



# **QA of Transport for NSW pricing proposal for compliance with IPART Determination**

THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL OF  
NSW (IPART)

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# QA of Transport for NSW pricing proposal for compliance with IPART Determination

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# QA of Transport for NSW pricing proposal for compliance with IPART Determination

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## Executive summary

The Independent Pricing and Regulatory Tribunal of NSW (IPART) determines the maximum fares to apply from July 2016 to June 2019 for all Opal Sydney services in Sydney and surrounds (covering rail, light rail, buses and ferries).<sup>1</sup> IPART's Determination *Transport – maximum fares for Opal services* (the Determination) was issued in the form of a maximum weighted average price change such that the increase in the Average Adult Fare from 2015-16 to 2018-19 is limited to 13%.

Frontier Economics was engaged by IPART to undertake a Quality Assurance (QA) review of Transport for NSW (TfNSW) pricing proposal—which included an increase in average Adult fares for Opal services of 2.4% in 2017-18—and to provide assurances to IPART that the data and calculations used to calculate Average Adult Fares for 2017-18 comply with IPART's Determination. A summary of our key findings is set out in Box 1.

### Box 1: Frontier Economics' key findings in QA of TfNSW Pricing Proposal for compliance with IPART Determination

Frontier Economics was engaged by IPART to undertake a QA check of TfNSW's pricing proposal and to provide assurances to IPART that the data and calculations used to calculate Average Adult Fares for 2017-18 comply with IPART's Determination.

We have reviewed the logic, calculations and assumptions underlying the pricing proposal and are satisfied that the Average Adult Fare for 2017-18 in the TfNSW Pricing Proposal have been calculated appropriately in that:

- Assumptions used in the calculation of the Trip Distribution can either be traced to source data or information reflecting the number of trips on Opal Services made for the representative 2016-17 period for the under an Opal Card and under a Ticket and/or these assumptions are documented and reasonable in the circumstances
- These assumptions are correctly used to calculate weights in the Trip Distribution and this calculation can be replicated
- The Average Adult Fare is correctly calculated using this Trip Distribution and that this calculation can be replicated

On this basis we can provide assurance that the proposed increase in the Average Adult Opal fare does not exceed a 13% increase (from 2015-16) including inflation and that the TfNSW Pricing Proposal complies with IPART's Determination: *Transport – maximum fares for Opal services*.

<sup>1</sup> IPART, *Transport – maximum fares for Opal services: Determination*, May 2016.

# 1 Background and context for the QA review

## 1.1 IPART's Determination: *Transport–maximum fares for Opal services*

On 20 May 2016, The Independent Pricing and Regulatory Tribunal of NSW (IPART) determined the maximum fares to apply from July 2016 to June 2019 for all Opal Sydney services in Sydney and surrounds (covering rail, light rail, buses and ferries).

IPART's Determination was issued in the form of a maximum weighted average price change. Average Adult Fares can:

- Increase by a maximum of 13% (including inflation) over the 3 years to June 2019; and
- Increase by up to 6.6% including inflation in 2016-17.

As part of IPART's Determination:

- Transport for New South Wales (TfNSW) is required to provide IPART with a pricing proposal at least 20 business days before any proposed changes to fares can occur;
- The pricing proposal must set out the proposed and existing Fares for Opal Services, the proposed Trip Distribution based on price and Trip data on the use of Opal Services available to Transport for NSW and any additional supporting information necessary<sup>2</sup>; and
- IPART then assesses the proposal for compliance with the Determination and issues a compliance statement.

## 1.2 TfNSW Pricing Proposal

The TfNSW Pricing Proposal<sup>3</sup> identifies one Fare Change Event:

1. Opal fares (inclusive of single trip tickets) and caps are to increase by 2.4% from 3 July 2017<sup>4</sup>.

The proposed fares for 2017-18 resulting from this Fare Change Event is set out in **Attachment A**.

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<sup>2</sup> IPART, Transport – maximum fares for Opal services: Determination, May 2016, Schedule 1.

<sup>3</sup> Transport for New South Wales (TfNSW), *2017-18 Fares for Opal Services Pricing Proposal June 2017*.

<sup>4</sup> This does not affect Pensioner/Senior gold card fares. These fares are to remain unchanged, and daily caps will be left at \$2.50.



The TfNSW pricing proposal states that the impact of this change results in an estimated increase in average Adult fares for Opal services from \$2.49 (excl. GST) to \$2.55 (excl. GST) an increase of 2.4%.<sup>5</sup>

### 1.3 Scope of the QA review

Frontier Economics was engaged by IPART to undertake a Quality Assurance (QA) check of the TfNSW pricing proposal and to provide assurances that the data and calculations used can be extracted and replicated to give average fares that comply with IPART's Determination.

