scheme administration agreement or Scheme arrangement
- ▼ conduct of the parties to a Scheme administration agreement or Scheme arrangement in negotiating the agreement or arrangement
- ▼ the grant or refusal of a container approval, and

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<sup>18</sup> The CIE, *Monitoring the impacts of the NSW Container Deposit Scheme*, January 2018, p 19. Also see, ACCC, *Grocery Inquiry 2008*, available from <https://www.accc.gov.au/about-us/consultations-submissions/public-consultations/grocery-inquiry-2008>, accessed 19 April 2018, Harper, I., P. Anderson, S. McCluskey, M. O’Byrne 2015 (*The Harper Review 2015*), Competition Policy Review, Final Report, March.

<sup>19</sup> The Australian Consumer Law is contained in Schedule 2 to the *Competition and Consumer Act 2010 (Cth)*

<sup>20</sup> Australian Competition and Consumer Commission, *2017 ACCC Compliance and Enforcement Policy 2017*, p 2, at <https://www.accc.gov.au/system/files/ACCC%20Compliance%20and%20Enforcement%20Policy%202017.pdf>, accessed on 24 January 2018.

<sup>21</sup> NSW Fair Trading website, at [http://www.fairtrading.nsw.gov.au/Consumers/Contracts/Unfair\\_contract\\_terms.html](http://www.fairtrading.nsw.gov.au/Consumers/Contracts/Unfair_contract_terms.html), accessed 2 February 2018.

- ▼ conduct authorised or required by or under the terms or conditions of a Scheme administration agreement, Scheme arrangement or container approval.<sup>22</sup>

Part IV of the *Competition and Consumer Act 2010 (Cth)* (the CCA) prohibits certain anti-competitive behaviour, including:

- ▼ cartel conduct
- ▼ making a contract, arrangement or understanding, or engaging in a concerted practice, that has the purpose or likely effect of substantially lessening competition
- ▼ certain types of boycotts, and
- ▼ misusing a substantial degree of market power for the purpose, or with the likely effect, of substantially lessening competition.

The “Scheme administration agreements” under the CDS are the agreement between the Government and the Scheme Coordinator (Exchange for Change) and the agreement between the Government and the network operator (TOMRA Cleanaway).

The “scheme arrangements” under the CDS are agreements between:

- ▼ the Scheme Coordinator and suppliers of beverages sold in a container, requiring the suppliers to pay to the Scheme Coordinator contributions towards the cost of the management, administration and operation of the Scheme
- ▼ the Scheme Coordinator and the network operator, requiring the Scheme Coordinator to pay to the operators refund amounts and associated administration and handling costs for containers that are collected at the collection points, and
- ▼ the network operator and persons who operate collection points, requiring the network operator to pay to those persons refund amounts and associated handling costs.

A “container approval” is an approval from the EPA to supply a beverage in a container in NSW. The WARRA creates an offence of supplying a container without a container approval.

### 2.4.3 Markets for recycled materials

In response to our Issues Paper, the NSW Business Chamber noted that, “recent developments related to China’s importation of recyclable materials mean that the merits of the CDS may no longer stack up”.<sup>23</sup> While litter reduction has been listed as a key benefit of the scheme, the Chamber argued that the capacity to recycle returned containers is integral to almost any basis for assessing the success of the CDS.<sup>24</sup>

We note the Minister for the Environment announced a \$47 million support package to address China’s enforcement of its “National Sword” policy, which restricts the types of

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<sup>22</sup> Section 45(1) of the Waste Avoidance and Resource Recovery Act 2001 (WARRA) specifically authorises certain conduct for the purposes of competition law. It permits these to the extent that it would, but for section 45(1), otherwise be prohibited by Part IV of the CCA.

<sup>23</sup> NSW Business Chamber, Submission to Issues Paper, March 2018, p 1.

<sup>24</sup> NSW Business Chamber, Submission to Issues Paper, March 2018, p 1.

recycled material it will accept.<sup>25</sup> As China is the largest importer of recyclables from Australia, this policy impacts NSW's kerbside recycling system and the options for recycling all products currently supplied in NSW, including beverage containers.

The support package will:

- ▼ enable councils to off-set some extra costs associated with kerbside recycling collections subject to guidelines
- ▼ improve council tendering processes to increase the production and use of recycled products, and
- ▼ fund community education initiatives to reduce kerbside recycling contamination.<sup>26</sup>

The NSW Government has established an inter-governmental Taskforce to progress a longer-term strategic response to National Sword. The Taskforce is led by the NSW EPA. The Taskforce includes representatives from the Department of Premier and Cabinet, including the Cross-Border Commissioner, NSW Treasury, Department of Finance, Services and Innovation, Roads and Maritime Services, Fire & Rescue NSW, Department of Planning and Environment, Office of Local Government, Department of Industry, and the Office of the Small Business Commissioner. Its focus is examining the use of recycled products and developing opportunities to increase the use of recycled products, pursuing a national policy, and examining long term recycling strategies and support requirements.<sup>27</sup>

The Senate Standing Committee on Environment and Communications References is conducting an inquiry into the waste and recycling industry in Australia.<sup>28</sup> The inquiry is considering issues related to landfill, markets for recycled waste and the Australian Government's role in providing a coherent approach to the management of solid waste. A report is due on 13 June 2018.

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<sup>25</sup> NSW EPA, Media Release, \$47 million to support recycling in NSW, 20 March 2018, Available from: - [https://www.epa.nsw.gov.au/news/media-releases/2018/epamedia180320-\\$47-million-to-support-recycling-in-nsw](https://www.epa.nsw.gov.au/news/media-releases/2018/epamedia180320-$47-million-to-support-recycling-in-nsw) , Accessed 17 April 2018.

<sup>26</sup> NSW EPA, Media Release, \$47 million to support recycling in NSW, 20 March 2018, Available from: - [https://www.epa.nsw.gov.au/news/media-releases/2018/epamedia180320-\\$47-million-to-support-recycling-in-nsw](https://www.epa.nsw.gov.au/news/media-releases/2018/epamedia180320-$47-million-to-support-recycling-in-nsw) , Accessed 17 April 2018.

<sup>27</sup> EPA website, <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/response-to-china-national-sword>, Accessed 11 April 2018.

<sup>28</sup> Senate Standing Committees on Environment and Communications, [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Environment\\_and\\_Communications/WasteandRecycling](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/WasteandRecycling), accessed on 5 April 2018.

## 3 Framework for monitoring and reporting

As Chapter 1 noted, our terms of reference for this review require us to monitor and report on the effect of the CDS on:

- ▼ the price of container beverages, and
- ▼ competition in the container beverage market, and any other market impacts on consumers.

Based on our findings, we are to recommend any actions required by government to address adverse effects or behaviours arising from the operation of the scheme, and whether price monitoring should continue beyond the initial one-year period.

In our Issues Paper, we proposed a framework for meeting these terms of reference and sought comment from stakeholders. After considering these comments, we have further developed and refined the framework and applied it to make the preliminary findings set out in Chapters 4 and 5. The sections below:

- ▼ provide an overview of the framework
- ▼ outline the key challenges of monitoring and reporting on the effects of the CDS, and how the framework addresses them, and
- ▼ discuss in more detail the key approaches and sources of information we will use to assess the effects of the CDS on retail prices and competition, and our responses to stakeholder comments on the framework.

### 3.1 Overview of our framework

Our framework for monitoring and reporting on the effects of the CDS in the period 1 November 2017 to 1 December 2018 involves two main parts:

1. **Assessing the effect on prices for container beverages in NSW** by analysing the overall or average changes in retail prices, and considering information on any complaints about beverage prices at an individual supplier level.
2. **Assessing the effect on competition in the container beverage market in NSW** and any other market impacts on consumers by seeking feedback from stakeholders and analysing any information on changes in the performance and conduct of suppliers, market shares and consumer expenditure on container beverages.

As Chapter 2 discussed, previous assessments of the beverage industry in NSW have either found there is ‘workable competition’ or not raised substantial concerns about competition in the industry. Like other regulators,<sup>29</sup> we think that this competition, together with Australian consumer law and compliance regulation, best protects consumers. Therefore,

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<sup>29</sup> For example, NSW Fair Trading, Compliance and Enforcement Policy, July 2013, p 2, available from [http://www.fairtrading.nsw.gov.au/biz\\_res/ftweb/pdfs/About\\_us/Compliance\\_and\\_enforcement\\_policy.pdf](http://www.fairtrading.nsw.gov.au/biz_res/ftweb/pdfs/About_us/Compliance_and_enforcement_policy.pdf), p 2, accessed on 6 February 2018.

we consider that our monitoring should focus on identifying any material change or behaviour resulting from the CDS that may indicate reduced competition. For example, this may include:

- ▼ sustained increases in prices above the efficient costs of supply beyond a reasonable time
- ▼ material increases in the costs of entering the market as a result of the CDS, or
- ▼ obstacles to switching suppliers as a result of the CDS.

Table 3.1 provides an overview of our framework, listing what we will monitor, how we will monitor and assess it, and when we will report on our findings. Given stakeholders' generally positive feedback, this framework is largely unchanged from the one proposed in our Issues Paper. However, in response to stakeholder concerns about whether we would be able to draw meaningful conclusions in our April Progress report, we have decided to also release a Draft Report in September prior to our final report in December.

Applying this framework to assess the effects of the CDS over 12 months should enable us to identify any systemic, ongoing impacts arising from the operation of the scheme, and distinguish them from one-off, transitional impacts due to its introduction or retailer competitive behaviour to gain customers or market share.

The findings of this assessment will inform our recommendations on any government actions required to address behaviours arising from the scheme, and whether price monitoring should continue beyond the initial one-year period. We expect that we would only consider recommending further monitoring if we do identify systemic, ongoing negative impacts.

### **3.2 Addressing the challenges of monitoring CDS impacts**

The nature of the container beverage industry and different pricing practices across the supply chain pose challenges for analysing the impact of the CDS on prices. Like in all competitive markets, participants in container beverage supply chain can change their prices at any time. Their pricing is also complex and often not transparent. For example, supplier agreements can vary by contract and may include discounts, rebates and other incentives. Details of these arrangements are not available to third parties. This makes it difficult to determine the true cost of supply. Larger retailers generally have more bargaining power than smaller retailers, and can use this to obtain more competitive prices from suppliers and avoid the need to use wholesalers.

**Table 3.1 IPART’s framework for monitoring and reporting on the effects of the CDS**

What?	How?	When?
1. Effect of the CDS on the price of container beverages	<p>Assess whether more than the full costs of the CDS have been passed through to consumers:</p> <ul style="list-style-type: none"> <li>▼ Collect and analyse information from the Scheme Coordinator on monthly costs of the CDS by container material type</li> <li>▼ Analyse changes in retail prices before and after the CDS for all container beverage products, including those not covered by the CDS, using two approaches: <ul style="list-style-type: none"> <li>– measuring overall price changes (trends) using price indices for beverages published by the Australian Bureau of Statistics (ABS)</li> <li>– quantifying the extent to which CDS direct costs are passed through to beverage prices using product level price data and a difference-in-differences method</li> </ul> </li> <li>▼ Collect and consider reports from consumers and scheme participants on individual instances of price changes in beverages before and after the introduction of the CDS</li> </ul>	<p>April Progress Report September Draft Report December Final Report</p>
2. Effect of the CDS on competition in the container beverage market and any other impacts on consumers	<p>Assess whether the CDS has resulted in a material reduction in competition in the container beverage market or any other market impacts on consumers:</p> <ul style="list-style-type: none"> <li>▼ Assess whether there have been sustained price increases above the efficient costs of supply based on the findings of part 1 above</li> <li>▼ Assess whether there have been changes in market shares or market composition by considering: <ul style="list-style-type: none"> <li>– changes in quantities of eligible beverage containers supplied into NSW by material type</li> <li>– information on consumers’ average spend on beverages</li> </ul> </li> <li>▼ Collect and considering reports from consumers and scheme participants on individual changes in prices, unfair or unjustified supplier behaviour</li> <li>▼ Considering other market impacts such as whether the CDS has led to a reduction in product innovation, consumers buying less container beverages overall or shifting consumption into non-CDS container beverages</li> </ul>	<p>April Progress Report September Draft Report December Final Report</p>

In addition, the container beverage market includes many different beverage types. Previous studies have found that the price elasticity of demand – that is, the extent to which consumption of a product changes in response to changes in price – differs across beverage



types.<sup>30</sup> This is likely to mean that the extent to which the full costs of the CDS can be passed through into retail prices will vary for different product types. Further:

- ▼ Some retailers regularly offer discounted prices for container beverages, which makes it more difficult to measure average price changes due to the introduction of the CDS.
- ▼ Not all retailers change their prices immediately following changes in costs. Some (like cafes and restaurants) may prefer to round prices and, for example, change their prices in 50c increments for ease of communication to customers. This means that some retailers may bear the costs of the CDS in the short term while others may increase prices to the next rounded increment and thus it appears they are more than recovering the costs of the CDS.
- ▼ Retailers may have a policy for nationally consistent prices, which means the mark ups may vary across different jurisdictions and the impact of the CDS on these prices is unclear.
- ▼ To the extent that the CDS involves fixed costs, large and small firms in the supply chain may be affected differently.

These factors will make it challenging to draw conclusion around the drivers of price changes within the supply chain. They also suggest the pass through of CDS costs into retail prices will vary by product and by retailer, depending on demand responses and bargaining power. And they suggest it may take some time before the full price impacts of the CDS flow through to retail prices.

To address these challenges, our framework:

- ▼ uses multiple information sources to monitor changes in price and competition
- ▼ uses a 'difference-in-differences' method to attempt to quantify any price changes that are attributable to the introduction of the scheme, and
- ▼ includes an additional stage of reporting so we can make draft findings after the CDS has been operating for longer than three months, and we consult stakeholders on these findings before we reach our final findings and recommendations.

### **3.2.1 Using multiple information sources to monitor changes in price and competition**

As Table 3.1 indicates, we will use a wide range of information sources to assess the impacts of the CDS on prices and competition. This includes information on retail beverage prices to assess average impacts. It also includes feedback from individual consumers and suppliers from all levels of the supply chain (including manufacturing, wholesaling and retailing). This feedback should help us identify the extent of individual instances of price changes or market behaviours of concern, and any emerging systemic issues in the market.

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<sup>30</sup> Powell, L.M, Chriqui, J. F., Khan, T., Wada, R., and Chaloupka, F.J, *Assessing the Potential Effectiveness of Food and Beverage Taxes and Subsidies for Improving Public Health: A Systematic Review of Prices, Demand and Body Weight Outcomes*, Obesity Reviews, February 2013, 14(2), pp 110-128

### 3.2.2 Using a ‘difference-in-differences’ method to isolate price impacts attributable to CDS

We used a difference-in-differences approach to quantify the dollar change in average beverage prices that is due to the CDS. Difference-in-differences is a statistical technique commonly used to evaluate a policy impact. The base case is where outcomes are observed for two groups over two time periods – one group is exposed to a treatment in the second period but not in the first period (ie, treatment group) while the other group is not exposed to the same treatment during either period (ie, control group).

The difference-in-differences method compares the changes in outcomes between the treatment group and the control group over time. By taking the difference of the differences, the method eliminates biases in the difference between the treatment and control group in the second period (ie, treatment period) that could be driven by permanent differences (that do not change over time) between those groups, as well as biases from changes over time in the treatment group that could be due to trends.

In the context of our review, the treatment is the introduction of the CDS, and the difference-in-differences method identifies changes in beverage prices in NSW that is due to the CDS, by:

1. calculating the change in beverage prices in NSW before and after the CDS
2. calculating the change in beverage prices in a **comparison group** over the same period, and
3. calculating the difference between 1 and 2.

We used Victoria as the comparison group for our difference-in-difference analysis.

### 3.2.3 Including an additional stage of reporting

In response to our Issues Paper, several stakeholders said that it could take much more than three months for the full impacts of the CDS on prices and competition to flow through. They questioned whether we would be able to draw any meaningful conclusions in the April Progress Report. For example:

- ▼ The Australian Beverage Council Ltd argued that April would be too early to undertake a meaningful assessment of the impact of the CDS, and that it may not be possible for perhaps as long as eighteen months from the date of implementation.<sup>31</sup>
- ▼ Two Metre Tall Company submitted that April would be too early to gauge the full implication of beverage price rises as many in the industry, especially small producers, were caught off guard by the rushed timeframes of the scheme’s introduction.<sup>32</sup>

We agree with stakeholders and have decided to release a Draft Report in September 2018. This will allow us to present draft findings and recommendations based on a longer monitoring period, and to conduct further analysis to address stakeholder concerns on the costs of the scheme and impacts on competition. We will also hold public hearings in

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<sup>31</sup> ABCL, Submission to Issues paper, March 2018, p 6.

<sup>32</sup> Two Metre Tall Company, Submission to Issues Paper, March 2018, p 5.

October after the release of the Draft Report, rather than July/August as originally proposed.

### 3.3 Assessing the effect of the CDS on prices

The first part of our framework involves assessing whether more than the full costs of the CDS have been passed through to consumers in prices by:

- ▼ quantifying the ‘direct’ costs of the scheme based on information from the Scheme Coordinator on the monthly costs of the CDS by container material type
- ▼ analysing changes in retail prices before and after the introduction of the CDS for all container beverage products, including those not covered by the CDS, and
- ▼ considering reports from consumers and scheme participants on individual instances of price changes in beverages before and after the introduction of the CDS.

#### 3.3.1 Quantifying direct costs of the CDS

In line with the approach proposed in our Issues Paper, we will quantify the ‘direct costs’ of the CDS. These are the costs that the Scheme Coordinator recovers from first suppliers, as set out in Table 3.2 below.

**Table 3.2 ‘Direct’ CDS costs**

Cost item	Description	Recovered through
Administration costs	Scheme Coordinator costs for administering the scheme - determined through a competitive tender process.	Monthly administration fee
Regulatory compliance costs	EPA costs for monitoring compliance with the scheme	Monthly compliance fee
Collection costs	Network Operator costs for paying the 10-cent refund per container returned to collection points and operating a network of Collection Points. The network fees for operating the Collection Points were determined through a competitive tender process.	Monthly network fee per container collected. This fee varies by container material type. <i>(Refund Amount (10c) + Network Fee) × Estimated monthly volume of containers recovered through Network Operator collection network</i>
Refunds to Material Recycling Facilities (MRFs)	Costs of paying the 10-cent refund per container returned by MRFs.	Monthly refund fee <i>(Refund amount (10c) × forecast volume of containers recovered through MRFs)</i>
Other	Other costs of the scheme such as interest earned on Scheme Payments accounts and recovery of bad debts	Monthly fee

**Source:** Exchange for Change, at [http://returnandearn.org.au/Assets/pdf/ReturnandEarn\\_SchemeCosts.pdf](http://returnandearn.org.au/Assets/pdf/ReturnandEarn_SchemeCosts.pdf), accessed on 6 February 2018.

A range of industry stakeholders argued that our analysis should include a broader set of costs, including the indirect costs to suppliers to comply with the scheme. For example:

- ▼ The Liquor Stores Association considered that a broader set of costs would include costs of setting up and coordinating the logistics, transport, handling, regular auditing, to ensure that containers are recycled, plus managing the cash flow. It argued that for bottled water, these costs are significant and can equate to price increases of around 60%.<sup>33</sup>
- ▼ The NSW Business Chamber recommended that we conduct a bottom up assessment of costs incurred by businesses throughout the supply chain to inform how prices are likely to adjust in the long run, and that both direct and indirect costs incurred by businesses be considered in this assessment.<sup>34</sup>
- ▼ The Office of the NSW Small Business Commissioner (OSBC) encouraged us to estimate all costs associated with complying with the CDS at all levels of the supply chain, and to consider the addition of margins at each level.<sup>35</sup>
- ▼ The Distilled Spirits Industry Council of Australia (DSICA) argued that suppliers have incurred other additional costs to participate in the scheme including:
  - internal administrative costs to register all products and any new products
  - label changes
  - maintenance of multiple pricing systems to deal with different state pricing
  - negotiation costs with customers
  - tracking product shipped to interstate warehouses but for eventual sale in NSW
  - increases in per unit costs as production scale is lost due to reduced volume flowing from price increases, and
  - losses incurred by suppliers in having their containers included unfairly in the scheme, and accordingly prohibited from sale in various states (for example, premixed spirits in casks).<sup>36</sup>

We note that the administrative burden for suppliers is likely to be higher in the early stages of the CDS and acknowledge that suppliers incurred or incur other costs in addition to the 'direct' costs outlined in Table 3.2. However, some of these costs are one-off in nature, and vary from supplier to supplier. In addition, as the beverage market is workably competitive, the market determines how much of these costs are passed through to customers. Rather than undertaking a bottom up cost assessment across many different suppliers in the market, we maintain the view that we should focus on those costs that have the potential to materially restrict competition in the relevant markets.

### 3.3.2 Analysing changes in retail prices before and after the introduction of the CDS

As proposed in our Issues Paper, we will analyse changes in retail prices before and after the introduction of the CDS for all container beverage products, including those not covered by the CDS, using two methods:

1. measuring overall price changes (trends) using price indices for beverages published by the Australian Bureau of Statistics (ABS)

<sup>33</sup> LSA, Submission to Issues Paper, March 2018, pp 6-7.

<sup>34</sup> NSW Business Chamber, Submission to the Issues paper, March 2018, p3

<sup>35</sup> Office of the NSW Small Business Commissioner, Submission to Issues Paper, March 2018, p 2.

<sup>36</sup> DSICA, Submission to Issues Paper, March 2018, p 1

2. quantifying the extent to which the costs of the CDS are passed through to retail beverage prices using product-level price data and a difference-in-differences approach.<sup>37</sup>

Several stakeholders supported this overall approach. For example, the Office of the NSW Small Business Commissioner considered it to be practical, given the challenges of price analysis at other levels of the supply chain.<sup>38</sup>

However, stakeholder also expressed some concerns about it. Several pointed out limitations in the ABS data we will use for the first method. For example, the Office of the NSW Small Business Commissioner noted that this data may not isolate NSW beverage sales completely accurately or align with 'first supply' classifications applicable under the CDS.<sup>39</sup> Two Metre Tall Company noted that the ABS 'Wine' expenditure class includes cider which is covered by the CDS.<sup>40</sup>

The Office of the NSW Small Business Commissioner and the Liquor Stores Association also raised concerns with the second method, particularly its focus on retail beverage prices. The former noted that this approach would naturally exclude price analysis further up the supply chain, and that it had received representations suggesting that suppliers at various levels often feel they themselves bear CDS related costs and face competitive issues flowing from the CDS.<sup>41</sup> The Liquor Stores Association argued that we should include 'wholesale prices' in the analysis where possible and applicable.<sup>42</sup>

We recognise the limitations of the ABS data noted by stakeholders. This is why we also assess the impact of the CDS on prices using a difference-in-differences method. As noted above, this method identifies any change in beverage prices in NSW that are due to the CDS by calculating:

1. the change in retail prices in the NSW beverage market before and after the CDS
2. the change in retail prices in the Victorian beverage market over the same period, and
3. the difference between 1 and 2.

Ideally, we would use a long time series of prices, both before and after the introduction of the CDS. However, we only have two years of data before the CDS and, at this stage, only three months of data after the CDS. This could mean that it may be difficult to attribute changes in prices to the CDS rather than other drivers of price variation.

However, we can address the limitations to some extent by running separate regression analyses for different beverage types in each of the two main markets (alcoholic and non-alcoholic beverages). These separate analyses allow us to account for differences in the price elasticity of demand across beverage types, and differences in the underlying production costs of different beverage types. Both these factors are likely to influence the extent to

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<sup>37</sup> Difference-in-differences is a statistical technique commonly used to evaluate a policy impact. The base case is where outcomes are observed for two groups over two time periods – one group is exposed to a treatment in the second period but not in the first period (ie, treatment group) while the other group is not exposed to the same treatment during either period (ie, control group).

<sup>38</sup> Office of the NSW Small Business Commissioner, Submission to Issues Paper, March 2018, p 1.

<sup>39</sup> Office of the NSW Small Business Commissioner, Submission to Issues Paper, March 2018, pp 1-2.

<sup>40</sup> The Two Metre Tall Company, Submission to Issues Paper, March 2018, p 3.

<sup>41</sup> Office of the NSW Small Business Commissioner, Submission to Issues Paper, March 2018, p 1.

<sup>42</sup> Liquor Stores Association, Submission to Issues Paper, March 2018, p 12

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which and how quickly the costs of the CDS are likely to be passed through to retail prices. (A more detailed explanation of these analyses is provided in Chapter 4, where we discuss our preliminary analysis on the impacts of the CDS on prices.)

We have decided to use the Victorian beverage market as the comparison market for this analysis. We think it is an appropriate comparison market, as it is comparable in size to the NSW market, Victoria does not have a CDS and has not announced it will introduce one over the monitoring period, and the prices for non-alcoholic beverages in these states tend to move together.

One of the key assumptions underlying the difference-in-differences method is that the prices in the comparison group market accurately represent changes in beverage prices that would have been experienced by NSW in the absence of the CDS. To test the validity of this assumption, we compared beverage price trends in NSW and Victoria before the introduction of the CDS – price trends between NSW and Victoria were similar prior to the CDS as shown in Chapter 4.

We acknowledge the concerns raised by the Office of the Small Business Commissioner and the Liquor Stores Association in relation to our focus on retail prices in applying the difference-in-differences method. But in our view, it would not be practical to extend our focus to manufacturer and wholesale price changes. We also consider that we should be able to address their concerns somewhat by collecting and considering reports on individual price changes from consumers and market participants (discussed in section 3.3.3 below).

### **3.3.3 Considering reports from consumers, manufacturers, wholesalers and retailers on price changes**

As the methods outlined above focus on the average changes in the price of container beverages, they won't help us to assess the extent to which individual price changes are above the costs of the scheme. Therefore, we will also collect and consider reports on individual price changes from consumers and other market participants. Consumers and scheme participants can report any incidents of individual price changes they consider to be excessive on our website. We will also monitor price complaints about the CDS to other regulators including NSW Fair Trading and the NSW Small Business Commissioner.

There is already a high level of price monitoring in the retail markets for alcoholic and non-alcoholic beverages, of both regular and promotional prices. For example, several companies collect and monitor beverage prices in NSW (prices on websites or scanned by retailers). The larger retailers of beverage products also generally monitor the pricing of their competitors for the same or similar products.

We do not propose to replicate the price monitoring that is already occurring across both CDS and non-CDS products in the beverage market. However, by monitoring complaints and feedback we can identify whether there are any emerging, systemic issues in the market.

## **3.4 Assessing the effect of the CDS on competition**

The second part of our framework involves assessing whether the scheme has imposed a material restriction on competition, using an approach similar to the 'competition tests'

included in regulatory impact statements. In general, legislation and regulation should not restrict competition unless it can be demonstrated that the benefits of the restriction to the community as a whole outweigh the costs, and the objectives of the regulation can only be achieved by restricting competition. Regulations can restrict competition in several ways – for example, by limiting the number or types of suppliers in a market (through raising costs for business etc); limiting the ability of suppliers to compete; and reducing the incentive of suppliers to compete.

Our approach for this analysis involves:

- ▼ defining the relevant markets
- ▼ assessing whether there have been sustained price increases above the efficient costs of supply in each of these markets
- ▼ assessing whether there have been changes in market shares or market composition in each market
- ▼ collect and considering reports from consumers and scheme participants on individual changes in prices, unfair or unjustified supplier behaviour, and
- ▼ considering whether the CDS has led to other market impacts, such as reduced product innovation, consumers buying less container beverages overall or shifting their consumption into non-CDS container beverages.

### 3.4.1 Defining the relevant markets

The main issues we will consider in defining the relevant markets for analysing whether the CDS has materially restricted competition are:

1. the **product classes and types** being offered (eg, non-alcoholic and alcoholic container beverages, beer and cider, soft drinks and water) and how readily they can be substituted for each other
2. the **geographic space** in which substitution can occur (eg, Australia, NSW, or regions)
3. the **functional** level of production in which competition occurs (eg, manufacturing, wholesaling or retailing).

To inform our market definitions, we will consider information on the beverage industry, and the findings of recent econometric studies and other regulators' market definitions in relation to the beverage industry.

### 3.4.2 Assessing whether there have been sustained price increases above the efficient costs of supply

When competition is working well, if a business increases its prices above the costs of supply, then they will be outcompeted and lose customers to other business. Sustained increases in prices above the costs of supply may indicate reduced competition. For this step, we will consider all the findings of our assessment of the effect of the CDS on prices (part 1 of our framework, discussed above).

### **3.4.3 Assessing whether there have been systemic changes in market shares or market composition**

Changes in market share provide information about whether the market is becoming more or less concentrated and whether there are more or less suppliers in the market. In addition, significant changes in the total quantities or levels of consumption of container beverages may indicate other potential unintended market consequences of the CDS.

We have engaged the Centre for International Economics (the CIE) to provide advice on the impact of the CDS on market shares and quantities and consumption of container beverages. The CIE will use:

- ▼ data from for the Scheme Coordinator on container quantities by material type to analyse changes in the total quantities and market shares of container beverage suppliers since the introduction of the CDS, and
- ▼ data from Nielsen's home scan survey to analyse the impact on consumer spending on alcoholic and non-alcoholic beverages.

### **3.4.4 Collecting and considering individual changes in prices, unfair or unjustified supplier behaviour**

We will collect and consider reports from consumers and scheme participants on individual changes in prices, unfair or unjustified supplier behaviour. Stakeholders generally supported this approach. However, some also emphasised that we need to seek and consider feedback from all parts of the supply chain (manufacturers, wholesalers, retailers) not just consumers. For example:

- ▼ The Australian Beverage Council and the National Retail Association noted that price rises are generally unpopular with consumers, so there is potential for an increase in complaints despite industry efforts to stay competitive and keep prices down.<sup>43</sup> The Australian Beverage Council also noted that a recent consumer survey revealed support for the CDS is declining as more customers become aware that they are paying more for beverages to cover the costs of the scheme.<sup>44</sup>
- ▼ The Liquor Stores Association noted that it is important that we consider complaints coming from additional stakeholders – in particular retailers – and also monitor complaints the Scheme Coordinator and Network Operator from customers, retailer and other scheme participants.<sup>45</sup>
- ▼ The Office of the NSW Small Business Commissioner suggested that we also consider feedback at the Return and Earn Facebook page where over 400 reviews have been posted.<sup>46</sup>

We agree with stakeholders that it is important for us to receive and consider feedback from a wide range of stakeholders, including the range of supply chain participants. While we may not have made this clear in our Issues Paper, it has always been our intention to do so.

<sup>43</sup> National Retail Association submission to IPART Issues Paper, March 2018, pp 7-8.

<sup>44</sup> Australian Beverage Council Ltd submission to IPART Issues Paper, March 2018, pp 16-17.

<sup>45</sup> Liquor Stores Association submission to IPART Issues Paper, March 2018, p 14.

<sup>46</sup> Office of the NSW Small Business Commissioner submission to IPART Issues Paper, March 2018, p 4.



## Investigating unfair or unjustified behaviour or market outcomes

In addition to monitoring and reporting on supplier performance and behaviour, our terms of reference provide for us to investigate any behaviour or market outcomes that appear unfair or unjustified on consumers or scheme participants. We can identify and investigate matters at our own discretion or on request from the Premier or the Minister for the Environment.

In the Issues Paper we outlined our preliminary view that IPART's investigating role would involve early identification of any issues for possible referral to NSW Fair Trading or the ACCC. Generally stakeholders didn't agree with our approach for referring matters for investigation to other regulators, and considered that we are unfairly targeting retailers.

The Australian Beverage Council considers that natural justice should be afforded in the first instance as it's not an area IPART traditionally operates in. Before referring any behaviour or market outcomes to a relevant regulator, the beverage manufacturer, wholesaler or retailer concerned should be afforded a reasonable opportunity to respond to any allegation and outline its position.<sup>47</sup>

The National Retail Association does not believe this review is able to determine the true impact of the scheme on pricing individual goods and in the absence of this information, do not support referring retailers to a regulator. The National Retail Association further submit that the review should have less hostile attitude to retailers and more respect and understanding of the enormous financial and logistical challenges that the implementation of the CDS has imposed on them.<sup>48</sup>

The Liquor Stores Association does not agree with the proposed criteria to refer matters to the relevant regulator. They are not convinced that this analysis will contribute to any reliable or meaningful conclusions, as it is already a given that price has been impacted as a result of the implementation of the CDS. They believe that IPART should adopt a more consultative approach with retailers, given the enormous financial and logistical challenges this CDS has imposed on the sector.<sup>49</sup>

The Office of the NSW Small Business Commissioner has suggested that IPART should consider investigating the effects experienced by small liquor and grocery retailers located in various towns adjacent to the NSW border with Victoria. The Commissioner also commented that regulators such as NSW Fair Trading and the ACCC lack the legal framework, resources or regulatory priority to investigate issues arising between neighbouring jurisdictions.<sup>50</sup>

While we will review and carefully consider all complaints we receive, our focus is on those circumstances that would have the potential to harm the competitive process or result in widespread consumer or business detriment.

We will exercise our discretion in deciding whether we would investigate a matter or refer it to the relevant regulator, by assessing:

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<sup>47</sup> Australian Beverage Council Ltd submission to IPART Issues Paper, March 2018, p 17.

<sup>48</sup> National Retail Association submission to IPART Issues Paper, March 2018, p 8.

<sup>49</sup> Liquor Stores Association submission to IPART Issues Paper, March 2018, p 14.

<sup>50</sup> Office of the NSW Small Business Commissioner submission to IPART Issues Paper, March 2018, p 5.

1. **If the alleged behaviour or market outcome is likely to be material.** For example, if we receive a single complaint or a series of complaints that raise similar concerns from different stakeholders. We would also consider the nature of the alleged behaviour.
2. **If the alleged behaviour or market outcome is likely to result in a substantial detriment to consumers or businesses.** For example, if we receive a series or range of complaints about the behaviour of the same supplier across different geographic markets.

Where we form a judgement that the alleged behaviour or market outcome is likely to be material and result in substantial detriment, we would then make a decision about whether to investigate the matter or refer it to the relevant regulator. We note that IPART does not have a compliance or enforcement role under the Australian Consumer Law and therefore we are not able to take action on unfair business practices or competition issues that may arise in the beverage market as a result of the introduction of the CDS.

In practice other regulators (such as the Australian Competition and Consumer Commission or NSW Fair Trading) are set up to investigate matters on competition issues and unfair business practices and they have expertise and experience in dealing with these matters. This means that we could be duplicating the effort of another regulator, particularly if we don't have an enforcement or compliance role on the matter under investigation. Further, we would not want to compromise any potential investigation and action by another regulator.

Therefore, we may decide it is more appropriate for Australian Competition and Consumer Commission or NSW Fair Trading to investigate allegations on competition issues or unfair business practices. Where we refer a matter to another regulator, it would be at their discretion whether or not to pursue the matter.

### **3.4.5 Considering whether the CDS has led to consumers buying less container beverages**

In addition to affecting competition in the market for container beverages, the CDS could have other impacts that affect consumers. For example, by increasing the retail price of eligible container beverages, it could lead to lower beverage consumption levels overall, or a shift in consumption from away from beverages covered by the scheme to those not covered by the scheme.

It is important to note that changes in consumption and expenditure will not necessarily move in the same direction, due to the role of price elasticity. As noted above, price elasticity means the extent by which beverage demand will respond to changes in price, and can take the form of:

- ▼ Inelastic demand – this means that any increase in the price paid for beverages is associated with a less than proportionate decrease in the quantity purchased.
- ▼ Elastic demand – this means that any increase in the price paid for beverages is associated with a more than proportional decrease in the quantity purchased

- 
- ▼ Unit elastic demand – an increase in price is associated with a proportional decrease in quantity purchased.<sup>51</sup>

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<sup>51</sup> The CIE, NSW Container Deposit Scheme – Impacts on beverage expenditure and consumption, Interim report, p 6.

## 4 Impacts on beverage prices

As Chapter 3 outlined, the first part of our framework is to assess the effects of the CDS on NSW container beverage prices. To do this, we:

- ▼ estimated the average increase, if any, in the retail prices of non-alcoholic and alcoholic beverages on a per container basis over the period November 2017 to February 2018 that can be attributed to the introduction of the scheme
- ▼ estimated the direct costs of the scheme on a per container basis over the period November 2017 to February 2018<sup>52</sup> using information from Exchange for Change (the Scheme Coordinator), and
- ▼ considered any reports or complaints about beverage price increases at an individual supplier level.

The sections below summarise our preliminary findings and recommendations on effects of the CDS on prices. We then discuss our findings and the analysis that support them in more detail.

### 4.1 Summary of preliminary findings and recommendations on effects on prices

Our preliminary findings suggest that increases in container beverage prices in NSW as a result of the CDS were consistent with the estimated direct costs of the scheme over the reporting period.<sup>53</sup> However, both the size and timing of the increases varied between non-alcoholic and alcoholic container beverages:

- ▼ Soft drinks and water prices were around 10 to 14 cents per container higher in December to February, and fruit juice prices were around 6 cents per container higher in January and February.
- ▼ Beer prices were around 2 to 3 cents per container higher in December 2017 and January 2018 increasing to around 6 cents per container higher in February 2018, and cider prices were up to 7 cents per container higher in February 2018.