Specifically IPART was requested to provide assurance that for the Average Adult Fare for 2017-18:

- That the data used by TfNSW can be traced back to source data or information reflecting the number of trips on Opal Services made for the 2017-18 period (or part thereof) under an Opal Card and under a Ticket. For trips under an Opal Card this would include extracting relevant data using SQL queries from TfNSW systems.
- The data from these trips are used to correctly calculate weights in a Trip Distribution for all Adult Fares payable during the 2017-18 period and that this calculation can be replicated.
- The Average Adult Fare is correctly calculated using this Trip Distribution and that this calculation can be replicated.

IPART provided Frontier Economics with a copy of TfNSW's pricing proposal and supporting average fare models (in Microsoft Excel) on 5 June 2017.

### 1.4 Our approach to the review and structure of this report

Our approach to this QA is structured around answering several broad questions:

- ***Does the TfNSW pricing proposal reflect the fares and calculations in the average fare models?*** For example:
  - Is the reported increase in Average Adult Fares for Opal services of 2.4% reflective of the proposed fares in 2017-18?
  - Are the reported customer impacts in 2017-18 reflective of the proposed fares in 2016-17?
- ***Do the average fare models do what they are supposed to do?*** For example, checking whether the:
  - Logic and structure of the average fare models are reasonable in the circumstances

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<sup>5</sup> Transport for New South Wales (TfNSW), *2016-17 Fares for Opal Services Pricing Proposal May 2017*, p1.

- Trip Distributions have been used appropriately such that the models calculate average fares in a way that complies with IPART's Determination
- Calculation of Average Adult Fares can be replicated.
- ***What assumptions does it rely on and are they correctly used?*** For example:
  - Documenting any assumptions that are used to calculate weights and checking them back to source data, such as the number of trips on Opal Services made for the 2017-18 period (or part thereof) under an Opal Card and under a Ticket.
  - Checking whether these assumptions have been used correctly to calculate weights in a Trip Distribution.
- ***How reasonable are the assumptions?*** For example, testing whether assumptions are reasonable in the circumstances given their materiality or impact on the Average Adult Fare and the availability of alternative assumptions (including approaches to estimating assumptions).

This report is structured in the following manner:

- Section 2 sets out an overview of the average fare models including how they estimate Average Adult Fares, lists the key assumptions used in the models and their source, and outlines how TfNSW has estimated the impacts of the proposed fares for 2017-18 on customers.

Section 3 provides our overall findings and assessment of TfNSW Pricing Proposal's compliance with IPART Determination

## 2 TfNSW pricing proposal and calculation of Average Adult Fares

### 2.1 Calculation of Average Adult Fare for 2017-18

Frontier Economics has been able to replicate TfNSW's proposed Average Adult Fare for 2017-18 as set out in Table 1.

Table 1: Average Adult Fare 2017-18 by Product

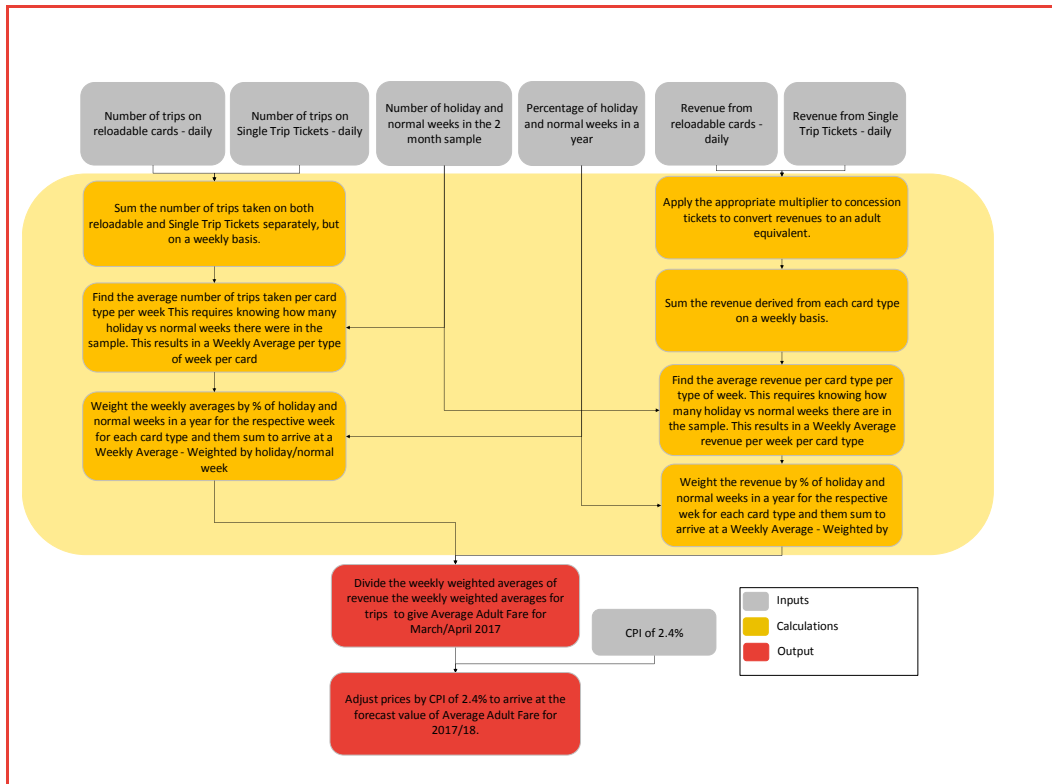
Product Group	Trip Weighting	Average Adult Fare 2017-18 (ex-GST)
Opal card	98.2%	\$2.52
Ticket	1.8%	\$4.24
TOTAL	100%	\$2.55