A comparison of these price increases with the estimated direct costs of the scheme (discussed below) suggests that on average, most of the estimated costs of the CDS have been passed through in non-alcoholic container beverage prices, but only around half these costs have been passed through in alcoholic container beverage prices.

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<sup>52</sup> As noted in Chapter 1, Exchange for Change issues invoices monthly in advance with first invoice issued in November for the scheme commencing on 1 December 2017.

<sup>53</sup> The 'direct' costs include the fees levied on first suppliers to recover the costs of operating the scheme and paying the 10-cent refund per container. We note that some suppliers may also have incurred other 'indirect' costs as a result of the scheme such as IT and reporting system upgrade, administration and reporting costs. These costs vary from business to business and so we are unable to estimate typical additional 'indirect' costs.

We found that estimated direct costs of the scheme for non-alcoholic and alcoholic beverages were around 12 to 15 cents per container over the period December 2017 to February 2018.<sup>54</sup> We also found that there was some volatility in these costs from month to month, as a result of the 'true up' mechanism. During the first three months of the scheme, Exchange for Change invoiced suppliers based on the forecast volumes of containers returned through TOMRA Cleanaway (the Network Operator) only. These forecasts were substantially above the actual volumes observed once the scheme commenced. We expect there will be further volatility in the coming months, as Exchange for Change start to true up costs for the actual volumes of containers returned through Material Recycling Facilities (MRFs) as well.

Exchange for Change has begun to provide additional information to suppliers on its forecasts of container volumes and costs in monthly newsletters. We consider it should also publish monthly forecasts of container volumes and scheme costs in advance of issuing invoices each month, to help improve the transparency of forecasting and reduce the volatility in the direct costs of the scheme.

### IPART preliminary findings

- 1 On average, the retail prices of container beverages in NSW have increased in line with or by less than the estimated direct costs of the scheme.
- 2 For non-alcoholic container beverages, most of the estimated direct costs of the scheme appear to have been passed through to consumers on average:
  - Soft drinks and water prices were around 10 to 14 cents per container higher as a result of the CDS in December to February.
  - Fruit juice prices were around 6 cents per container higher in January and February as a result of the CDS.
- 3 For alcoholic container beverages, less than half of the estimated direct costs of the scheme appear to have been passed through to consumers on average:
  - Beer prices were around 2 to 3 cents per container higher as a result of the CDS in December 2017 and January 2018, increasing to around 6 cents per container higher in February 2018.
  - Cider prices were up to 7 cents per container higher as a result of the CDS in February 2018.
- 4 The estimated direct costs of the scheme for non-alcoholic and alcoholic beverages have been around 12 to 15 cents per container (including GST) over the period December 2017 to February 2018.

### IPART Preliminary Draft Recommendation

- 1 Exchange for Change publish the following information prior to issuing its June invoice and all subsequent invoices:
  - forecast container volumes for the next three months for both Network Operator volumes and MRF volumes
  - a description of how container volumes were estimated

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<sup>54</sup> Including GST

- forecast costs per container for the next three months
- costs per container for previous months based on actual container volumes recovered via the Network Operator and MRFs (once known) (ie, what the costs would have been if forecasts were 100% accurate).

## 4.2 On average container beverages prices have increased by around 2-14 cents per container as a result of the CDS

To estimate the average increase in container beverage retail prices for this progress report, we used the difference in differences method outlined in Chapter 3.<sup>55</sup> We focused on the following set of beverage products which are covered by the CDS, using the datasets outlined in Box 4.1:

- ▼ bottled water
- ▼ soft drink
- ▼ fruit juice
- ▼ beer, and
- ▼ cider.<sup>56</sup>

Our sample consisted of monthly prices of container beverages sold in NSW and Victoria over the period January 2016 to February 2018. We categorised products by manufacturer (or brand), product description, pack type (ie, multi pack or single pack), size (eg, 350 ml, 600 ml, etc), price type (ie, promotional or non-promotional price), retailer, and retailer location. We excluded bottled water drink containers of 3 litre or more, and pure fruit or vegetable juice containers of 1 litre or more from our sample because they are not eligible for a refund under the CDS. We also excluded products that were not available for sale in both states to avoid different product compositions having an effect on our price analysis.

Our sample includes beverage products that have continuous monthly prices. Specifically, for a product to be included in our sample, its price must be available every month since January 2017. This filter is necessary as identifying the impact of the CDS on beverage products at a product level requires tracking the prices of the same product over time.<sup>57</sup>

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<sup>55</sup> We did not measure the overall price changes (trends) using price indices for beverages published by the Australian Bureau of Statistics (ABS) as the relevant ABS data does not yet cover a sufficient period following the introduction of the CDS. We will include this analysis in our draft report.

<sup>56</sup> We did not analyse the impacts of the CDS on beverage products not covered by the CDS such as wine and spirits for this report but will do so for our draft report.

<sup>57</sup> Nielsen's Homescan database contains the prices of products purchased by its panel members. By imposing a condition that products must have continuous monthly prices from January 2017, we excluded products that were not regularly purchased by the panel members. This condition also excludes the majority of the products with temporary promotional prices from the Homsecan and Insight Retail datasets. We note that this filtering process results in a relatively small sample size for bottled water and fruit juice products.

## Box 4.1 Datasets used for analysis of the CDS impact on beverage prices

### Non-alcoholic beverages

Our analyses of non-alcoholic beverage prices are based on transactional prices from Nielsen's Homescan. The Homescan consists of a national representative panel of consumer purchases in terms of region, household size, life stage, and income. Its panel comprises 10,000 households across Australia.

Participating households are provided with a hand-held scanner (or use Nielsen's mobile app) and are required to scan all items following a purchase. The scanner scans the barcode of the product and records all product specific information for each purchase. In addition, households manually record the price and quantity for the purchase. For each transaction, households are also asked whether they perceived the purchase to have been made on promotion or off promotion. The scanned data is then sent automatically to Nielsen. Participating households receive points exchangeable for gifts and store vouchers.

We obtained two sets of data from Nielsen:

- ▼ **Aggregated reports** containing average 4-weekly prices for each group of products where a group is given by a combination of beverage category, pack size, manufacturer, pack type, price type and retailer. For example, an aggregated report provides that for a 4 week period from 3 January 2016 to 30 January 2016, the average price paid for *single pack 1L soft drink* manufactured by *Coca Cola Amatil* sold at a *Retailer A* in NSW is \$3.
- ▼ **Transactional data** containing individual transactions made across the categories by the Homescan panel. This contains price paid, price type (ie, promotional or non-promotional price), manufacturer, pack type (ie, multi pack or single pack), beverage size, retailer and region (ie, Sydney Metro, Northern NSW and Southern NSW for NSW, and Melbourne Metro and regional Victoria for Victoria).

### Alcoholic beverages

Our analyses of alcoholic beverage prices are based on retail prices collected by Invigor Group (Invigor) Insights Retail datasets. Invigor collects prices for beer, cider, RTD, spirits and wine from 28 retailer websites a number of times each day, and has provided aggregated monthly prices such as mean, median, maximum, minimum and mode prices.

Based on information provided by Invigor, of the 27 retailers, Dan Murphy's, First Choice Liquor, Liquorland, Thirsty Camel, Vintage Cellars have state-based pricing (ie, different prices for different states). Within each state, Dan Murphy's is the only retailer which has different prices at a postcode level.

We then built two sets of sample data:

- ▼ **Sample A**, which included the products for which there is continuous monthly price information from January 2017, and
- ▼ **Sample B**, which included only the products with continuous monthly price information from January 2016. It contained fewer observations, and is likely to contain products that are more established and commonly purchased.

We conducted our difference-in-differences analysis using the econometric model shown in Appendix B for each sample set within each beverage category.

See Appendix B for further information our regression model specifications including descriptive statistics of our sample and full regression results.

This analysis suggests that on average container beverages prices increased by around 2 to 14 cents per container over December 2017 to February 2018 as a result of the CDS.

#### 4.2.1 Bottled water prices have been 10 to 14 cents per container higher due to the CDS

Based on our analysis of Sample A, we found that on average there has been a statistically significant<sup>58</sup> increase in bottled water prices associated with the introduction of the CDS. In December 2017, bottled water prices were 11.6 cents higher per container due to the CDS. While prices were only around 10 cents higher in January 2018 as a result of the CDS, this difference increased to 12.5 cents per container in February 2018.

When we considered Sample B, we found that bottled water prices were around 13 to 14 cents higher due to the CDS over the period December 2017 to February 2018.

**Table 4.1 CDS impact on bottled water prices (Cents per container, including GST)**

	Nov-17	Dec-17	Jan-18	Feb-18
Sample A	- <sup>a</sup>	11.6**	9.7**	12.5**
Sample B	- <sup>a</sup>	13.0*	13.9**	12.5*

<sup>a</sup> Results not reported due to statistical insignificance.

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level. Sample A constitutes products with consecutive prices from January 2017 and Sample B constitutes products with consecutive prices from January 2016.

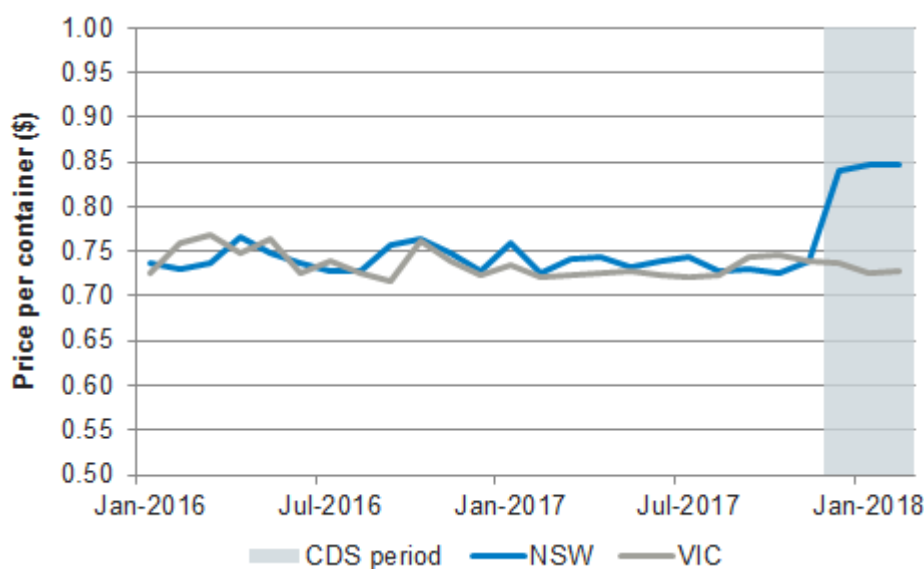
**Source:** IPART analysis using Nielsen Homescan data.

Figure 4.1 shows monthly average prices for bottled water products greater than 1 L.

<sup>58</sup> Our interpretation of the econometric analysis is based on statistical significance – a result is statistically significant when it is unlikely to have occurred by chance. We use three levels of conventional statistical significance: 1%, 5% and 10%. A statistically significant price change at the 1%, 5% and 10% significance levels means that we are 99%, 95% and 90% confident about the observed price change, respectively.



**Figure 4.1 Monthly average bottled water prices in NSW and Victoria (including GST)**



**Note:** Based on sample of products with prices available for each month from January 2017 (Sample A). Average prices tend to differ between non-promotion and promotional prices – the figure shows non-promotional prices.

**Data source:** IPART analysis using Nielsen Homescan data.

As detailed in Appendix B, we categorised bottled water products into three size groups – Small, Medium and Large where a product is defined as Small if size is less than or equal to 600 ml, Medium if size is between 600 ml and 1 L (inclusive), and Large if size is greater than 1 L. The figure shows average prices for large-sized products only as there are insufficient data for the Small and Medium categories.

The figure shows that price increases coincided with the introduction of the CDS in December 2017 and have remained relatively stable.

The majority of bottled water products in our sample are those supplied in a PET container. The Scheme Coordinator estimated that the direct scheme costs for a PET container are around 15 cent, 14 cents and 12 cents per container (including GST) in each of the first three months of the scheme (see Table 4.4). Therefore, our preliminary findings indicate that most of the estimated direct costs of the scheme were passed through to consumers.

As discussed in our Issues Paper, an important assumption of the difference-in-differences method is that the comparison group – the Victorian beverage market in our analysis – must accurately represent changes in beverage prices that would have been experienced by NSW in the absence of the CDS. The figure shows that the price trends between NSW and Victoria were similar prior to the CDS, indicating Victoria is a valid comparison group for our difference-in-difference analysis.

#### **4.2.2 Soft drink prices have been 11 to 13 cents per container higher due to the CDS**

Similar to our findings on bottled water beverages, the CDS has had a statistically significant impact on soft drink prices sold in NSW. Based on our analysis of Sample A, soft drink

prices were around 11 to 12 cents higher due to the CDS. The evidence of Sample B suggests this difference as a result of the CDS is between 11 and 13 cents.

**Table 4.2 CDS impact on soft drinks prices (Cents per container, including GST)**

	Nov-17	Dec-17	Jan-18	Feb-18
Sample A	- <sup>a</sup>	11.2**	11.8**	10.9**
Sample B	- <sup>a</sup>	11.2**	12.4**	13.2**

<sup>a</sup> Results not reported due to statistical insignificance.

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level. Sample A constitutes products with consecutive prices from January 2017 and Sample B constitutes products with consecutive prices from January 2016.

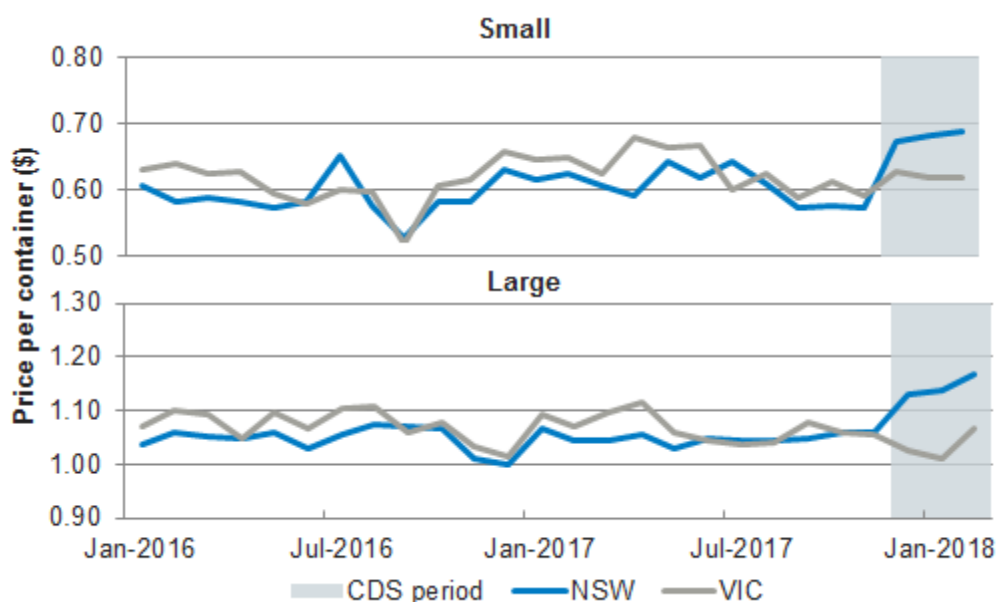
**Source:** IPART analysis using Nielsen Homescan data.

Figure 4.2 shows monthly average prices for soft drink products in NSW and Victoria. Similar to bottled water, we grouped soft drinks based on their size where a product is defined as Small if size is less than 500 ml, Medium if size is between 500 ml (inclusive) and 1 L, and Large if size is greater than or equal to 1 L. The figure does not include monthly averages for soft drinks in the Medium category as the sample size was too small.

The figure also shows that the price trends between NSW and Victoria were similar prior to the CDS, indicating Victoria is a valid comparison group for our difference-in-difference analysis.

Our analysis indicates that soft drink price increases coincided with the introduction of the CDS in December 2017 (see Figure 4.2).

**Figure 4.2 Monthly average soft drink prices in NSW and Victoria (including GST)**



**Note:** Based on sample of products with prices available for each month from January 2017 (Sample A). Average prices tend to differ between non-promotion and promotional prices – the figure shows non-promotional prices.

**Data source:** IPART analysis using Nielsen Homescan data.

Cola-flavoured carbonated soft drinks make up the largest product segment of the soft drink manufacturing industry in Australia. This segment includes traditional cola and diet cola

carbonated soft drinks, and additional flavoured products such as vanilla cola and lime cola.<sup>59</sup> We further categorised soft drinks into cola and non-cola segments to understand whether there has been a different impact of the CDS introduction on these two segments.

As Table 4.3 shows, the extent and the timing of the price increase did not vary markedly across these two product segments. The prices of products in both segments increased at the same time as the introduction of the CDS, with price increases as result of the CDS ranging between 10 and 13 cents.

**Table 4.3 CDS impact on cola and non-cola drinks (Cents per container, including GST)**

	Nov-17	Dec-17	Jan-18	Feb-18
<b>Cola</b>				
Sample A	_ <sup>a</sup>	11.1**	11.7**	11.8**
Sample B	_ <sup>a</sup>	10.5**	12.0**	13.2**
<b>Non-Cola</b>				
Sample A	_ <sup>a</sup>	11.1**	11.6**	9.6**
Sample B	_ <sup>a</sup>	11.8**	12.6**	12.9**

<sup>a</sup> Results not reported due to statistical insignificance.

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level. Sample A constitutes products with consecutive prices from January 2017 and Sample B constitutes products with consecutive prices from January 2016.

**Source:** IPART analysis using Nielsen Homescan data.

Most soft drinks included in our analysis are supplied in PET or aluminium containers. The estimated direct costs of the scheme for these containers were around 15 cents per container in December 2017, 13 cents to 14 cents in January 2018 and 12 cents in February 2018, including GST. Given the similarity between our estimated price increases and the estimated direct costs of the scheme, our preliminary results indicate that most of the estimated direct costs of the scheme were passed through to consumers.

#### 4.2.3 Fruit juice prices increased by around 6 cents due to the CDS

We found that fruit juice container beverages prices were around 6 cents per container higher in January and February 2018 as a result of the CDS, which is less than the direct costs of the scheme. The majority of the products included in the sample were those supplied in liquid paper board. The estimated direct cost of the scheme for liquid paper board was around 16 cents in December 2017, 14 cents in January 2018, and 13 cents in February 2018, including GST.

<sup>59</sup> IBISWorld Industry Report C1211a Soft Drinks Manufacturing in Australia, June 2017, p 12.

**Table 4.4 CDS impact on fruit juices prices (Cents per container, including GST)**

	Nov-17	Dec-17	Jan-18	Feb-18
Sample A	_ <sup>a</sup>	_ <sup>a</sup>	6.3**	6.4**

<sup>a</sup> Results not reported due to statistical insignificance.