Source: TfNSW Pricing Proposal

As shown in Figure 1 this Average Adult Fare is based on a trip weighted average price for qualifying travel on tickets and on Opal cards for an 8 week period from 6 March 2017 to 30 April 2017<sup>6</sup> and its calculation involves several steps and key inputs and assumptions.

<sup>6</sup> Frontier Economics has tested the reasonableness of this 8 week period against other potential 8 week periods. These results are discussed in Section 0.

Figure 1: Steps for the calculation of Average Adult Fare in 2017-18



Source: Frontier Economics

## 2.2 Trip Distribution for 2017-18

IPART’s Determination was issued in the form of a maximum weighted average price change. This form of regulation requires TfNSW to calculate an Average Adult Fare based on the numerous travel product types (including Adult and Concession travel using Opal cards and paper tickets).

To calculate this Average Adult Fare a ‘Trip Distribution’ is required, which reflects the number of Trips taken for an Adult Fare as a proportion of total Trips taken for that period.

IPART’s Determination requires TfNSW to propose a Trip Distribution based on price and Trip data on the use of Opal Services.

For 2017-18, TfNSW proposed constructing a ‘Trip Distribution’ using actual trip data for the period 6 March 2017 to 30 April 2017.

### 2.2.1 The 2017-18 Trip Distribution

Frontier Economics has been able to replicate TfNSW’s proposed Opal card Trip Distribution for 2017-18 using the source data. We present our results in Table 2: Frontier Economics’ replication of TfNSW’s proposed Opal card Trip Distribution and Average Adult fare for 2017-18.

Table 2: Frontier Economics' replication of TfNSW's proposed Opal card Trip Distribution and Average Adult fare for 2017-18

Fare Up To	Holiday			Normal			Total		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	7%	7%	\$0.00	7%	6%	\$0.00	7%	6%	\$0.00
\$2.00	19%	21%	\$0.91	21%	25%	\$0.96	21%	24%	\$0.95
\$3.00	23%	25%	\$2.11	23%	25%	\$2.10	23%	25%	\$2.10
\$4.00	28%	29%	\$3.08	26%	27%	\$3.09	26%	27%	\$3.09
\$5.00	17%	12%	\$4.19	17%	14%	\$4.19	17%	14%	\$4.19
\$7.00	5%	4%	\$5.66	4%	3%	\$5.72	4%	3%	\$5.71
Over \$7.00	1%	1%	\$7.27	1%	1%	\$7.36	1%	1%	\$7.34
ALL	100%	100%	\$2.54	100%	100%	\$2.51	100%	100%	\$2.52

Source: Frontier Economics

Table 3: Frontier Economics' replication of TfNSW's proposed Single Trip Ticket Distribution and Average Adult fare for 2017-18

Fare Up to	Holiday			Normal			Total		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	-	-	-	-	-	-	-	-	-
\$2.00	-	-	-	-	-	-	-	-	-
\$3.00	24%	27%	\$2.36	25%	30%	\$2.36	30%	25%	\$2.36
\$4.00	-	-	-	-	-	-	-	-	-
\$5.00	38%	38%	\$3.86	40%	38%	\$3.86	38%	40%	\$3.86
\$7.00	23%	22%	\$5.06	21%	21%	\$5.05	21%	21%	\$5.05

Over \$7.00	15%	13%	\$7.66	13%	11%	\$7.67	11%	14%	\$7.67
ALL	100%	100%	\$4.30	100%	100%	\$4.21	100%	100%	\$4.23

Source: Frontier Economics

Frontier Economics has also calculated the combined Ticket and Opal card Trip Distribution for 2017-18 using the source data (Table 4).

Table 4: Frontier Economics' calculation of combined Ticket and Opal card Trip Distribution and Average Adult fare for 2017-18

Fare Up to	Holiday			Normal			Total		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	7%	7%	\$0.00	7%	6%	\$0.00	7%	6%	\$0.00
\$2.00	19%	21%	\$0.91	21%	25%	\$0.96	21%	24%	\$0.95
\$3.00	23%	25%	\$2.14	23%	25%	\$2.13	23%	25%	\$2.11
\$4.00	28%	29%	\$3.09	26%	27%	\$3.09	26%	27%	\$3.09
\$5.00	17%	12%	\$4.20	17%	14%	\$4.20	17%	14%	\$4.20
\$7.00	5%	4%	\$5.65	4%	3%	\$5.71	4%	3%	\$5.70
Over \$7.00	1%	1%	\$7.35	1%	1%	\$7.42	1%	1%	\$7.43
ALL	100%	100%	\$2.57	100%	100%	\$2.54	100%	100%	\$2.55

Source: Frontier Economics

### *Testing whether the 2016-17 sample period is reasonable*

Frontier Economics has been able to replicate TfNSW's proposed Trip Distribution and for 2016-17 using the source data (see Table 5).

Table 5: Frontier Economics replication of TfNSW's Average Fares and Trip Distribution for 2016-17

	Holiday			Normal		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	7%	7%	\$0.00	7%	6%	\$0.00
\$2.00	19%	21%	\$0.89	22%	25%	\$0.93
\$3.00	31%	33%	\$2.20	30%	31%	\$2.18
\$4.00	20%	22%	\$3.13	20%	21%	\$3.12
\$5.00	17%	12%	\$4.09	17%	14%	\$4.09
\$7.00	5%	4%	\$5.53	4%	3%	\$5.59
Over \$7.00	1%	1%	\$7.11	1%	1%	\$7.19
ALL	100%	100%	\$2.48	100%	100%	\$2.45

Source: Frontier Economics Calculations, TfNSW data.

To test whether the proposed sample period from 6 March 2017 to 30 April 2017 is reasonable we undertook sensitivity analysis on the changes in the Average Adult Fare and Trip Distribution using several alternative sample periods in 2016-17. That is, would the use of an alternative sample period result in a materially different Trip Distribution and Average Adult Fare.

Table 6 to Table 8 shows the differences between the Trip Distributions and each of the price bands from using alternative sample periods in 2016-17 (compared to the proposed Trip Distribution). The results show that there is minimal change in the Adult Fare's and the Trip Distribution from using alternative sample periods in 2016-17.<sup>7</sup>

<sup>7</sup> Table 4 and Table 5 excluded sample periods that cover the Christmas and New Year break. There is a greater difference in Table 6 which includes the Christmas and New Year break—however this is arguably less representative.

Table 6: Trip Distribution: Comparison of TfNSW proposal and alternative period from 5 September to 24 October 2016

	Holiday			Normal		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	0%	0%	0.00	0%	-1%	0.00
\$2.00	0%	0%	-0.02	0%	1%	-0.02
\$3.00	0%	1%	0.00	0%	-1%	0.00
\$4.00	0%	0%	0.00	0%	0%	0.00
\$5.00	0%	0%	0.00	0%	1%	0.00
\$7.00	0%	0%	0.00	0%	0%	0.00
Over \$7.00	0%	0%	0.04	0%	0%	0.01
ALL	0%	0%	-0.01	0%	0%	-0.01

Source: Frontier Economics Calculations, TfNSW data.

Table 7: Trip Distribution: Comparison of TfNSW proposal and alternative period from 31 October to 19 December 2016

	Holidays			Normal		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	0%	0%	0.00	0%	-1%	0.00
\$2.00	-1%	3%	-0.04	0%	2%	0.00
\$3.00	0%	-2%	0.01	0%	-3%	0.00
\$4.00	0%	-1%	0.00	0%	0%	0.00
\$5.00	1%	0%	0.00	0%	2%	0.00
\$7.00	0%	0%	0.01	0%	0%	0.01



Over \$7.00	0%	0%	0.04	0%	0%	0.04
ALL	0%	0%	0.01	0%	0%	0.00

Source: Frontier Economics Calculations, TfNSW data.