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level. The results presented in this table are based on monthly average prices. See Appendix B for results based on median, mode, maximum and minimum prices. Sample A constitutes products with consecutive prices from January 2017. We do not present results based on Sample B due to an insufficient number of observations.

**Source:** IPART analysis using Nielsen Homescan data.

#### 4.2.4 Beer prices are up to 6 cents higher as a result of the CDS

In the alcoholic beverage market, we found evidence of lagged price increases unlike those in the non-alcoholic beverage market. There is mixed evidence for beer products in terms of price increases in December 2017 and January 2018 between Sample A and Sample B. However, price increases are more pronounced in February 2018 in both samples with a statistically significant increase of around 5 to 6 cents due to the CDS.

**Table 4.5 CDS impact on beer prices (Cents per container, including GST)**

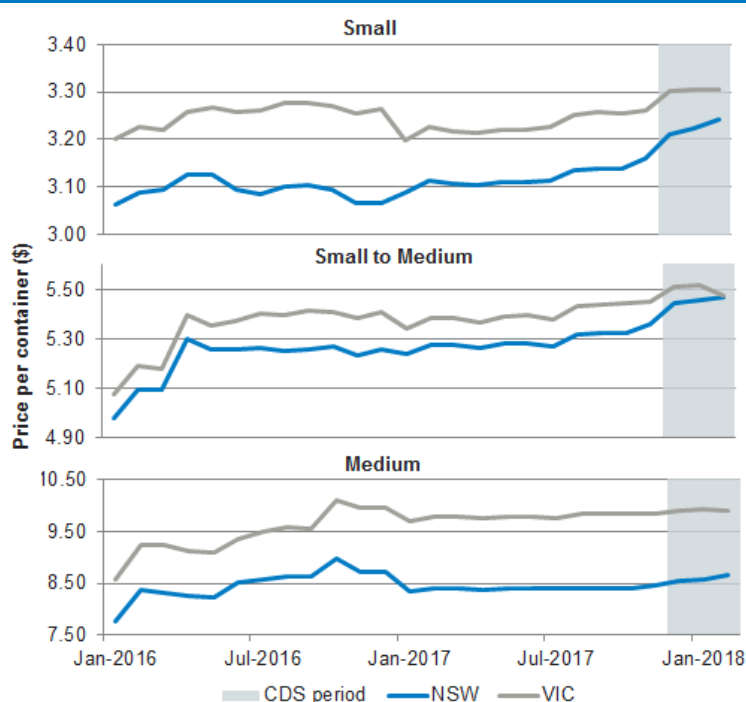
	Nov-17	Dec-17	Jan-18	Feb-18
Sample A	_ <sup>a</sup>	_ <sup>a</sup>	_ <sup>a</sup>	5.3**
Sample B	_ <sup>a</sup>	2.1**	2.9**	5.7**

<sup>a</sup> Results not reported due to statistical insignificance.

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level. The results presented in this table are based on monthly average prices. See Appendix B for results based on median, mode, maximum and minimum prices. Sample A constitutes products with consecutive prices from January 2017 and Sample B constitutes products with consecutive prices from January 2016.

**Source:** IPART analysis using Invigor Insights Retail data.

**Figure 4.3 Monthly average beer prices in NSW and Victoria (including GST)**



**Note:** Based on sample of products with prices available for each month from January 2017 (Sample A).

**Data source:** IPART analysis using Invigor Insights Retail data.

Figure 4.3 shows monthly average prices for beer products in NSW and Victoria. Similar to non-alcoholic beverages, we grouped beer based on their size – beer is defined as Small if size is less than or equal to 375 ml, Small to Medium if size is between 375 ml and 600 ml, Medium if size is between 600 ml (inclusive) and 1L, and Large if size is greater than or equal to 1 L. The figure does not show monthly averages for beers in the Large category as the sample size was too small.

The figure shows that beer prices between NSW and Victoria tend to be highly correlated in both pre- and post-CDS periods. Consistent with the results presented in Table 4.5, there seems to be a slight increase in beer prices resulting from the CDS. Beer prices increased in both states in December 2017 when the CDS commenced in NSW. This may be why we do not observe a statistically significant increase due to the CDS as a difference-in-differences captures a difference between the changes in prices before and after the CDS and the differences in prices between NSW and Victoria.

Beers are typically supplied in a glass or aluminium container. Our findings suggest close to minimal to no pass-through of the estimated direct scheme costs to consumers in the first two months of the scheme. In February 2018, less than half of the estimated direct costs of the scheme for glass or aluminium container seem to have been passed through to consumers.

#### 4.2.5 Cider prices are 6 to 7 cents higher as a result of the CDS

We did not find a material increase in cider prices in the month prior to, or in the first two months of the scheme commencing, suggesting there was a lagged response to the scheme

costs. In February 2018, a 6 to 7 cents increase in cider prices on average is attributable to the scheme – the increase is less than the estimated direct cost of the scheme.

**Table 4.6 CDS impact on cider prices (Cents per container, including GST)**

	Nov-17	Dec-17	Jan-18	Feb-18
Sample A	_ <sup>a</sup>	_ <sup>a</sup>	_ <sup>a</sup>	5.9**
Sample B	_ <sup>a</sup>	_ <sup>a</sup>	_ <sup>a</sup>	6.7**

**a** Results not reported due to statistical insignificance.

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level. The results presented in this table are based on monthly average prices. See Appendix B for results based on median, mode, maximum and minimum prices. Sample A constitutes products with consecutive prices from January 2017 and Sample B constitutes products with consecutive prices from January 2016.

**Source:** IPART analysis using Invigor Insights Retail data.

### 4.3 ‘Direct’ costs have been declining with some volatility from March 2018 due to ‘true up’

We estimated the direct costs of the CDS per container over the period from December 2017 to February 2018 based on information provided by Exchange for Change. These costs are not straightforward to calculate, due to the way Exchange for Change invoices suppliers in advance based on forecasts of container volumes and material types to be returned under the scheme, and then makes periodic adjustments to ‘true up’ any difference between the forecast and actual volumes in later months, as the necessary information becomes available.

Our best estimate is that the direct costs of the CDS were around 12 to 15 cents per container including GST over this period. These costs are in line with our estimated average price increases as result of the scheme of between 2 and 14 cents per container, discussed above.

We also found that some volatility in the costs is expected from March due to the significant differences between the forecasts and actual volumes for December and January. There may also be some further volatility beyond this when costs are trued up for MRF volumes.

#### 4.3.1 Direct costs of the CDS are not straightforward to calculate

As Scheme Coordinator, Exchange for Change is responsible for calculating and collecting fees from first suppliers to cover the costs of the CDS.<sup>60</sup> These fees represent the ‘direct’ costs of the scheme. They are listed in Table 4.7 below.

<sup>60</sup> Exchange for Change, *Media Release – Return and Earn Publishes Estimated Costs for Beverage Suppliers in NSW*, at [http://www.exchangeforchange.com.au/ReturnAndEarn\\_MediaRelease.pdf](http://www.exchangeforchange.com.au/ReturnAndEarn_MediaRelease.pdf), 18 August 2017, accessed on 19 April 2018.

**Table 4.7 CDS costs and how they are recovered from first suppliers**

Cost item	Description	Recovered through
Administration costs (fixed)	Scheme Coordinator costs for administering the scheme - determined through a competitive tender process.	Monthly administration fee
Regulatory Compliance costs (fixed)	EPA costs for monitoring compliance with the scheme.	Monthly compliance fee
Collection costs (variable)	Network Operator costs for paying the 10-cent refund per container returned to collection points and operating a network of Collection Points. The network fees for operating the Collection Points were determined through a competitive tender process.	Monthly network fee per container collected. This fee varies by container material type. <i>(Refund Amount (10c) + Network Fee) × Estimated monthly volume of containers recovered through Network Operator collection network</i>
Refunds to Material Recycling Facilities (MRFs) (variable)	Costs of paying the 10-cent refund per container returned by MRFs.	Monthly refund fee <i>Refund amount (10c) × forecast volume of containers recovered through MRFs</i>
Other (variable)	Other costs of the scheme such as interest earned on Scheme Payments accounts and recovery of bad debts.	Monthly fee

**Source:** Exchange for Change, at [http://returnandearn.org.au/Assets/pdf/ReturnandEarn\\_SchemeCosts.pdf](http://returnandearn.org.au/Assets/pdf/ReturnandEarn_SchemeCosts.pdf), accessed on 6 February 2018.

As Table 4.7 shows, some of the costs are variable – that is, their level depends on factors that can change from month to month. These factors include:

- ▼ **The total number of containers returned under the scheme.** All else being equal, if the total number of containers returned through the scheme is higher, then the variable costs of the scheme increase and hence the total costs are higher.
- ▼ **The number of each container type returned.** The Network Operator fee varies by the container material type. All else being equal, if more high-cost material types are returned then the variable costs of the scheme increase and its total costs are higher.
- ▼ **How containers are returned.** Containers returned to Collection Points attract a higher fee than those returned through kerbside recycling/MRFs. All else being equal, if the proportion of containers returned through Collection Points is higher, then the variable costs of the scheme increase and its total costs are higher.

Exchange for Change invoices first suppliers for their share of the scheme’s costs **monthly in advance**. For example, its December invoices are for the scheme’s costs in January. As the variable costs are not known, these monthly invoices include:

- ▼ **Advance contributions** for the administration and regulatory compliance fees and the estimated network refund fees for that month. The estimated fees are based on forecasts of container volumes and material types that will be returned to collection points and recovered from MRFs in the next month.
- ▼ **Periodic adjustments** to reconcile or ‘true up’ any differences between the estimated network and refund fees paid in a previous month and the actual fee for that month (ie, based on actual container volumes and material types returned to the TOMRA Cleanaway collection points or returned through MRFs in that month).

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Periodic adjustments occur in two stages, as the necessary information becomes available:

- ▼ Stage 1 adjustments true up for the actual containers returned through Return and Earn collection points (RVMS, over the counter, automated depot). They are lagged and will occur every month, once actual data for the previous months has been reported by first suppliers. Volumes are known on a two month lag (ie, December volumes are known for the February invoice).
- ▼ Stage 2 adjustments true up for the actual containers recovered from MRFs that process material from kerbside collections (yellow lidded wheelie bins). They are lagged and will occur every quarter.

In the period covered by this report, December and January invoices contained no periodic adjustments, and the February invoice contained the first Stage 1 Network Operator true up for December 2017. The first true up for Stage 2 MRF volumes will occur after the CDS Ministerial Advisory Committee sets the Eligible Container Factors for the quarter most recently ended. This factor is published on the 43rd calendar day after the quarter ends and will be published for the first time in mid-May. This means the first Stage 2 MRF true up under the scheme will be included in the June invoice.

#### **4.3.2 We estimate the direct costs were around 12 to 15 cents per container over November 2017 to February 2018**

Table 4.8 shows the advance contributions per container by material type published by Exchange for Change. In developing these advance contributions, Exchange for Change adopted its own forecasts of container volumes based on a number of considerations including:

- ▼ the projections around the number of collection points that would be in place for consumers to return their containers
- ▼ the possibility that many consumers might have stockpiled containers in the lead up to the start date, and
- ▼ the need to get enough liquidity into the scheme so it could pay for itself and that consumers can get their refunds.<sup>61</sup>

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<sup>61</sup> Exchange for Change Newsletter, January 2018, p 3, available from <http://returnandearn.org.au/Assets/pdf/media/EFC-Newsletter-January-2018.pdf?v=2> , accessed 20 April 2018.



**Table 4.8 Scheme Advance Contributions per Supplied Container (cents ex-GST)**

Invoice Month	Nov 17	Dec 17	Jan 18	Feb 18
<b>Advanced Contribution for</b>	<b>Dec 17</b>	<b>Jan 18</b>	<b>Feb 18</b>	<b>Mar 18</b>
Aluminium	13.54	12.24	10.94	8.71
Glass	14.07	12.78	11.36	9.00
HDPE	13.78	12.45	11.13	8.84
PET	13.78	12.45	11.13	8.84
Liquid Paper Board	14.42	13.03	11.64	9.18
Steel	14.07	12.72	11.36	9.00
Other Plastics	13.78	12.45	11.13	8.84
Other Materials	13.78	12.45	11.13	8.84

**Source:** Exchange for Change – Information provided to IPART – April 2018.

Next, we calculated the true up amounts per supplied container for February (Table 4.9). As discussed above, Exchange for Change’s February invoices contained the first Stage 1 Network Operator stream true up for December 2017. Table 4.9 shows the Scheme Contribution True Up per supplied container. These amounts were substantial, as the actual container volumes returned through collection points were substantially below Exchange for Change’s forecasts which it made in mid-2017 prior to the scheme commencing.

**Table 4.9 Scheme True Up per Supplied Container (cents ex-GST)**

Invoice Month	Nov 17	Dec 17	Jan 18	Feb 18
<b>True up for</b>				<b>Dec-17</b>
Aluminium	-	-	-	-7.65
Glass	-	-	-	-7.85
HDPE	-	-	-	-7.92
PET	-	-	-	-7.47
Liquid Paper Board	-	-	-	-10.36
Steel	-	-	-	-7.10
Other Plastics	-	-	-	-1.84
Other Materials	-	-	-	-8.81

**Source:** IPART Calculations based on information provided by Exchange for Change April 2018.

**Table 4.10 Number of containers recovered through Return and Earn collection points – forecast and actual**

	Dec 2017	January 2018	Feb 2018
Forecast (millions)	170.5	147.0	116.9
Actual (millions)	17.9	46.2	56.3

**Source:** Information provided to IPART by Exchange for Change, April 2018.

We then estimated the effective monthly costs per supplied container by adding the advance contribution and true up per container for each month (Table 4.11). We found these costs dropped substantially from March 2018 as a result of the Stage 1 true ups. All else being equal, we would expect the effective monthly cost to stabilise as forecasts and actual container volumes converge. However, Exchange for Change will not know actual MRF

container volumes until later this year and some further volatility may occur when the first Stage 2 MRF true up occurs in June 2018.

**Table 4.11 Effective Monthly Cost per Supplied Container (cents ex-GST)**

Invoice Month	Nov 17	Dec 17	Jan 18	Feb 18
Effective monthly cost	Dec 17	Jan 18	Feb 18	Mar 18
Aluminium	13.54	12.24	10.94	1.06
Glass	14.07	12.78	11.36	1.15
HDPE	13.78	12.45	11.13	0.92
PET	13.78	12.45	11.13	1.37
Liquid Paper Board	14.42	13.03	11.64	-1.18
Steel	14.07	12.72	11.36	1.90
Other Plastics	13.78	12.45	11.13	7.00
Other Materials	13.78	12.45	11.13	0.03

**Source:** Information provided by Exchange for Change.

We have calculated an estimate of the costs per container for the period December 2017 to February 2018 based on actual container volumes (ie, what the costs would have been if forecasting was 100% accurate). Table 4.12 shows that these calculated costs are lower in the early months of the scheme and increased as TOMRA Cleanaway rolled out more collection points during January and February. Exchange for Change has noted that it considers collection volumes via the Network Operator will continue to increase further as collection points continue to be rolled out and the scheme is increasingly adopted by the NSW public. In parallel, it expects the volumes collected through the kerbside program to decline due to consumers redirecting containers from kerbside recycling to the Network Operator collection points in order to redeem the 10-cent refund.<sup>62</sup>

<sup>62</sup> Exchange for Change, Newsletter March 2018, p 3.

**Table 4.12 Calculated cost per supplied container based on actual containers supplied and actual containers returned through Network Operator (cents ex-GST)**

Calculated cost for month	Dec 17	Jan 18	Feb 18
Aluminium	5.68	10.75	9.90
Glass	4.50	8.05	9.63
HDPE	5.38	7.57	5.79
PET	4.92	8.66	8.75
Liquid Paper Board	5.99	4.84	5.37
Steel	4.31	5.09	11.44
Other Plastics	14.07	9.18	8.74
Other Materials	6.01	2.53	3.72

**Source:** IPART calculation based on information provided by Exchange for Change April 2018.

### 4.3.3 We consider improved transparency around container volume forecasts is required

We consider that there should be greater transparency around the container volume forecasts used by Exchange for Change and the impact of these on the costs per container. This will help ensure that both suppliers and consumers have better information on the costs of the scheme.

We note that Exchange for Change started providing further information on its approach to forecasting through monthly newsletters sent to first suppliers and that from March 2018 has adopted container volumes that are more in line with industry forecasts. As part of these newsletters it also provides an outlook on future container volumes.

We are making a preliminary draft recommendation that, from the June 2018 invoice, Exchange for Change publish these updates on its website prior to issuing invoices every month. The updates should set out the following information:

- ▼ forecast container volumes for the next three months for both Network Operator volumes and MRF volumes
- ▼ a description of how container volumes were estimated
- ▼ forecast costs per container for the next three months, and
- ▼ costs per container for previous months based on actual container volumes recovered via the Network Operator and MRFs (once known) (ie, what the costs would have been if forecasts were 100% accurate).

## 4.4 Price increases for individual beverage products have varied

Stakeholders noted a variety of price responses during the first three months of the scheme. For example:

- ▼ Several large beverage manufacturers passed through the forecast costs of the scheme in full and wrote to customers in September 2017 to inform them of this.<sup>63</sup>

<sup>63</sup> Organisation (Anonymous and confidential), Submission to Issues Paper, March 2018, p 2

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- ▼ Freshwater Springs applied a \$2.80 increase per carton for bottled water and noted that this has caused a reduction in sales because it represented a 40% price increase.<sup>64</sup>
  - ▼ Two Metre Tall Company did not change prices when the CDS commenced, largely because of the complexity and confusing differences in communication between Return & Earn, Exchange for Change, & NSW EPA.<sup>65</sup>
  - ▼ Individual (Anonymous) noted that price of a carton of beer has gone up \$6.40.<sup>66</sup>
  - ▼ Individual Anonymous noted that supermarkets have raised prices by 100% more than the rebate.<sup>67</sup>
  - ▼ Drink prices have increased by double the 10c refund.<sup>68</sup>

Over the period December 2017 to February 2018, we also received a small number of comments through our online feedback form (26 in total, 19 from consumers and 7 from small business. Most responses generally fall into two categories:

- ▼ Consumers explaining how the price of a particular beverage product (eg, a bottle of mineral water or a carton of beer) increased at a specific retail location, or
- ▼ Consumers objecting to paying for a beverage price increase due to the CDS and then finding it difficult or costly to obtain a refund. Most of these consumers consider that that they are out-of-pocket due to the poor design and implementation of the scheme.

We note that some beverage manufacturers have decreased the amount they charge customers for the CDS as a result of the Exchange for Change true up. For example, Lion Beer Australia announced it would halve its CDS charge to customers from 12 cents per container to six cents per container from Monday 5 March 2018.<sup>69</sup>

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<sup>64</sup> Freshwater Springs, Submission to Issues Paper, March 2018, p 2.

<sup>65</sup> The Two Metre Tall Company, Submission to Issues Paper, March 2018, p 3.

<sup>66</sup> Anonymous Individual Submission to Issues Paper, March 2018, p 1.

<sup>67</sup> Anonymous Individual Submission to Issues Paper, February 2018, p 1.

<sup>68</sup> Anonymous Individual Submission to Issues Paper, February 2018, p 1; Individual (A Zaunders), Submission to Issues Paper, February 2018, p 1.

<sup>69</sup> <https://www.theshout.com.au/news/lion-halve-nsw-cds-charges/>, accessed on 19 April 2018.

## 5 Impacts on competition

As Chapter 3 discussed, in monitoring the effect of the CDS on competition, we will assess whether the scheme has materially restricted competition in the container beverage market or had any other market impacts on consumers or businesses. Our approach for this includes first defining the relevant markets for the purpose of this assessment and then:

- ▼ assessing whether there have been sustained price increases above the efficient costs of supply
- ▼ assessing whether there have been systemic changes in market shares or market composition
- ▼ collecting and considering reports from consumers and scheme participants on individual changes in prices, and unfair or unjust market behaviour, and
- ▼ considering whether the CDS has had other market impacts on businesses and consumers.

We have reviewed preliminary information about the relevant markets, prices, market share and market composition, and considered issues raised in submissions. The following sections summarise our preliminary findings and recommendations then discuss our findings and considerations in more detail.

### 5.1 Summary of preliminary findings and recommendations on effect of the CDS on competition

We have formed the preliminary view that for the purposes of assessing the effect of the CDS on competition, there are two separate product markets – one for alcoholic container beverages and one for non-alcoholic container beverages. This product market separation also applies across the manufacturing, wholesaling and retailing markets for container beverages. Our preliminary view is that the geographic market is not restricted to NSW, but extends to businesses Australia-wide.

There are also some smaller product subcategories and geographic subsectors. In the product subcategories, we consider the most significant are ‘craft’ or ‘boutique’ brewing in the alcoholic container beverage market, and craft or boutique non-alcoholic container beverage market. In terms of geographic subsectors, we propose to focus on locations close to the Victorian border, where consumers may seek to avoid the costs of the CDS by shopping over the border. ACT and Queensland have announced the introduction of similar schemes so these border areas are unlikely to experience the same issue once their schemes commence.

Given the NSW CDS has only been in place since December 2017, we consider it is too early to assess whether the scheme has materially restricted competition in these markets by examining market outcomes. We will conduct detailed analysis of these impacts and report on our findings in our Draft Report.

For this progress report, we have considered stakeholder comments on aspects of the CDS that have the potential to restrict competition. We found there is sufficient evidence that the seven-day payment terms for first supplier contributions to the direct costs of the scheme and the payment of these costs in advance place cash flow pressures on some businesses, particularly small businesses. We are making a draft recommendation that the EPA and Exchange for Change amend the payment terms from to 30 days, consistent with the payment term requirements for Government agencies.

### IPART preliminary findings

- 5 It is too early to conclude whether the CDS has had a material impact on competition by examining market outcomes.
- 6 There is potential for the costs of entering the market, or remaining in the market, to have a detrimental impact on competition where those costs disproportionately affect particular types of supplier or particular locations.

## 5.2 Defining the relevant markets

Our preliminary view is that for the purposes of assessing the effect of the CDS on competition, there are two separate markets – one for alcoholic container beverages and one for non-alcoholic container beverages – as well as subcategories within each. This applies across the manufacturing, wholesaling and retailing sectors of the market. In general, the geographic market is Australia-wide, but there are some smaller regional or local submarkets.

### 5.2.1 Separate markets for alcoholic and non-alcoholic container beverages

We consider there are separate markets for alcoholic and non-alcoholic container beverages. Recent econometric studies have found a high degree of substitutability between non-alcoholic beverages. For example, sugar sweetened beverages including soft drinks, flavoured mineral waters, energy drinks, fruit juices and cordials are substitutes for diet soft drinks and bottled water.<sup>70</sup> There is also evidence of a high degree of substitutability among alcoholic beverages, including beer, wine and ready-to-drink or pre-mixed spirits.<sup>71</sup>

There also appear to be separate subcategories for boutique beverages that are produced or supplied in small volumes but a wide range of types, flavours or styles. For example, craft beers often release multiple product types in small batches throughout a year. We consider that these products are targeted at niche markets and so are not as readily substituted by large volume mass market beers. Similarly, boutique non-alcoholic products form a distinct subcategory of non-alcoholic container beverages.

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<sup>70</sup> Duckett, S., Swerissen, H. and Wiltshire, T. 2016, *A sugary drinks tax: recovering the community costs of obesity*, Grattan Institute; Sharma S, Hauck K, Hollingsworth B, Siciliani L, *The Effects of taxing sugar-sweetened beverages across different income groups*, Health Economics 23(9) 2014 pp 1159-1184.

<sup>71</sup> Srivastava P, McLaren K, Wohlgenant M and Zhao X, *Econometric Modelling of Price Response by Alcohol Types to Inform Alcohol Tax Policies*, Monash University Department of Econometrics and Business Statistics Working Papers, February 2014.

## 5.2.2 Distinction between alcoholic and non-alcoholic applies across all sectors

We also consider that the distinction between alcoholic and non-alcoholic container beverage markets applies across the manufacturing, wholesale and retail sectors of these markets. For example:

- ▼ Businesses that manufacture alcoholic drinks require different equipment to those producing non-alcoholic drinks.
- ▼ In the wholesaling space, businesses that supply non-alcoholic beverages are typically small family-run firms that focus on niche food and drink products. The major supermarkets and retailers generally purchase directly from manufacturers rather than using wholesalers.<sup>72</sup> In contrast, the alcoholic beverage wholesale market is dominated by two firms, Metcash Ltd and Independent Liquor Group.<sup>73</sup>
- ▼ In the retailing market, businesses that sell alcoholic beverages require a licence with their local authority<sup>74</sup> while those that retail only non-alcoholic drinks do not.

## 5.2.3 Geographic market is Australia-wide but there are smaller regional or local submarkets

Our preliminary view is that the geographic market for container beverages is not restricted to NSW but extends Australia-wide. This view is consistent with the ACCC's position when it has considered market definitions in relation to the beverage industry in the context of proposed mergers and acquisitions. For example, in 2012, it considered a proposed acquisition by Coca-Cola Amatil Pty Ltd of the non-alcoholic beverages business of Foster's Group Limited. In this case, it found there were separate markets for national production and national wholesale supply of carbonated soft drinks, bottled water, fruit beverages and cordial.<sup>75</sup>

However, when considering retail beverage markets, we also propose to focus on locations close to the Victorian border, where consumers may seek to avoid the costs of the CDS by shopping over the border. ACT and Queensland have announced the introduction of similar schemes so these border areas are unlikely to experience the same issue once their schemes commence.

## 5.3 Assessing whether there have been sustained price increases above the efficient costs of supply

As Chapter 4 discussed, our review of preliminary data suggests that while container beverage prices have increased since the CDS commenced, the average increase is **equal to or below** the direct costs of the scheme. This outcome is consistent with a competitive market. But even if the increase **was** higher than the direct costs, it would have to have been sustained over a longer period than the scheme has currently been in place to be considered as evidence of lack of competition.

<sup>72</sup> The CIE, *Monitoring the Impacts of the NSW Container Deposit Scheme*, January 2018, p 9.

<sup>73</sup> IBISWorld Industry Report F3606a Liquor Wholesaling in Australia, August 2017, pp 21-22

<sup>74</sup> In NSW this is the Department of Industry - Liquor and Gaming.

<sup>75</sup> ACCC Public Register: Coca-Cola Amatil – Proposed Acquisition for Foster's Non-Alcoholic Beverage Assets, at <http://registers.accc.gov.au/content/index.php/itemId/1069965/fromItemId/751043>, accessed on 19 April 2018.

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Consistent with our terms of reference, we will continue to monitor price changes.

## 5.4 Assessing whether there have been systemic changes in market shares or market composition

Changes in market share provide information about whether the market is becoming more or less concentrated and whether there are more or fewer suppliers in the market.

We have done some preliminary analysis on market shares using commercial-in-confidence information from the Scheme Coordinator, Exchange for Change. We compared the monthly market shares of first suppliers of alcoholic and non-alcoholic beverages into NSW from before (January 2017) and after (January 2018) the CDS commenced.<sup>76</sup> We found that these shares were quite volatile, in that they fluctuated considerably from month to month, both before and after the CDS commenced. This volatility means the changes in monthly market shares since the scheme commenced are not statistically significant.

We consider it is too early to assess whether the CDS has resulted in systemic changes in market shares or market composition. We will continue to monitor market shares, and will conduct further analysis to assess whether there have been systemic changes for our Draft Report.

We have also considered concerns about aspects of the CDS raised by stakeholders that have the potential to lead to systemic changes in market shares or market composition in the long term. These include concerns that:

- ▼ Exchange for Change's payment arrangements for first supplier contributions to the scheme's costs put cash flow pressure on businesses that disproportionately affect small businesses
- ▼ the EPA's \$80 fee per container approval disproportionately affects boutique beverage suppliers, which typically supply a wide range of different container beverages in small volumes
- ▼ the costs of the CDS disproportionately affect NSW retailers in border areas, as they must compete with retailers on the other side of the border where there is no CDS, and
- ▼ some elements of scheme's design, including governance arrangements and arrangements for locating reverse vending machines, advantage some businesses over others.

### 5.4.1 Exchange for Change's payment arrangements put cash flow pressure on businesses

The CDS has been designed so that first suppliers of eligible container beverages into NSW contribute **in advance** to the costs of the scheme. Each month, first suppliers make financial contributions for their share of monthly scheme costs. These contributions are invoiced one month in advance of the operating month with payment terms of seven days.

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<sup>76</sup> We weren't able to break down this analysis into manufacturing, wholesale and retail markets, due to limitations in the data.



Stakeholders submitted that the payment of upfront costs and the seven-day payment terms put cash flow pressure on beverage businesses, particularly small and medium size businesses. For example, the Australian Beverages Council Ltd said that being required to pay CDS levies in advance has caused cash flow issues and financial hardship for beverage manufacturers – both large and small – although the impact is greater the smaller the entity. It also said this problem is exacerbated by industry standard commercial terms of trade (90 days) which can mean manufacturers are ‘out of pocket’ for CDS levies for up to 120 days.<sup>77</sup>

To assist smaller businesses, the NSW Government provided small loans through a Transitional Assistance Program to help eligible beverage suppliers during CDS implementation (between November 2017 and January 2018). However, these loans are only a temporary measure to help some eligible businesses to manage CDS implementation costs. The loans are to be fully repaid over the nine months from February 2018 to October 2018.<sup>78</sup> Only nine businesses have been approved loans under the scheme with a total value of \$914,988.<sup>79</sup>

Through the feedback portal on our website, small businesses have told us that the costs of complying with the CDS are substantial, particularly businesses that have fewer than 15 employees or revenue less than \$2 million per annum. These small businesses are concerned about the costs imposed by the CDS including the scheme operation, container registration, administration and compliance.

One area we consider could be reviewed immediately is the seven-day payment terms Exchange for Change (on behalf of the NSW Government) has set for first supplier contributions. This is out of step with the NSW Government’s own payment terms – it currently requires government agencies to pay small business suppliers within 30 days for goods and services (unless an alternative period is provided) or else automatically pay interest on the amount outstanding.<sup>80</sup>

Increasing the time for beverage businesses to pay the scheme costs may have a temporary impact on Exchange for Change’s cash flow or liquidity, limiting its own ability to make payments to the Network Operator and the EPA. However, to help beverage businesses address cash flow issues and reduce the potential impact of the CDS on competition, our preliminary view is that the EPA and Exchange for Change should amend the payment terms for first supplier contributions to the CDS from seven days to 30 days, consistent with the payment term requirements for Government agencies.

### Draft Recommendation

- 2 NSW Environment Protection Authority and Exchange for Change amend the payment terms for first supplier contributions to the CDS from seven days to 30 days, consistent with the payment term requirements for NSW Government agencies.

<sup>77</sup> Australian Beverages Council Ltd submission to IPART Issues Paper, March 2018, pp 15-16.

<sup>78</sup> <https://www.smallbusiness.nsw.gov.au/supporting-business/cds-transitional-assistance-package>, accessed on 20 March 2018.

<sup>79</sup> Legislative Council Questions and Answers No. 147 on 10 April 2018, p 2669.

<sup>80</sup> NSW Government Treasury Circular, Payment of Accounts Policy, NSWTC 11/12, p 1.

#### 5.4.2 Flat fee per container approval disproportionately affects boutique beverage suppliers

Under the CDS, a first supplier must register each class of eligible container it supplies with the NSW EPA and pay an application fee of \$80 for a container approval. This registration is valid for five years. In January 2018, the EPA capped the annual cost of container approval fees for small suppliers<sup>81</sup> at \$3,200.<sup>82</sup>

Several stakeholders raised concerns about this fee and its potential impacts on suppliers and competition in the market. For example, Two Metre Tall, a small brewing company from Tasmania, submitted that the fee creates a competitive disadvantage for smaller businesses wanting to sell into NSW. It noted that while the cost of the fee is negligible for large manufacturers that sell millions of beverages, it is substantial for smaller businesses – particularly those that supply a large number of different beverages in small quantities. It noted that it has decided not to supply some products into NSW because of this cost, and that consumers in NSW will be disadvantaged through being denied access to small, innovative producers.<sup>83</sup>

The Office of the NSW Small Business Commissioner submitted that craft brewers are concerned about the impacts of the CDS, for similar reasons.<sup>84</sup> Thirst for Life, a small importer of non-alcoholic drinks, raised a similar issue. It told us that under the CDS it was required to pay the \$80 container approval fee for each different flavour of cordial it imports.<sup>85</sup>

The Australian Beverages Council raised a broader concern. It questioned “whether the actions of the EPA, in charging a fee for container approvals (and renewals), constitute profiteering from the introduction of the Scheme, and an unnecessary cost impost imposed upon both manufacturers and consumers.” It asked IPART to investigate this, and noted that the ACT and Queensland Governments have already confirmed that they will not be charging a container registration fee when they introduce similar schemes later this year.<sup>86</sup>

We agree with stakeholders that the nature of the container approval fee means that it will have the biggest impact on first suppliers that are small businesses and have a relatively large number of eligible containers/products. This is often the case for craft beer manufacturers or small beverage importers that offer a large variety of products and regularly introduce new products.

This suggests that the fee could act as a barrier to entering or remaining in the NSW market for these small businesses and, over time, could lead to systemic changes in market composition. It could also discourage product innovation, particularly for small businesses that produce boutique beverages, which could impact on the competitiveness of markets and on costs and productivity.

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<sup>81</sup> A small supplier supplies 2.5 million beverage containers or less in a financial year.

<sup>82</sup> See *Waste Avoidance and Resource Recovery (Container Deposit Scheme) Regulation 2017*, NSW Government Gazette No 1 of 5 January 2018, p. 3.

<sup>83</sup> Two Metre Tall submission to IPART Issues Paper, March 2018, pp 2-3.

<sup>84</sup> Office of the NSW Small Business Commissioner submission to IPART Issues Paper, March 2018, p 4.

<sup>85</sup> Thirst for Life submission to IPART Issues Paper, March 2018, p 1.

<sup>86</sup> Australian Beverage Council Ltd submission to IPART Issues Paper, March 2018, pp 10-11, 15-16.

We consider that as the EPA appointed Exchange for Change and TOMRA Cleanaway using a competitive market-testing process, their costs are likely to be reasonably efficient given the scheme's design.

We consider that the regulatory compliance costs of the EPA and the fees charged to first suppliers per container approval should also reflect the efficient costs. We will engage a consultant to review the efficiency of the EPA's costs, including its Scheme Administration fee and container approval fee. We will include our findings in our Draft Report.

We have requested information from the EPA to understand its costs and we will also:

- ▼ investigate how many first suppliers have reached the annual fee cap for containers
- ▼ investigate how registration costs are recovered in the proposed ACT and Queensland container deposit schemes, where there may not be a registration fee charged, and
- ▼ consider the feasibility of registering container types rather than individual products, noting the impact particularly on boutique beverage suppliers, and given the NSW Government's objective to maintain the integrity of the scheme and to reduce the potential for fraud.

#### IPART finding

- 7 The EPA's regulatory compliance costs and fees charged to first suppliers per container approval should reflect the efficient costs.

### 5.4.3 Costs of the CDS disproportionately affect container beverage retailers in border areas

Several stakeholders, including the Liquor Stores Association of New South Wales, have raised concerns about the disproportionate impact of the CDS on small retail businesses along the border regions of Queensland, ACT and Victoria. This is because consumers can conveniently purchase beverages over the border and avoid higher prices from the CDS.<sup>87</sup>

A confidential submission from a retail business located in a border area stated that to remain competitive with rivals in a jurisdiction without a CDS, it has not passed through the costs of the CDS in many of its beverage products. It showed that this has had a substantial negative effect on its profitability since the scheme commenced, relative to the same period the year before.

Similarly, the Office of the NSW Small Business Commissioner submitted that retailers near a border are losing beverage sales on lower priced products available interstate. Based on information volunteered by six retailers, it has estimated that the average profit foregone is around \$90,000 per annum.<sup>88</sup>

The NSW Business Chamber told us that feedback it received from independent supermarkets suggests that those located some distance from state boundaries have been able to recover increases in the cost of goods sold via price increases without a large impact on sales. But independent supermarkets located close to state borders, particularly Victoria, have had to either significantly reduce margins to match prices across the border or

<sup>87</sup> Liquor Stores Association of New South Wales submission to IPART Issues Paper, March 2018, p 13.

<sup>88</sup> Office of the NSW Small Business Commissioner submission to IPART Issues Paper, March 2018, p 4.

maintain margins at the expense of major reductions in sales volumes. It submitted that impact on retailers located close to the border appears to vary depending on the type of retailer, type of product and the context in which the products are sold. For example, price increases in dollar terms are more visible for bulk-buy packs and consumers may be more price-sensitive.