Table 8: Trip Distribution: Comparison of TfNSW proposal and alternative period from 5 September 2016 to 24 April 2017

	Holiday			Normal		
	Adult	Concession	Average Fare	Adult	Concession	Average Fare
\$0.00	0%	0%	0.00	0%	-1%	0.00
\$2.00	0%	1%	0.00	0%	1%	0.00
\$3.00	-1%	0%	0.00	0%	-1%	0.00
\$4.00	0%	0%	0.00	0%	0%	0.00
\$5.00	1%	0%	0.00	0%	1%	0.00
\$7.00	0%	0%	0.04	0%	0%	0.01
Over \$7.00	0%	0%	0.10	0%	0%	0.03
ALL	0%	0%	0.02	0%	0%	0.00

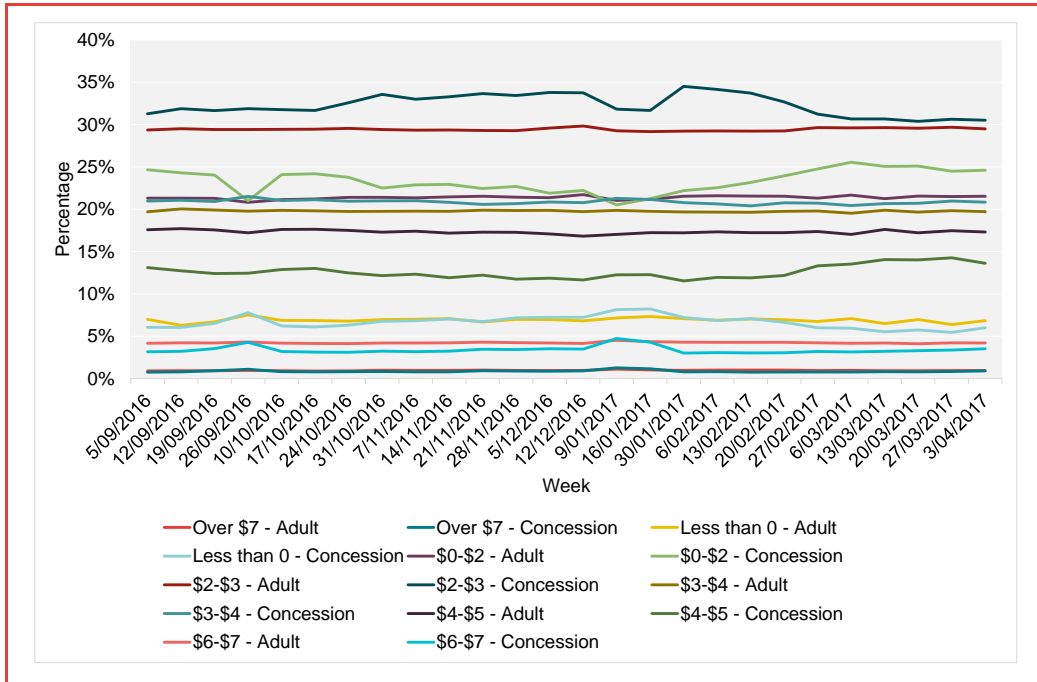
Source: Frontier Economics Calculations, TfNSW data.

## 2.2.2 Trip Distributions by Normal and Holiday week

Figure 2 and Figure 3 shows the percentage use of a given card type (Concession or Adult) for a given price band. It shows that some card types vary more than others over the period from 5 September 2016 to 24 April 2017 but there are few material changes in the percentage of trips that each card type and price band occupy.<sup>8</sup>