The NSW Business Chamber recommended that we investigate how the CDS impacts businesses located close to the border, including examining sales data.<sup>89</sup> In addition, it noted that it would be impractical for the NSW Government to wind back implementation of the scheme in border regions, as this may risk shifting border issues from one region to the next. As an alternative, it suggested the Government develop a border-region adjustment mechanism to target support for businesses in border regions facing disproportionate impacts from the CDS, and that this mechanism operate until a comparable scheme exists in the adjacent jurisdiction. This mechanism would aim to financially compensate businesses that have experienced losses as a result of the CDS. The Chamber has estimated that this kind of mechanism would cost less than \$1 million per annum, and proposed that simplicity should be a guiding principle of any compensatory mechanism and the cost be funded out of consolidated revenue.<sup>90</sup>

We agree with stakeholders that, being a NSW scheme, the CDS creates a potential price differential wherever it is convenient for consumers to purchase container beverages in an adjacent state or territory. While the ACT and Queensland Governments will introduce container deposit schemes on 30 June 2018 and 1 November 2018 respectively,<sup>91</sup> Victoria has not announced plans for a scheme.

We have identified two options for addressing the impact of the CDS on businesses in the NSW/Victoria border regions:

1. Defining an exclusion zone adjacent to state borders, within which the scheme does not apply.
2. Developing a financial assistance package to adversely affected businesses, via a one-off payment to businesses based on actual sales in the first year.

As the Business Chamber submitted, Option 1 is impractical and would be difficult to implement without merely shifting the border problem from one region to the next.

The eligibility criteria for the financial assistance package in Option 2 could be aligned with those for the transitional assistance loans offered to first suppliers at the commencement of the scheme. Box 5.1 provides a list of proposed eligibility criteria. The Office of the NSW Small Business Commissioner would be well placed to administer the financial assistance package in light of its previous experience in administering the transitional assistance loans.

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<sup>89</sup> NSW Business Chamber submission to IPART Issues Paper, March 2018, pp 6-7.

<sup>90</sup> Ibid, pp 8-9.

<sup>91</sup> ACT Government, *Media Release - Canberra's Container Deposit Scheme to Start on 30 June*, at [https://www.cmtedd.act.gov.au/open\\_government/inform/act\\_government\\_media\\_releases/meegan-fitzharris-mla-media-releases/2018/canberras-container-deposit-scheme-to-start-on-30-june](https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/meegan-fitzharris-mla-media-releases/2018/canberras-container-deposit-scheme-to-start-on-30-june), 9 April 2018, accessed on 19 April 2018; Queensland Government, *Fact Sheet – Container Refund Scheme*, 14 February 2018, at <https://www.qld.gov.au/environment/pollution/management/waste/container-refund-about>, accessed on 19 April 2018.

An additional criteria based on financial hardship could also be included so that a business would need to demonstrate that it has experienced financial hardship as a result of the CDS. However, there is an administrative cost associated with assessing financial hardship and the Small Business Commissioner would need to consider this when deciding whether such a criteria should also be included.

The financial assistance package could be funded either by taxpayers (through the budget) or beverage consumers (through the costs of the scheme).

#### **Box 5.1 Proposed eligibility criteria**

Potential eligibility criteria for a financial assistance package are listed below. These criteria are based on the criteria used for the Transitional Assistance Package offered to first suppliers at the commencement of the CDS.

- ▼ Have beverage sales revenue of at least x% of total sales for its business group (measured over the most recent full financial year of operation).<sup>a</sup>
- ▼ Not be a member of Exchange for Change.
- ▼ Not be a major retailer or owned by or controlled by a major retailer or contracted to manufacture beverages whose sales revenue exceeds 10% of total sales for the business group on behalf of a major retailer.
- ▼ Not be a publicly listed company, or owned by a publicly listed company, or a member of a group of entities related by ownership with total employees exceeding 200, or total sales exceeding \$50 million in the most recent full financial year of operation.
- ▼ Be predominantly based in NSW, but its NSW premises are within 80km of the Victorian border by road.

<sup>a</sup> This eligibility threshold was 50% for the loans, but as they were aimed at suppliers, it would be lower for retailers.

Each of these options has benefits and costs. In addition, as these businesses operate in competitive markets, any hardship due to the CDS would need to be isolated from the normal operation of business competing to maintain market shares. Our analysis of price increases as a result of the CDS indicates that, for non-alcoholic drinks, the price increases are in line with the estimated direct costs of the Scheme, but for alcoholic drinks not all of the scheme's estimated costs have been passed on to consumers to date. Any potential compensation would need to recognise this dynamic.

On balance, our preliminary view is that Option 2 is more appropriate. We are seeking feedback from stakeholders on these options and any other alternative options. We are also seeking to understand the size of the impact in border areas, as well as feedback on which of the options best balances the costs and benefits to consumers, businesses and taxpayers.

#### **IPART seeks comments on the following**

- 1 What are your views on the costs and benefits of different options for addressing the impacts of the CDS on businesses in the NSW/Victoria border region?

#### 5.4.4 Some elements of scheme design could have impacts on competition

In our Issues Paper, we asked stakeholders about the impact the Scheme Coordinator, Network Operator and other participant bodies in the CDS have on the competitive dynamic in the beverage market. Several stakeholders expressed concern about implications of the appointment of a single network operator and its partnership with Woolworths in rolling out reverse vending machines.

For example, the Australian Beverage Council Ltd submitted that the Scheme Coordinator and Network Operator have not affected the competitive dynamic in the beverage sector. However, it argued that the appointment of TOMRA Cleanaway as sole Network Operator has eroded competition and cost efficiencies that would have been created if other businesses were involved in network operations.<sup>92</sup> Two Metre Tall also argued that the consortium of large beverage companies involved as Scheme Coordinator have no incentive for a scheme that supports small producers.<sup>93</sup>

The Office of the NSW Small Business Commissioner submitted that we should investigate the competition impacts of the arrangement between the Network Operator and Woolworths in providing Collection Points/reverse vending machines.<sup>94</sup>

The Liquor Stores Association of New South Wales also suggested we investigate some specific matters including:

- ▼ whether the section 45 competition exemption in the Waste Avoidance and Resource Recovery Act 2001 is valid, and
- ▼ the approach for the Network Operator to enter into joint venture arrangements with large retailers and the impact of the reverse vending machine voucher system on consumer behaviour.<sup>95</sup>

We note that the Scheme Coordinator and Network Operator were appointed through a competitive tender process. This means the fees that these organisations receive have been market tested. Through this process it was also decided that a single Network Operator was preferred to a number of operators across the state. We consider that the EPA should publish a contract summary for each of the agreements with the Scheme Coordinator and the Network Operator, similar to the contract summary that NSW Treasury has published for the Sydney Light Rail Public Private Partnership.<sup>96</sup>

#### Draft Recommendation

- 3 That the EPA publish a contract summary for each of the agreements with the Scheme Coordinator and the Network Operator.

In response to stakeholder comments, we have also requested further information from the Network Operator on its arrangements for providing collection points/reverse vending machines and options available to consumers who are returning containers. We note that

<sup>92</sup> Australian Beverage Council Ltd submission to IPART Issues Paper, March 2018, p 11 and p 16.

<sup>93</sup> Two Metre Tall submission to IPART Issues Paper, March 2018, p 4.

<sup>94</sup> Office of the NSW Small Business Commissioner submission to IPART Issues Paper, March 2018, p 3.

<sup>95</sup> Liquor Stores Association of New South Wales submission to IPART Issues Paper, March 2018 p 13.

<sup>96</sup> Transport for NSW, *Sydney Light Rail Public Private Partnership Contract Summary – Final Contract Summary*, 25 August 2015 [https://www.treasury.nsw.gov.au/sites/default/files/2017-02/Sydney\\_Light\\_Rail\\_PPP.pdf](https://www.treasury.nsw.gov.au/sites/default/files/2017-02/Sydney_Light_Rail_PPP.pdf), accessed on 129 April 2018.

the partnership with Woolworths is not an exclusive arrangement; the Network Operator also has collection points with other retailers including Coles, IGA and Food Works, as well as sporting clubs and universities.<sup>97,98</sup> On its website, TOMRA Cleanaway allows interested parties the opportunity to register their interest to host a reverse vending machine.<sup>99</sup>

## **5.5 Collecting and considering reports of unfair or unjustified market behaviour**

Our terms of reference ask us to consider any behaviour or market outcomes that have arisen that appear unfair or unjustified on consumers or Scheme participants. As noted in Chapter 3, we will continue to monitor behaviours and outcomes in the beverage market.

## **5.6 Considering whether the CDS has had other market impacts on businesses and consumers**

In addition to assessing the impact of the CDS on prices and competition we are considering other market impacts of the scheme including changes in consumer spending on non-alcoholic and alcoholic beverages, and the impact of scheme design on business costs and ultimately consumer prices.

### **5.6.1 It is too early to observe significant changes in consumer spending**

We have engaged the Centre for International Economics (the CIE) to estimate whether the introduction of the CDS has had an impact on:

- ▼ the quantity of beverages purchased for consumption in NSW
- ▼ the amount spent by consumers on beverages in NSW, and
- ▼ the market shares of large and small retailers in NSW.

Using household level consumption and expenditure data from the Nielsen Homescan Consumer Panel, the CIE has compared the behaviour of households before and after the introduction of the CDS in NSW with a control group (namely Victoria which does not have a CDS in operation). There are challenges with this approach, due to volatility in beverage consumption trends and consumer patterns of alcoholic beverage purchases. While modelling is able to account for these issues to an extent, it should be noted that it is very early and results should be interpreted with caution.

Bearing these issues in mind, to date the main results from this analysis are that:

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<sup>97</sup> EPA, *Media Release – Return and Earn Partners with Coles*, at <https://www.epa.nsw.gov.au/news/media-releases/2017/epamedia171220-return-and-earn-partners-with-coles>, 20 December 2017, accessed on 19 April 2018.

<sup>98</sup> EPA, *Media Release – Eight New Return and Earn Collection Points to Open*, at <https://www.epa.nsw.gov.au/news/media-releases/2018/epamedia180105-eight-new-return-and-earn-collection-points-to-open>, 5 January 2018, accessed on 19 April 2018.

<sup>99</sup> <http://www.tcnsw.com.au/>.

- ▼ The CDS may have reduced consumption of non-alcoholic beverages by around 900mL per household per month, driven by reductions in soft drink and bottled water. This represents a reduction of around 6% in average household non-alcoholic beverage consumption.
- ▼ There has been little change in expenditure on non-alcoholic beverages due to the CDS, suggesting that the price increases have been offset by reduced consumption.
- ▼ At this stage no clear conclusions can be drawn about the impact of the CDS on the consumption or expenditure on alcoholic beverages.

We will continue to monitor the impact of the CDS on consumer behaviour, and will update results in our Draft and Final Reports.

### **5.6.2 It is possible that the CDS design could affect its costs and its effectiveness**

Although our review focuses on monitoring, reporting on and potentially investigating price and competition impacts of the CDS, we consider that some aspects of the scheme's design may impact on its costs to businesses and its effectiveness. We will undertake further analysis and consider whether incremental changes to the scheme would have a net benefit, while maintaining the contractual arrangements that support the scheme and achieving the NSW Government's policy objectives.

This could include changes to the requirements about the condition in which containers have to be returned, or the capability of reverse vending machines (RVMs) to shred or crush containers. For example, currently containers must be returned empty, uncrushed, unbroken and with the original label attached. While this maintains the integrity of the scheme by allowing eligibility to be checked at the collection point, it could also limit the scheme's effectiveness in reducing litter.

Similarly, the ability of RVMs to shred or crush containers could make a difference to the costs of collection, particularly if it allowed the machine to hold more containers and be emptied less frequently. However, the potential benefits would have to be assessed against the costs of any necessary modifications required to machinery.

The Office of the NSW Small Business Commissioner noted that consumers have three options when claiming their refund: a deposit to a PayPal account; donation to select charities; or a credit voucher for shopping or redeemable for cash at certain retail stores. It suggested that it may be preferable if credit vouchers could be redeemed at more retailers and/or additional payment systems be made available.<sup>100</sup>

As noted above, some submissions expressed concern with the competition impacts of RVM location arrangements and refund methods. Refund methods may also have an impact on consumer behaviour and therefore the effectiveness of the scheme. Currently refunds from RVMs can be given as:

- ▼ a voucher to be redeemed for cash or an in-store credit at a participating retail partner
- ▼ a direct payment to a designated bank account via PayPal, or
- ▼ a donation to charities and community groups linked to the reverse vending machines.

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<sup>100</sup> Office of the NSW Small Business Commissioner submission, March 2018, p 3.



These methods may be a barrier to some people collecting and returning containers, particularly children, who may not have a PayPal account. An alternative may be to allow refunds to be made to a nominated bank account, as proposed in the ACT.<sup>101</sup>

Currently, South Australia and the Northern Territory operate container deposit schemes, and Queensland, the ACT and Western Australia are all proposing to introduce schemes over the coming year.<sup>102</sup> Consistency across the schemes in different jurisdictions would reduce costs for the beverage industry. Scheme improvements that are made in other States and Territories could also be considered in NSW.

### 5.6.3 Stakeholders have raised concerns about the indirect costs to business of administering and complying with the CDS

In addition to concerns about the direct costs of the CDS (discussed above), several stakeholders have expressed concerns about the indirect costs to businesses of administering and complying with the scheme. For example, the Office of the NSW Small Business Commissioner noted that beverage industry will tend to incur costs associated with the CDS that go beyond the fees levied by the Scheme Coordinator. These compliance costs could include notification, education, permission, purchasing, record keeping, enforcement, publication and documentation.<sup>103</sup>

The Distilled Spirits Industry Council of Australia (DSICA) submitted that suppliers have incurred other additional costs to participate in the scheme including:

- ▼ internal administrative costs to register all products and any new products
- ▼ label changes
- ▼ maintenance of multiple pricing systems to deal with different state pricing
- ▼ negotiation costs with customers
- ▼ tracking product shipped to interstate warehouses but for eventual sale in NSW
- ▼ increases in per unit costs as production scale is lost due to reduced volume flowing from price increases, and
- ▼ losses incurred by suppliers in having their containers included unfairly in the scheme, and accordingly prohibited from sale in various states (for example, premixed spirits in casks).<sup>104</sup>

Thirst for Life submitted that it decided to close its business importing drinks and cordials in December 2017 after considering the impacts of the CDS. It noted that the cost and time of

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<sup>101</sup> ACT Container Deposit Scheme FAQs at [https://www.actcds.com.au/pdf/ACT\\_Container\\_Deposit\\_Scheme\\_FAQs.pdf](https://www.actcds.com.au/pdf/ACT_Container_Deposit_Scheme_FAQs.pdf) accessed on 12 April 2018.

<sup>102</sup> Queensland's Container Refund Scheme will commence on 1 November 2018, at <https://www.qld.gov.au/environment/pollution/management/waste/container-refund-about> accessed on 11 April 2018; Western Australia's container deposit scheme is expected to start in mid-2019 <https://www.der.wa.gov.au/our-work/programs/111-wa-container-deposit-scheme> accessed on 11 April 2018; and the ACT is to introduce their CDS on 30 June 2018 [https://www.cmtedd.act.gov.au/open\\_government/inform/act\\_government\\_media\\_releases/meegan-fitzharris-mla-media-releases/2018/canberras-container-deposit-scheme-to-start-on-30-june](https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/meegan-fitzharris-mla-media-releases/2018/canberras-container-deposit-scheme-to-start-on-30-june) accessed on 11 April 2018.

<sup>103</sup> Office of the NSW Small Business Commissioner submission to IPART Issues Paper, March 2018, p1.

<sup>104</sup> Distilled Spirits Industry Council of Australia submission to IPART Issues Paper, March 2018, p 1.

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updating its accounting software to comply with reporting obligations was high for a small business, and that it may have been able to continue operators if the scheme was national, rather than six individual state-based schemes.<sup>105</sup>

We note that the administrative burden is likely to be higher in the early stages of the CDS as businesses adapt to the new requirements.

**IPART seeks comments on the following**

- 2 Are there any aspects of the NSW Government's CDS that could be changed to reduce the costs of the scheme whilst maintaining the contractual arrangements that support the scheme and achieving the NSW Government's policy objectives?

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<sup>105</sup> Thirst for Life submission to IPART Issues Paper, March 2018, p 1.

## A Terms of reference



**Gladys Berejiklian MP**  
Premier of New South Wales

Reference: A2397294

09 FEB 2018

Dr Peter Boxall AO  
Chairman  
Independent Pricing and Regulatory Tribunal  
PO BOX K35  
HAYMARKET POST SHOP NSW 1240

  
Dear Dr Boxall

Thank you for your letter on 20 December 2017 outlining the result of public consultation on my request to the Independent Pricing and Regulatory Tribunal to monitor and report on the impact of the implementation of the NSW Container Deposit Scheme on beverage prices.

I have considered your request to revise the terms of reference to include monitoring and reporting on the effect of the Scheme on competition for beverages supplied in a container as well as the performance and conduct of suppliers. I am pleased to issue IPART with final terms of reference (attached)

This amendment is consistent with the focus of NSW Government to ensure the success of the CDS and to safeguard against potential risk that suppliers may seek to raise prices of beverages above the costs associated with the Scheme.

I look forward to a final report addressing all aspects of the attached terms of reference in December 2018.

Yours faithfully,

**Gladys Berejiklian MP**  
Premier

cc: The Hon Gabrielle Upton MP, Minister for the Environment

**Terms of Reference for IPART to monitor and report on matters relating to the Container Deposit Scheme**

I, Gladys Berejiklian, Premier of New South Wales, under Section 12A of the *Independent Pricing and Regulatory Tribunal Act 1992*, request that the Independent Pricing and Regulatory Tribunal (IPART) monitor and report on the Container Deposit Scheme in accordance with these terms.

Task

IPART is to monitor:

1. the effect of the Container Deposit Scheme on prices of beverages supplied in a container;
2. the effect of the Container Deposit Scheme on competition for beverages supplied in a container and the performance and conduct of suppliers; and
3. any other market impacts on consumers that arise from the commencement of the Scheme, for the period from 1 November 2017 and 1 December 2018 (monitoring period)

IPART is to provide a report to the Premier and the Minister for the Environment regarding:

1. the effect of the Container Deposit Scheme on prices of beverages supplied in a container for the period from 1 November 2017 to 1 December 2018;
2. the framework for monitoring the Container Deposit Scheme including the behaviour of suppliers;
3. the effect of the Container Deposit Scheme on suppliers; and
4. any recommendations for actions by government to address any adverse effects or behaviours arising from the operation of the Scheme.

In undertaking the monitoring, IPART should have regard to:

1. any changes in prices of beverages before or after 1 November 2017 that purport to be in response to the Scheme;
2. any information provided by Scheme participants and consumers;
3. the behaviour of suppliers and major retailers before and after 1 November 2017 including whether beverage prices have increased beyond the amount suppliers are charged by the Scheme Coordinator;
4. the manner in which suppliers are recovering the costs of the Container Deposit Scheme; and
5. any other matters considered relevant.

Public consultation

IPART should undertake public consultation.

### Timeframe

IPART is to release a progress report in April 2018 which provides a draft framework for the review and reports on the first three months of the Container Deposit Scheme. IPART is to provide a final report to the Premier and the Minister for the Environment in December 2018. The final report is to also recommend whether subsequent monitoring is necessary.

At any time during the monitoring period, if the Premier or the Minister for the Environment or IPART considers that any behaviour or market outcomes have arisen that appear unfair or unjustified on consumers or Scheme participants, IPART is to:

1. Investigate the matter immediately at its own discretion or on request from the Premier or the Minister, and
2. Provide an interim report to the Premier and the Minister as soon as practicable.

### Definitions

Act means the *Waste Avoidance and Resource Recovery Act 2001*.

Beverage has the meaning given to the term under the Act.

Container has the meaning given to the term under the Act.

Container Deposit Scheme means the scheme established by the Act.

Scheme Coordinator has the meaning given to the term under the Act.

Scheme participant has the meaning given to the term under the Act.

Supplier means a supplier, as defined in the Act, who is required under the Act to enter into a supply arrangement with the Scheme Coordinator.



The Hon Gladys Berejiklian MP  
Premier

Dated at Sydney *sp/*..... 2018

## B Analysis of the impact of the CDS on beverage prices

As discussed in Chapter 4, as part of our approach for monitoring the effects of the CDS, we assessed whether there have been any significant increases in beverage prices above the costs of the scheme.

This appendix provides details of our data and the econometric models we used to analyse the impact of the CDS on beverage prices and provides complete regression results from our analysis.

### B.1 Data and methodology

#### B.1.1 Data

Our sample consists of monthly prices of beverages sold in NSW and Victoria over the period January 2016 to February 2018. In our analysis, a beverage product is defined by its manufacturer (or brand), product description, pack type (ie, multi pack or single pack), size (eg, 350 ml, 600 ml, etc), price type (ie, promotional or non-promotional price), retailer, and retailer location.

We excluded from the sample the following beverages supplied in containers which are not eligible for a refund under the CDS:

- ▼ bottled water drink containers of 3 litre or more, and
- ▼ pure fruit or vegetable juice containers of 1 litre or more.

We excluded products that were not available for sale in both states to avoid different product compositions having an effect on our price analysis.

We also excluded beverage products with missing prices from our dataset. Specifically, we required that for a product to be included in our sample, its prices must be available every month since January 2017. This filter is necessary as to identify the impact of the CDS on beverage products at a product level we must track the prices of the same product over time.

Nielsen's Homescan database contains the prices of products purchased by its panel members. By imposing a condition that products must have prices every month since January 2017, we eliminated products that were not regularly purchased by the panel members. This condition also removes the majority of the products with temporary promotional prices from the Homescan and Insights Retail datasets.

We note that these filters result in a relatively small sample size for bottled water and fruit juice products (no more than 20 products).

We also winsorised the data at the 1st and 99th percentile to reduce the impact of possibly spurious outliers. For each product within each beverage size category, we calculated the distributions of prices and replaced all prices below the 1st percentile or above the 99th percentile with the respective percentile.

Table B.1 to Table B.4 provide some descriptive statistics for our final sample by beverage category, size, pack type and brand.

**Table B.1 Descriptive statistics: non-alcoholic beverages by pack type and size**

Category	Pack Type	Size	No. of obs (no.)		No. of obs (%)		Mean		SD	
			NSW	VIC	NSW	VIC	NSW	VIC	NSW	VIC
Soft Drinks	Single	Small	0	0	0%	0%	-	-	-	-
		Medium	376	201	5.7%	4.8%	3.18	3.16	0.34	0.30
		Large	4,749	2,710	71.7%	64.2%	1.31	1.35	0.67	0.70
	Multi	Small	1,499	1,311	22.6%	31.1%	0.60	0.60	0.18	0.20
		Medium	0	0	0%	0%	-	-	-	-
		Large	0	0	0%	0%	-	-	-	-
Water	Single	Small	52	51	4.7%	6.5%	1.76	1.62	0.64	0.60
		Medium	52	74	4.7%	9.5%	3.17	3.08	0.64	0.55
		Large	638	411	57.3%	52.7%	0.79	0.83	0.16	0.24
	Multi	Small	320	197	28.7%	25.3%	0.34	0.32	0.11	0.11
		Medium	0	0	0%	0%	-	-	-	-
		Large	52	47	4.7%	6.0%	0.70	0.69	0.03	0.02
Fruit Juices	Single	Small	78	52	11.6%	13.2%	1.00	1.00	0.04	0.03
		Medium	102	52	15.2%	13.2%	2.11	1.75	0.18	0.26
		Large	0	0	0%	0%	-	-	-	-
	Multi	Small	493	289	73.3%	73.5%	0.37	0.37	0.08	0.08
		Medium	0	0	0%	0%	-	-	-	-
		Large	0	0	0%	0%	-	-	-	-

**Note:** Descriptive statistics based on a sample of products with prices available for every month from January 2017. See Section B.2.1 for the definitions of Pack Type and Size.

**Source:** IPART analysis using Nielsen Homescan data.

**Table B.2 Number of observations for non-alcoholic beverages by brand**

Category	Brand	Number		Percentage	
		NSW	VIC	NSW	VIC
Soft Drinks	Major Brand	3638	2529	55%	60%
	Other Brand	567	382	9%	9%
	Private Label	2419	1311	37%	31%
Water	Major Brand	52	73	5%	9%
	Other Brand	24	51	2%	7%
	Private Label	1038	656	93%	84%
Fruit Juices	Major Brand	152	103	23%	26%
	Other Brand	51	26	8%	7%
	Private Label	470	264	70%	67%

**Note:** Descriptive statistics based on a sample of products with prices available for every month from January 2017. See Section B.2.1 for the definitions of Major Brand, Private Label and Other Brand.

**Source:** IPART analysis using Nielsen Homescan data.

**Table B.3 Descriptive statistics: alcoholic beverages**

Category	Pack Type	Size	No. of obs (no.)		No. of obs (%)		Mean		SD	
			NSW	VIC	NSW	VIC	NSW	VIC	NSW	VIC
Beer	Single	Small	12,043	10,619	21.2%	25.2%	4.27	4.25	0.99	1.01
		Small to Medium	2,125	1,943	3.7%	4.6%	6.38	6.36	1.97	2.03
		Medium	1,756	1,398	3.1%	3.3%	11.77	12.47	10.35	11.30
		Large	156	156	0.3%	0.4%	23.33	23.33	10.52	10.52
	Multi	Small	34,849	24,026	61.4%	57.0%	2.73	2.81	0.96	1.04
		Small to Medium	3,182	2,490	5.6%	5.9%	4.55	4.62	1.75	1.84
		Medium	2,683	1,515	4.7%	3.6%	6.30	7.08	3.31	3.98
		Large	0	0	0%	0%	-	-	-	-
Cider	Single	Small	1,687	1,389	16.9%	19.2%	4.09	4.03	0.81	0.80
		Small to Medium	643	517	6.4%	7.1%	7.01	6.91	0.79	0.77
		Medium	26	26	0.3%	0.4%	5.64	5.61	0.40	0.36
		Large	0	0	0%	0%	-	-	-	-
	Multi	Small	6,491	4,509	65.0%	62.3%	2.57	2.60	0.77	0.82
		Small to Medium	1,140	797	11.4%	11.0%	5.41	5.47	0.68	0.69
		Medium	0	0	0%	0%	-	-	-	-
		Large	0	0	0%	0%	-	-	-	-

**Note:** Descriptive statistics based on a sample of products with prices available for every month from January 2017. See Section B.3.1 for the definitions of Pack Type and Size.

**Source:** IPART analysis using Invigor Insights Retail data.



**Table B.4 Number of observations for beer by brand and beer type**

		Number		Percentage	
		NSW	VIC	NSW	VIC
Brand	Major Brand	22120	13065	39%	31%
	Other Brand	34674	29082	61%	69%
Beer Type	Craft Beer	26293	20805	46%	49%
	Non-Craft Beer	30501	21342	54%	51%

**Note:** Descriptive statistics based on a sample of products with prices available for every month from January 2017. See Section B.3.1 for the definitions of Major Brand, Other Brand, Craft Beer and Non-Craft Beer.

**Source:** IPART analysis using Invigor Insights Retail data.

### B.1.2 Methodology

Our main econometric model takes the generic form shown below.

$$P_{i,t,r,s} = \beta_0 + \beta_1 NSW + \sum_{\tau=Nov\ 2017}^{Feb\ 2018} \beta_{2,\tau} NSW \times TIME_{\tau} + \gamma X_{i,t,r} + \delta M_t + \varepsilon_{i,t,r,s}$$

where:

- ▼  $P_{i,t,r,s}$  is the price (expressed in dollar per container) of product  $i$  in month  $t$  sold in a retail shop  $r$  in state  $s$
- ▼  $NSW$  equals 1 if product  $i$  is sold in NSW, and 0 otherwise
- ▼  $TIME$  refers to the months of the CDS implementation period from November 2017<sup>106</sup> to February 2018 and equals 1 if month  $t$  is any month in the period, and 0 otherwise
- ▼  $NSW \times TIME$  equals 1 if  $NSW = 1$  and  $TIME = 1$ , and 0 if either  $NSW$  or  $TIME = 0$
- ▼  $X_{i,t,r}$  comprises a set of beverage and retailer characteristics that are likely to affect prices
- ▼  $M_t$  is month dummy variables from January 2016 to February 2018, and
- ▼  $\varepsilon_{i,t,r,s}$  is the error term.

Specifically, we run a pooled OLS regression with month dummy variables to control for time-series variations in prices, for example to control for general price increases over time. T-statistics are based on clustered standard errors by product to account for time series correlation of residuals for a given product – if there are variables that are not controlled for in our regressions which are correlated over time within a product, they are addressed through the calculation of the clustered standard errors.<sup>107</sup>

- ▼  $\beta_1$  captures possible differences in beverage prices between NSW and VIC prior to the introduction of the CDS (ie, pre-treatment period), and

<sup>106</sup> Note that while the CDS commenced officially on 1 December 2017, we included November 2017 as the first month of the CDS period as first suppliers were issued the first invoice a month prior to the commencement of the scheme (ie, November 2017).

<sup>107</sup> We also run regressions with product and time fixed effects. Results are qualitatively similar and are not sensitive to model specifications

- ▼  $\beta_{2,\tau}$  is the difference-in-differences estimate, which captures the price impact of the CDS attributable to the scheme itself in each of the relevant months. This is our main coefficient of interest. In Table B.5 to Table B.13, these coefficients are shown as  $CDS_{NOV}$ ,  $CDS_{DEC}$ ,  $CDS_{JAN}$  and  $CDS_{FEB}$ .

The dependent variable in our regression is the monthly price of a product. We obtained monthly mean, median, maximum, minimum and mode prices for each alcoholic beverage sold by a retailer in NSW and Victoria. For non-alcoholic beverage prices obtained from Nielsen’s Homescan transactional data, we calculated monthly average prices for each product sold in a shop in a region (as defined by Nielsen) in each state. For example, to obtain a monthly price of a 350 ml Coca Cola sold at Retailer A in the Sydney metro area, we averaged the prices paid for all transactions associated with a 350 ml Coca Cola at all Retailer A stores in the Sydney metro area in a given month.

Both the Homescan and Insights Retail datasets report the total price for multi-pack products (eg, 24-pack 350 ml Coca Cola or 30-pack 375 ml Victoria Bitter). In this case, we computed the price per container by dividing the total price of the multi-pack product by the number of units per pack.

Beverage price per container may vary across different dimensions such as time, size, package type, manufacturer, retailer, region, etc. To isolate the impacts of these confounding factors on beverage prices, we control for several product characteristics, which are captured in the coefficient(s),  $\gamma$ .

Our main model presented above is designed to capture the impact of the CDS on beverage prices for each month of the CDS period from November 2017 to February 2018. In addition to our main model, we also applied the following model to estimate the overall impact of the CDS on beverage prices for the CDS period, as a whole:

$$P_{i,t,r,s} = \beta_0 + \beta_1 NSW + \beta_2 TIME + \beta_3 NSW \times TIME + \gamma X_{i,t,r} + \delta M_t + \varepsilon_{i,t,r,s}$$

where  $TIME$  equals 1 if month  $t$  is from December 2017 to November 2018 (ie, treatment period in which the CDS is in place), and 0 otherwise. All other variables are defined as above.

In this model,  $\beta_3$  is our main coefficient of interest which captures the average change in beverage prices in NSW that is due to the CDS. In Table B.5 to Table B.13, this coefficient is shown as  $CDS_{NOV-FEB}$ .

In presenting our results, we refer to our main model as **Model 1**, and to our supplementary model as **Model 2**.

## B.2 Non-alcoholic beverages

### B.2.1 Variable definitions

As discussed above, we included a set of product and retailer characteristics as a control variable in our regression analysis. Using Nielsen’s Homescan data, we have created the following variables:

- ▼ beverage size
- ▼ brand
- ▼ retailer
- ▼ pack type (ie, multi pack), and
- ▼ price type (ie, promo price).

### **Beverage size**

For bottled water, products are categorised into three size groups – Small, Medium and Large, where a product is defined as Small if its size is less than or equal to 600 ml, Medium if its size is between 600 ml and 1 L (inclusive), and Large if its size is greater than 1 L.

For soft drinks, a product is defined as Small if its size is less than 500 ml, Medium if its size is between 500 ml (inclusive) and 1 L, and Large if its size is greater than or equal to 1 L.

Fruit juice is defined as Small if its size is less than or equal to 300 ml, Medium if its size is between 300 ml and 750 ml, and Large if its size is greater than or equal to 750 ml.

### **Brand**

Brand is a categorical variable to indicate whether a product is a major, private label or any other brand.

For bottled water and soft drinks, *Brand* is set to *Major brand* if a product is manufactured by Asahi Holdings (Asahi) or Coca Cola Amatil (CCA), and to a *Private label* if it is Aldi-, Coles- or Woolworth-branded. A product that is neither a major brand nor a private label is grouped as “*Other Brand*”.

CCA and Asahi are the two major companies in the bottled water and soft drink manufacturing industries in Australia:

- ▼ In bottled water manufacturing, the market shares of CCA and Asahi are 47.7% and 13.7%, respectively.<sup>108</sup>
- ▼ In soft drink manufacturing, CCA and Asahi hold 53.7% and 25.5% of the total market share, respectively.<sup>109</sup>

For fruit juices, *Brand* is set to *Major brand* if a product is manufactured by Asahi, Lion or Heinz Wattie’s, and to a *Private label* if it is Aldi-, Coles- or Woolworth-branded. A product that is neither a major brand nor a private label is grouped into the “*Other*” category.

Asahi, Lion and Heinz Wattie’s are the three major players in fruit juice manufacturing, holding a market share of 22.8%, 25.6% and 15.9%, respectively.<sup>110</sup>

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<sup>108</sup> IBISWorld Industry Report C1211b – Bottled Water Manufacturing in Australia, August 2017, pp 23-24.

<sup>109</sup> IBISWorld Industry Report C1211a – Soft Drink Manufacturing in Australia, June 2017, pp 23-24.

<sup>110</sup> IBISWorld Industry Report C1211c – Fruit Juice Drink Manufacturing in Australia, August 2017, pp 23-24.

## Retailer

*Retailer type* is a categorical variable to indicate whether a product is sold at a major retailer or a non-major retailer. *Retailer* is set to *Major Retailer* if a product is sold at either Coles or Woolworths, and to a *Second-Tier* if it is sold at Aldi or IGA. A product that is sold neither at *Major Retailer* nor *Second-Tier Retailer* is grouped into the “*Other Retailer*” category.

## Pack Type

*Multipack* is a binary variable that is equal to 1 if a product is a multi-pack and zero, otherwise.

## Price Type

*Promo* is a binary variable that is equal to 1 if a product was on promotion and zero, otherwise.

### B.2.2 Regression results

This section provides regression results for non-alcoholic beverages:

- ▼ all soft drinks in Table B.5
  - cola flavoured soft drinks in Table B.6
  - non-cola flavoured soft drinks in Table B.7
- ▼ bottled water in Table B.8
- ▼ fruit juices in Table B.9.

Based on our main model using Sample A (**Model 1** under **Sample A**), soft drink prices are 11.2 cents higher in December 2017, 11.8 cents higher in January 2018, and 10.9 cents higher in February 2018 due to the CDS.

The signs of other coefficients are generally consistent with our expectation. Holding other things constant,

- ▼ Soft drinks sized between 500 ml (inclusive) and 1 L are on average \$1.30 more expensive per container than large soft drinks sized greater than or equal to 1 L.
- ▼ Soft drinks sized less than 500 ml are on average \$1.10 cents per container cheaper than large soft drinks.
- ▼ Private labelled soft drinks tend to be \$1.20 cheaper per container than non-private labelled products.
- ▼ Soft drinks sold at a retail store other than Coles, Woolworths, Aldi and IGA tend to be cheaper by 50 cents per container. However, its economic magnitude could be considered trivial – we note that data points from “*Other Retailer*” represent less than 0.7% of the total number of observations in our regressions.
- ▼ Soft drinks on promotion tend to be 27 cents cheaper, on average.

Note all multi pack products were small soft drinks, and therefore *Pack Type* variable was not included in the regression – the estimated coefficient for Small sized soft drinks also captures the effect of the multi-pack on soft drink prices.

**Table B.5 Impact of the CDS on soft drinks (\$ including GST)**

	Sample A		Sample B	
	Model 1	Model 2	Model 1	Model 2
NSW	-0.024	-0.024	0.009	0.009
Time		0.024		0.003
CDS <sub>NOV-FEB</sub>		0.088**		0.096**
CDS <sub>NOV</sub>	0.011		0.017	
CDS <sub>DEC</sub>	0.112**		0.112**	
CDS <sub>JAN</sub>	0.118**		0.124**	
CDS <sub>FEB</sub>	0.109**		0.132**	
Medium	1.256**	1.256**	1.222**	1.222**
Small	-1.085**	-1.085**	-1.107**	-1.107**
Private Label	-1.223**	-1.223**	-1.266**	-1.266**
Other Brand	-0.801**	-0.801**	-0.806**	-0.806**
Second Tier Retailer	0.175	0.175	0.131	0.131
Other Retailer	-0.465**	-0.465**	-0.881**	-0.881**
Promo	-0.272**	-0.272**	-0.26**	-0.26**
Intercept	2.059**	2.059**	2.063**	2.063**
Month Fixed Effect	Yes	Yes	Yes	Yes
N	10,846	10,846	8,060	8,060
Adj. R squared	79.25%	79.24%	79.87%	79.86%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Nielsen Homescan data.

Regression results presented below can be interpreted in a similar manner.