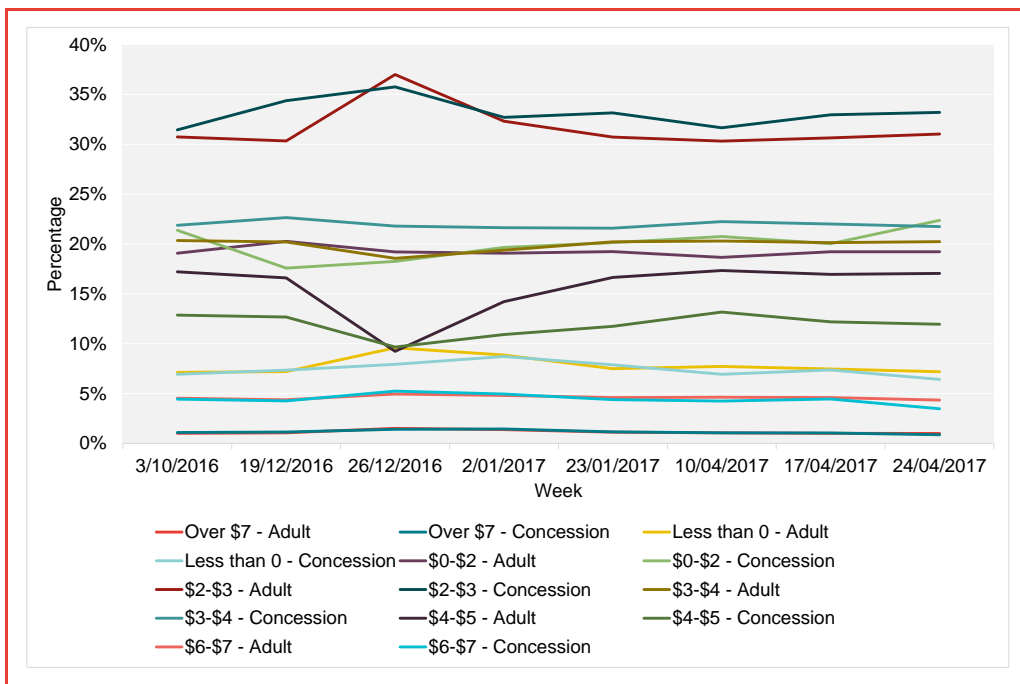
<sup>8</sup> For example, it shows the percentage of total fares taken on a concession card in the price band range of \$2 - \$3 on the 5/12/2016 is approximately 34%, for this same card and price band, the percentage of total fares is nearing 30% on 3/04/2017.

Figure 2: Movement of Components of Trip Distribution – Normal Weeks



Source: Frontier Economics Calculations, TfNSW data.

Figure 3: Movement of Components of Trip Distribution – Holiday Weeks



Source: Frontier Economics Calculations, TfNSW data.

## 2.3 Transfer discount and travel reward comparisons

Frontier Economics has been able to replicate the calculations and results using source data (see Table 9), and can confirm the following statement in TfNSW's pricing proposal:

Since its introduction in September 2016, around 12 per cent of Opal card trips received a transfer discount compared to 2015-16 where no trips received a transfer discount. Since the change to travel rewards in September 2016, around 16 per cent of Opal card trips received a weekly travel reward of 50% compared to 2015-16, where 19 per cent of Opal card trips received a 100% discount.<sup>9</sup>

Table 9: Transfer discount and travel rewards from September 2016 to June 2017

Passenger Type	Total Trips	Transfer Discount	Travel Reward
Adult	351.3	42.0	59.4
Concession (exc Snr/Pens)	56.7	8.2	6.2
Total	408.0	50.2	65.6
Percentage of Trips		12.3%	16.1%

Source: Frontier Economics

<sup>9</sup> Transport for New South Wales (TfNSW), *2017-18 Fares for Opal Services Pricing Proposal June 2017 page 1-2*

### 3 Summary of our findings and assessment of TfNSW Pricing Proposal’s compliance with IPART Determination

#### 3.1 Average Adult Fare for 2017-18

We have reviewed the logic, calculations and assumptions underlying the pricing proposal and are satisfied that the Trip Distribution and Average Adult Fare for 2017-18 in the TfNSW Pricing Proposal has been calculated appropriately.

Table 10: Average Adult Fare for 2016-17: Frontier Economics’ key findings in QA of TfNSW Pricing Proposal for compliance with IPART Determination

Scope of QA	Frontier Economics finding	Frontier Economics assurance
<p>Check that the representative period in 2016-17 that TfNSW proposes to use as the starting point for the 2017-18 Trip Distribution is reasonable, including QA of sensitivity analysis on the impact of using alternative assumptions.</p> <p>Check that any assumptions that are made by TfNSW in calculating the proposed Trip Distribution for 2017-18 from the representative period in 2016-17 are documented.</p>	<p>Our QA finding is that:</p> <ul style="list-style-type: none"> <li>• The calculation of Average Adult Fare in 2017-18 is insensitive (excluding Christmas and New Year period) to the assumed Trip Distribution used in 2016-17.</li> <li>• There are range of approaches and time periods to use in determining a Trip Distribution in 2017-18 with each approach balancing a range of risks.</li> <li>• Key assumptions that are made by TfNSW in calculating the proposed Trip Distribution for 2017-18 from the representative period in 2016-17 are documented.</li> </ul>	<p>TfNSW’s proposed representative period in for the 2017-18 Trip Distribution is reasonable in the circumstances.</p> <p>Key assumptions that are made by TfNSW in calculating the proposed Trip Distribution for 2017-18 from the representative period in 2016-17 are documented.</p>
<p>Check that the data used by TfNSW can be traced back to source data or information reflecting number of trips on Opal Services made during the representative period in 2016-17. under an Opal Card and under a Ticket.</p>	<p>Our QA finding is that:</p> <ul style="list-style-type: none"> <li>• The data reflects source information on the number of trips on Opal Services made for the 2017-18 period (or part thereof).</li> </ul>	<p>These assumptions are correctly used to calculate weights in the Trip Distribution for 2017-18 and this calculation can be replicated.</p>