**Table B.6 Impact of the CDS on cola flavoured soft drinks (\$ including GST)**

	Sample A		Sample B	
	Model 1	Model 2	Model 1	Model 2
NSW	-0.019	-0.019	0.02	0.02
Time		-0.018		-0.018
CDS <sub>NOV-FEB</sub>		0.094**		0.096**
CDS <sub>NOV</sub>	0.03		0.028	
CDS <sub>DEC</sub>	0.111**		0.105**	
CDS <sub>JAN</sub>	0.117**		0.12**	
CDS <sub>FEB</sub>	0.118**		0.132**	
Multi Pack	-1.309**	-1.309**	-1.28**	-1.28**
Medium	1.057**	1.057**	1.154**	1.154**
Other Brand	-0.86**	-0.86**	-0.757**	-0.757**
Private Label	-1.437**	-1.437**	-1.373**	-1.373**
Other Retailer	-0.436**	-0.436**	-0.899**	-0.899**
Second Tier Retailer	0.028	0.028	-0.073	-0.073
Promo	-0.292**	-0.292**	-0.233**	-0.233**
Intercept	2.236**	2.236**	2.139**	2.139**
Month Fixed Effect	Yes	Yes	Yes	Yes
N	5,722	5,722	4,524	4,524
Adj. R squared	82.65%	82.66%	81.26%	81.27%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Nielsen Homescan data.

**Table B.7 Impact of the CDS on non-cola flavoured soft drinks (\$ including GST)**

	Sample A		Sample B	
	Model 1	Model 2	Model 1	Model 2
NSW	0.002	0.002	-0.004	-0.004
Time		0.075**		0.031**
CDS <sub>NOV-FEB</sub>		0.078**		0.094**
CDS <sub>NOV</sub>	-0.013		0.001	
CDS <sub>DEC</sub>	0.111**		0.118**	
CDS <sub>JAN</sub>	0.116**		0.126**	
CDS <sub>FEB</sub>	0.096**		0.129**	
Small	-0.568**	-0.568**	-0.403**	-0.403**
Medium	1.761**	1.761**		
Other Brand	-0.269	-0.269	-0.049	-0.049
Private Label	-0.547**	-0.547**	-0.311**	-0.311**
Second Tier Retailer	0.083	0.083	-0.034	-0.034
Promo	-0.06	-0.06	-0.011*	-0.011*
Intercept	1.322**	1.322**	1.08**	1.08**
Month Fixed Effect	Yes	Yes	Yes	Yes
N	5,124	5,124	3,536	3,536
Adj. R squared	62.80%	62.75%	37.90%	37.72%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Nielsen Homescan data.

**Table B.8 Impact of the CDS on bottled water (\$ including GST)**

	Sample A		Sample B	
	Model 1	Model 2	Model 1	Model 2
NSW	-0.002	-0.002	-0.007	-0.007
Time		-0.032		-0.083
CDS <sub>NOV-FEB</sub>		0.085**		0.108*
CDS <sub>NOV</sub>	0.004		0.039	
CDS <sub>DEC</sub>	0.116**		0.13*	
CDS <sub>JAN</sub>	0.097**		0.139**	
CDS <sub>FEB</sub>	0.125**		0.125*	
Multi Pack	-0.587**	-0.587**	-0.91**	-0.91**
Medium	1.992**	1.992**	3.013**	3.013**
Small	0.208	0.208	0.426**	0.426**
Other Brand	0.313	0.313		
Private Label	-0.434	-0.434	1.092**	1.092**
Second Tier Retailer	0.199**	0.199**	-0.035*	-0.035*
Promo	-0.083**	-0.083**	0.011**	0.011**
Intercept	1.22**	1.22**	-0.331**	-0.331**
Month Fixed Effect	Yes	Yes	Yes	Yes
N	1,894	1,894	1,118	1,118
Adj. R squared	84.37%	84.37%	97.03%	97.03%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Nielsen Homescan data.



**Table B.9 Impact of the CDS on fruit juices (\$ including GST)**

	Sample A		Sample B	
	Model 1	Model 2	Model 1	Model 2
NSW	0.05	0.05	0.119**	0.119**
Time		0.036		0.078
CDS <sub>NOV-FEB</sub>		0.031		-0.012
CDS <sub>NOV</sub>	-0.035		-0.051	
CDS <sub>DEC</sub>	0.033		-0.037	
CDS <sub>JAN</sub>	0.063**		0.007	
CDS <sub>FEB</sub>	0.064**		0.033	
Multi Pack	-0.64**	-0.64**	-0.579**	-0.579**
Small	-1.114**	-1.114**	-1.136**	-1.136**
Other Brand	-0.381**	-0.381**	-0.388**	-0.388**
Private Label	-0.077**	-0.077**		
Second Tier Retailer	0.017	0.017		
Intercept	2.144**	2.144**	2.045**	2.045**
Month Fixed Effect	Yes	Yes	Yes	Yes
N	1,066	1,066	338	338
Adj. R squared	97.57%	97.56%	96.94%	96.96%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Nielsen Homescan data.

## B.3 Alcoholic beverages

### B.3.1 Variable definitions

As discussed above, we included a set of product characteristics as control variables in our regression analysis. These variables include:

- ▼ beverage size
- ▼ brand<sup>111</sup>, and
- ▼ pack type.

#### Beverage size

For both beer and cider, *Size* is defined as Small if beverage size is less than or equal to 375 ml, Small to Medium if beverage size is between 375 ml and 600 ml, Medium if beverage size is between 600 ml (inclusive) and 1L, and Large if beverage size is greater than or equal to 1L.

#### Brand-related variables

For beer, we included two types of brand-related variables:

<sup>111</sup> Included only for beer.

- ▼ *Brand* is a categorical variable to indicate whether a product is a major or non-major brand: *Brand* is set to *as Major brand* if a product is manufactured by Carton & United Breweries or Lion. Carton & United Breweries or Lion are the two major players in beer manufacturing, holding a market share of 43.3% and 37.2%, respectively.<sup>112</sup>
- ▼ *Craft* is a categorical variable to indicate whether a product is a craft (premium) beer. Beers in our sample are categorised into *Craft* and *Non-craft* groups based on our hand-collected list of craft beers from Dan Murphy's website and GABS Craft Beer list.<sup>113</sup>

### Pack Type

*Multipack* is a binary variable that is equal to 1 if a product is a multi-pack and zero, otherwise.

### Price Type

*Promo* is a binary variable that is equal to 1 if a product was on promotion and zero, otherwise.

We note that we did not include a *Retailer* variable as all beer and ciders in our final sample are sold at Coles or Woolworths' liquor retailers which include Liquorland, First Choice, Vintage Cellars, Woolworths Liquor, BWS and Dan Murphy's, which collectively account for around 65% of the market.<sup>114</sup> Also, we did not include a variable to identify promo prices as all beer and cider prices in our final sample are non-promotional prices.

## B.3.2 Regression results

This section provides regression results for alcoholic beverages:

- ▼ beer in Table B.10 (using Sample A) and Table B.11 (using Sample B)
- ▼ cider in Table B.12 (using Sample A) and Table B.13 (using Sample B).

As noted previously, we obtained monthly mean, median, maximum, minimum and mode (ie, most common) prices for each alcoholic beverage sold by a retailer in NSW and Victoria. Therefore, we run separate regressions using each of these prices as the dependent variable. Our results are robust to different types of prices used although the magnitude of the coefficients tends to be smaller when monthly maximum prices are used as the dependent variable.

Based on our main model estimated on Sample A (Table B.10), we found that beer prices are 5.3 cents higher in February 2018 as a result of the CDS. We did not find any statistically significant differences in other months during the CDS period.

The signs of the other coefficients are generally consistent with our expectation. For example, holding other things constant,

<sup>112</sup> IBISWorld Industry Report C1212 – Beer Manufacturing in Australia, July 2017, pp 23-24. We did not define products manufactured by Coopers Brewery Limited as *Major brand* as its market share is less than 10% (ie, 5.3%).

<sup>113</sup> <https://www.danmurphys.com.au/dm/home.jsp>; <https://www.gabsfestival.com/h100-2017-aus-main-list>, accessed on 12 April 2018.

<sup>114</sup> <http://www.roymorgan.com/findings/7181-liquor-retail-australia-201703201051>, accessed on 12 April 2018.

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- ▼ Beer sized between 375 ml and 600 ml costs on average \$6 per container (the sum of the intercept and the coefficient on *Small to Medium*). Small beer costs \$4 per container, on average.
  - ▼ On average, craft beer tends to be 82 cents more expensive than non-craft beer.

Beers produced by the major producers, Carlton & United Breweries and Lion, tend to be, on average, about 50 cents cheaper than those produced by other manufacturers.

**Table B.10 Impact of the CDS on beer using a sample of products with prices available from January 2017 (Sample A, \$ including GST)**

	Mean Price		Median Price		Maximum Price		Minimum Price		Most Common Price	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
NSW	-0.059	-0.059	-0.056	-0.056	-0.063	-0.063	-0.056	-0.056	-0.059	-0.059
Time		0.289**		0.261**		0.312**		0.261**		0.284**
CDS <sub>NOV-FEB</sub>		0.024		0.026		0.019		0.026		0.026
CDS <sub>NOV</sub>	0.003		-0.003		0.001		-0.003		0.009	
CDS <sub>DEC</sub>	0.016		0.019		0.016		0.019		0.016	
CDS <sub>JAN</sub>	0.025		0.029		0.024		0.029		0.024	
CDS <sub>FEB</sub>	0.053**		0.059**		0.034*		0.059**		0.055**	
Craft Beer	0.824**	0.824**	0.825**	0.825**	0.822**	0.822**	0.825**	0.825**	0.823**	0.823**
Major Producer	-0.488**	-0.488**	-0.508**	-0.508**	-0.471**	-0.471**	-0.508**	-0.508**	-0.484**	-0.484**
Medium	-12.815**	-12.815**	-12.806**	-12.806**	-12.821**	-12.821**	-12.806**	-12.806**	-12.819**	-12.819**
Small	-18.465**	-18.465**	-18.475**	-18.475**	-18.458**	-18.458**	-18.475**	-18.475**	-18.466**	-18.466**
Small to Medium	-16.418**	-16.418**	-16.425**	-16.425**	-16.418**	-16.418**	-16.425**	-16.425**	-16.42**	-16.42**
Multi Pack	-1.721**	-1.721**	-1.754**	-1.754**	-1.693**	-1.693**	-1.754**	-1.754**	-1.716**	-1.716**
Intercept	22.503**	22.503**	22.499**	22.499**	22.504**	22.504**	22.499**	22.499**	22.508**	22.508**
Month Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	98,941	98,941	98,941	98,941	98,941	98,941	98,941	98,941	98,941	98,941
Adj. R squared	45.18%	45.18%	45.41%	45.41%	44.97%	44.97%	45.41%	45.41%	45.11%	45.11%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Invigor Insights Retail data.

**Table B.11 Impact of the CDS on beer using a sample of products with prices available from January 2016 (Sample B, \$ including GST)**

	Mean Price		Median Price		Maximum Price		Minimum Price		Most Common Price	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
NSW	-0.049	-0.049	-0.052	-0.052	-0.049	-0.049	-0.052	-0.052	-0.048	-0.048
Time		0.201**		0.164**		0.231**		0.164**		0.199**
CDS <sub>NOV-FEB</sub>		0.027**		0.026**		0.027**		0.026**		0.029**
CDS <sub>NOV</sub>	0.002		-0.001		0.013**		-0.001		0	
CDS <sub>DEC</sub>	0.021**		0.019**		0.023**		0.019**		0.022**	
CDS <sub>JAN</sub>	0.029**		0.03**		0.029**		0.03**		0.03**	
CDS <sub>FEB</sub>	0.057**		0.054**		0.043**		0.054**		0.063**	
Craft Beer	0.797**	0.797**	0.797**	0.797**	0.796**	0.796**	0.797**	0.797**	0.796**	0.796**
Major Producer	-0.591**	-0.591**	-0.614**	-0.614**	-0.573**	-0.573**	-0.614**	-0.614**	-0.587**	-0.587**
Size (MED)	-13.622**	-13.622**	-13.613**	-13.613**	-13.63**	-13.63**	-13.613**	-13.613**	-13.627**	-13.627**
Size (SML)	-18.544**	-18.544**	-18.555**	-18.555**	-18.535**	-18.535**	-18.555**	-18.555**	-18.544**	-18.544**
Size (SML to MED)	-16.705**	-16.705**	-16.717**	-16.717**	-16.701**	-16.701**	-16.717**	-16.717**	-16.706**	-16.706**
Multi Pack	-1.604**	-1.604**	-1.639**	-1.639**	-1.575**	-1.575**	-1.639**	-1.639**	-1.598**	-1.598**
Intercept	22.602**	22.602**	22.605**	22.605**	22.598**	22.598**	22.605**	22.605**	22.606**	22.606**
Month Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	71,136	71,136	71,136	71,136	71,136	71,136	71,136	71,136	71,136	71,136
Adj. R squared	52.14%	52.15%	52.35%	52.35%	51.90%	51.90%	52.35%	52.35%	52.06%	52.06%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Invigor Insights Retail data.

**Table B.12 Impact of the CDS on cider using a sample of products with prices available from January 2017 (Sample A, \$ including GST)**

	Mean Price		Median Price		Maximum Price		Minimum Price		Most Common Price	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
NSW	-0.015	-0.015	-0.007	-0.007	-0.02	-0.02	-0.007	-0.007	-0.015	-0.015
Time		0.247**		0.203**		0.273**		0.203**		0.246**
CDS <sub>NOV-FEB</sub>		0.022		0.024		0.02		0.024		0.022
CDS <sub>NOV</sub>	-0.01		-0.017		-0.004		-0.017		-0.012	
CDS <sub>DEC</sub>	0.007		0.013		0.004		0.013		0.005	
CDS <sub>JAN</sub>	0.033		0.028		0.031		0.028		0.032	
CDS <sub>FEB</sub>	0.059**		0.072**		0.048*		0.072**		0.06**	
Size (SML)	-1.562**	-1.562**	-1.588**	-1.588**	-1.535**	-1.535**	-1.588**	-1.588**	-1.56**	-1.56**
Size (SML to MED)	1.31**	1.31**	1.322**	1.322**	1.312**	1.312**	1.322**	1.322**	1.305**	1.305**
Multi Pack	-1.494**	-1.494**	-1.535**	-1.535**	-1.471**	-1.471**	-1.535**	-1.535**	-1.483**	-1.483**
Intercept	5.56**	5.56**	5.576**	5.576**	5.554**	5.554**	5.576**	5.576**	5.557**	5.557**
Month Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	17,225	17,225	17,225	17,225	17,225	17,225	17,225	17,225	17,225	17,225
Adj. R squared	75.22%	75.22%	75.44%	75.45%	74.96%	74.96%	75.44%	75.45%	74.89%	74.90%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Invigor Insights Retail data.

**Table B.13 Impact of the CDS on cider using a sample of products with prices available from January 2016 (Sample B, \$ including GST)**

	Mean Price		Median Price		Maximum Price		Minimum Price		Most Common Price	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
NSW	-0.011	-0.011	-0.012	-0.012	-0.013	-0.013	-0.012	-0.012	-0.011	-0.011
Time		0.218**		0.162**		0.244**		0.162**		0.224**
CDS <sub>NOV-FEB</sub>		0.038		0.038		0.043		0.038		0.035
CDS <sub>NOV</sub>	0.002		-0.004		0.028		-0.004		-0.01	
CDS <sub>DEC</sub>	0.035		0.035		0.036		0.035		0.037	
CDS <sub>JAN</sub>	0.045		0.045		0.045		0.045		0.046	
CDS <sub>FEB</sub>	0.067**		0.077**		0.062**		0.077**		0.068**	
Size (SML)	-1.654**	-1.654**	-1.683**	-1.683**	-1.621**	-1.621**	-1.683**	-1.683**	-1.648**	-1.648**
Size (SML to MED)	1.233**	1.233**	1.243**	1.243**	1.233**	1.233**	1.243**	1.243**	1.226**	1.226**
Multi Pack	-1.457**	-1.457**	-1.507**	-1.507**	-1.43**	-1.43**	-1.507**	-1.507**	-1.447**	-1.447**
Intercept	5.597**	5.597**	5.625**	5.625**	5.585**	5.585**	5.625**	5.625**	5.593**	5.593**
Month Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	11,934	11,934	11,934	11,934	11,934	11,934	11,934	11,934	11,934	11,934
Adj. R squared	78.09%	78.10%	78.42%	78.43%	77.50%	77.50%	78.42%	78.43%	77.53%	77.54%

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10% level.

**Source:** IPART analysis using Invigor Insights Retail data.

## C List of submissions to Issues Paper

**Table 5.14 List of submission on IPART Issues Paper**

Submitter	Date received
Individual – Anonymous (Confidential)	13 February 2018
Individual – Anonymous (Confidential)	15 February 2018
Individual – Anonymous (Confidential)	16 February 2018
Individual – Anonymous (Confidential)	12 March 2018
Individual – Anonymous (Confidential)	13 March 2018
Individual – Anonymous (Confidential)	13 March 2018
Individual – T Allport (Confidential)	14 February 2018
Sternwin TA Firstwater Springs (Confidential)	13 March 2018
Individual – Anonymous	13 February 2018
Individual – Anonymous	13 February 2018
Individual – Anonymous	13 February 2018
Individual – Anonymous	13 February 2018
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Individual – Anonymous	15 February 2018
Individual – Anonymous	15 February 2018
Individual – Anonymous	16 February 2018
Individual – Anonymous	17 February 2018
Individual – Anonymous	23 February 2018
Individual – Anonymous	24 February 2018
Individual – A Zaunders	15 February 2018
Individual – B. Batten	16 February 2018
Individual – F. Shaw	15 February 2018
Individual – G. O’Riley	13 February 2018
Individual – J Connell	6 March 2018
Individual – J. Ellis	1 March 2018



Submitter	Date received
Individual – J. Haddon	4 March 2018
Individual – J. Moffitt	16 February 2018
Individual – J. Parry	15 February 2018
Individual – J. Singh	15 February 2018
Individual – L. Townsend	25 February 2018
Individual – M. Bowen	25 February 2018
Individual – M. Ingram	16 February 2018
Individual – M. Thompson	21 February 2018
Individual – R. McKay	15 February 2018
Individual – S. Smith	14 February 2018
Individual – T. Caldwell	28 February 2018
Individual – V. Clayton	17 February 2018
Individual – V Nielson	15 February 2018
Organisation - Anonymous	24 February 2018
Australian Beverages Council	13 March 2018
DSICA	12 March 2018
Liquor Stores Association NSW ACT	13 March 2018
Mathews IGA Supermarkets	5 March 2018
MGA Liquor	27 March 2018
National Retail Association	13 March 2018
NSW Business Chamber	21 March 2018
Office of the NSW Small Business Commissioner	16 March 2018
Restaurant Catering Industry Association	14 March 2018
The Two Metre Tall Company Pty Ltd	12 March 2018
Thirst for Life	27 February 2018