<p>Check that any assumptions in calculating the proposed Trip Distribution for 2017-18 from the representative period in 2016-17 are correctly used to calculate weights in the proposed Trip Distribution and that this calculation can be replicated.</p>	<p>Our QA finding is that:</p> <ul style="list-style-type: none"> <li>• Assumptions used to calculate weights in the Trip Distribution for 2016-17 are appropriately used and this calculation can be replicated.</li> </ul>	<p>These assumptions are appropriately used to calculate weights in the Trip Distribution for 2017-18 and this calculation can be replicated.</p>
<p>Check that the Average Adult Fare is correctly calculated using this Trip Distribution and that this calculation can be replicated</p>	<p>Our QA finding is that:</p> <ul style="list-style-type: none"> <li>• Logic and structure of the average fare model is reasonable in the circumstances</li> <li>• Inputs have been correctly sourced</li> <li>• The model correctly uses this Trip Distribution</li> <li>• Key calculations can be replicated</li> </ul>	<p>The Average Adult Fare is correctly calculated using this Trip Distribution and that key calculations can be replicated.</p>

Source: Frontier Economics analysis

### 3.2 Estimation of impact of proposed fare change

We have reviewed the logic, calculations and assumptions underlying the estimated impact of the proposed fares as set out in Table 11.

Table 11: Estimation of impact of proposed fares and Fare Change Events: Frontier Economics' key findings in QA of TfNSW Pricing Proposal for compliance with IPART Determination

Scope of QA	Frontier Economics finding	Frontier Economics assurance
<p>Is the reported increase in Average Adult Fares for Opal services of 2.4% reflective of the proposed fares in 2017-18?</p>	<p>Our QA finding is that the Average Adult Fare of \$2.55 in 2017/18, and the estimated increase of 2.4%, is correct.</p>	<p>The increase in the Average Adult Fare of 2.4% in 2017-18 is correct.</p>
<p>Are the reported impacts of the Fare Change Events calculated correctly?</p>	<p>Our QA finding is that these calculations can be replicated.</p>	<p>The impact of the Fare Change Event on the Average Adult Fare in 2017-18 is calculated correctly and can be replicated.</p>

### 3.3 Overall assessment of TfNSW Pricing Proposal's compliance with IPART Determination

Frontier Economics was engaged by IPART to undertake a QA check of TfNSW's pricing proposal and to provide assurances to IPART that the data and calculations used to calculate Average Adult Fares for 2017-18 comply with IPART's Determination.

We have reviewed the logic, calculations and assumptions underlying the pricing proposal and are satisfied that the Trip Distribution and Average Adult Fare for 2017-18 in the TfNSW Pricing Proposal has been calculated appropriately:

- Assumptions used in the calculation of the Trip Distribution can either be traced to source data or information reflecting the number of trips on Opal Opal Card and under a Ticket and/or these assumptions are documented and reasonable in the circumstances
- These assumptions are correctly used to calculate weights in the Trip Distribution and this calculation can be replicated
- The Average Adult Fare is correctly calculated using this Trip Distribution and that this calculation can be replicated.

On this basis we can provide assurance that the proposed increase in the Average Adult Opal fare does not exceed an increase of 13% from the prices set in 2015-16 including inflation and that the TfNSW Pricing Proposal complies with IPART Determination: *Transport – maximum fares for Opal services.*

## Attachment A: TfNSW proposed fares for 2017-18

Figure 4: Changes to Opal card fares: Train

	ADULT		CONCESSION	
	Current peak	New peak	Current peak	New peak
<b>Train Band 1</b>	\$3.38	\$3.46	\$1.69	\$1.73
<b>Train Band 2</b>	\$4.20	\$4.30	\$2.10	\$2.15
<b>Train Band 3</b>	\$4.82	\$4.94	\$2.41	\$2.47
<b>Train Band 4</b>	\$6.46	\$6.61	\$3.23	\$3.30
<b>Train Band 5</b>	\$8.30	\$8.50	\$4.15	\$4.25

	ADULT		CONCESSION	
	Current off peak	New off peak	Current off peak	New off peak
<b>Train Band 1</b>	\$2.36	\$2.42	\$1.18	\$1.21
<b>Train Band 2</b>	\$2.94	\$3.01	\$1.47	\$1.50
<b>Train Band 3</b>	\$3.37	\$3.45	\$1.68	\$1.72
<b>Train Band 4</b>	\$4.52	\$4.62	\$2.26	\$2.31
<b>Train Band 5</b>	\$5.81	\$5.95	\$2.90	\$2.97

Figure 5: Changes to Opal card fares: Bus

	ADULT		CONCESSION	
	Current	New	Current	New
<b>Bus Band 1</b>	\$2.10	\$2.15	\$1.05	\$1.07
<b>Bus Band 2</b>	\$3.50	\$3.58	\$1.75	\$1.79
<b>Bus Band 3</b>	\$4.50	\$4.61	\$2.25	\$2.30

Figure 6: Changes to Opal card fares: Light rail

	ADULT		CONCESSION	
	Current	New	Current	New
<b>Light rail Band 1</b>	\$ 2.10	\$ 2.15	\$ 1.05	\$ 1.07
<b>Light rail Band 2</b>	\$ 3.50	\$ 3.58	\$ 1.75	\$ 1.79
<b>Light rail Band 3</b>	\$ 4.50	\$ 4.61	\$ 2.25	\$ 2.30

Figure 7: Changes to Opal card fares: Ferry

	ADULT		CONCESSION	
	Current	New	Current	New
<b>Ferry Band 1</b>	\$5.74	\$5.88	\$2.87	\$2.94
<b>Ferry Band 2</b>	\$7.18	\$7.35	\$3.59	\$3.67
<b>Stockton Ferry</b>	\$2.10	\$2.15	\$1.05	\$1.07

Figure 8: Changes to Opal caps

	Weekday/Saturday		Sunday		Weekly	
	Current	New	Current	New	Current	New
<b>Adult</b>	\$15.00	\$15.40	\$2.50	\$2.60	\$60.00	\$61.60
<b>Child/Youth</b>	\$7.50	\$7.70	\$2.50	\$2.60	\$30.00	\$30.80
<b>Concession</b>	\$7.50	\$7.70	\$2.50	\$2.60	\$30.00	\$30.80
<b>Senior/Pensioner</b>	\$2.50	\$2.50	\$2.50	\$2.50	N/A	N/A

Figure 9: Changes to single trip ticket fares: Train

	ADULT		CHILD/YOUTH	
	Current	New	Current	New
<b>Train Band 1</b>	\$4.10	\$4.20	\$2.00	\$2.10
<b>Train Band 2</b>	\$5.10	\$5.20	\$2.50	\$2.60
<b>Train Band 3</b>	\$5.80	\$6.00	\$2.90	\$3.00
<b>Train Band 4</b>	\$7.80	\$8.00	\$3.90	\$4.00
<b>Train Band 5</b>	\$10.00	\$10.20	\$5.00	\$5.10

Figure 10: Changes to single trip ticket fares: Bus

	ADULT		CHILD/YOUTH	
	Current	New	Current	New
<b>Bus Band 1</b>	\$2.60	\$2.60	\$1.30	\$1.30
<b>Bus Band 2</b>	\$4.20	\$4.30	\$2.10	\$2.10
<b>Bus Band 3</b>	\$5.40	\$5.60	\$2.70	\$2.80

Figure 11: Changes to single trip ticket fares: Light rail

	ADULT		CHILD/YOUTH	
	Current	New	Current	New
<b>Light rail Band 1</b>	\$2.60	\$2.60	\$1.30	\$1.30
<b>Light rail Band 2</b>	\$4.20	\$4.30	\$2.10	\$2.10
<b>Light rail Band 3</b>	\$5.40	\$5.60	\$2.70	\$2.80

Figure 12: Changes to single trip ticket fares: Ferry

	ADULT		CHILD/YOUTH	
	Current	New	Current	New
<b>Ferry Band 1</b>	\$6.90	\$7.10	\$3.40	\$3.50
<b>Ferry Band 2</b>	\$8.70	\$8.90	\$4.30	\$4.40
<b>Stockton Ferry</b>	\$2.60	\$2.60	\$1.30	\$1.30

Source: TfNSW Pricing Proposal





