IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of fares for Sydney Ferries services from January 2013

Transport— Draft Report
September 2012

IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of fares for Sydney Ferries services from January 2013

Transport – Draft Report
September 2012

ISBN 978-1-922127-24-2

The Tribunal members for this review are:

Dr Peter J Boxall AO, Chairman

Mr James Cox PSM, Chief Executive Officer and Full Time Member

Inquiries regarding this document should be directed to a staff member:

Stephanie Biesaga (02) 9290 8429

Fiona Towers (02) 9290 8420

Independent Pricing and Regulatory Tribunal of New South Wales
PO Box Q290, QVB Post Office NSW 1230
Level 8, 1 Market Street, Sydney NSW 2000

T (02) 9290 8400 F (02) 9290 2061

www.ipart.nsw.gov.au

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 12 October 2012.

We would prefer to receive them electronically via our online submission form <http://www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by fax to (02) 9290 2061, or by mail to:

Review of fares for Sydney Ferries services from January 2013
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Office NSW 1230

Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au>. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

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. IPART will then make every effort to protect that information, but 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.

Contents

1 Introduction and executive summary

Sydney Ferries provides passenger ferry services on Sydney Harbour and the Parramatta River under a service contract with the Transport for NSW.[1] The Independent Pricing and Regulatory Tribunal of NSW (IPART) is responsible for setting the maximum fares Sydney Ferries can charge passengers for these services, in line with the requirements of section 16AE of the *Passenger Transport Act 1990*.[2]

We are undertaking a review of these ferry fares, and have made a draft determination of fares to apply from January 2013. The purpose of this report is to explain our draft determination, and the decisions and analysis that support it. We invite all stakeholders to make submissions in response to this report, which we will consider before making our final decisions and determination in November 2012.

1.1 A different approach to fare regulation

The landscape for public transport fare regulation is changing. Sydney Ferries now has a new private operator, the Opal Card electronic ticketing system is expected at the end of this year, and increasing competition on some routes raises questions about the need for ongoing fare regulation as the best mechanism to protect consumers from the exercise of monopoly power.

We have taken the dynamic nature of this market into account in making this draft determination, both in relation to proposed fare increases and the deregulation of Sydney Ferries fares on the Manly service.

1.2 How does our draft determination affect ferry passengers?

Under the draft determination, the maximum fares applying to Sydney Ferries services will increase by an average of 4.9% per year in nominal terms (or 2.6% per year above the expected rate of inflation). This is equal to an increase of 21.1% in nominal terms over the four-year determination period (or 11.0% above the rate of inflation).

---

1 An overview of Sydney Ferries operations and the Sydney Ferries route map is given in Appendix A.

2 Appendix B sets out these requirements.

We are proposing a maximum average increase, rather than specific fares, to provide the Government with the flexibility that may be required with the introduction of the Opal Card. This means that in setting prices for individual fares, the Government would need to ensure that the overall average increase in prices is 4.9% or less per year.

Taking into account the different levels of patronage and cost-recovery on Sydney Ferries 3 service areas, we recommend that:

- Fares for MyFerry2 tickets (covering travel to and from Manly and longer parts of the Parramatta River) should increase on average by 2.4% per year (or 0.2% plus inflation). This translates to a 10 cent increase for a single trip or 80 cents for a TravelTen in 2013.
- Fares for MyFerry1 tickets (which cover Inner Harbour travel and parts of the Parramatta River) should increase on average by 7.5% per year (or 5.2% plus inflation). This translates to a 40 cent increase for a single trip or $3.20 for a TravelTen in 2013.

This draft determination applies to maximum fares for the single, return and 'TravelTen'[3] tickets that can be used for Sydney Ferries services. Maximum fares for multi-mode tickets,[4] which can also be used for Sydney Ferries services, are not included as they are set through our determination of CityRail fares. We are currently reviewing CityRail fares, and intend to make our draft determination on those fares in September 2012. Fares for Pensioner Excursion Tickets (PETs) and other concession fares that can be used for Sydney Ferries services are set by the Government.

1.3 Why are fare increases necessary?

Like most public transport service providers in the world, Sydney Ferries does not generate enough income from passenger fares to recover the costs of providing its services. Therefore, the Government – or taxpayers – subsidise these costs. We consider that in this situation, fares for Sydney Ferries services – like those for CityRail and Sydney bus services – should reflect the efficient costs of providing the services **minus** the value of the external benefits they generate for the community as a whole (such as reduced road congestion). This approach ensures that passengers and taxpayers each fund a fair share of the costs.

Efficient costs for Sydney Ferries for the 4 years to 1 July 2016 were estimated as part by this draft determination by expert consultants L.E.K. Consulting, and the proposed new fares reflect the efficient costs as determined in their report.[5] Service quality on Sydney Ferries is high. Service outcomes have improved over the last few

3 TravelTen tickets involve the purchase of 10 trips at a discount to the price of a single ticket.
4 Such as the MyMulti1 weekly ticket or the MyMulti day pass.
5 See L.E.K. Consulting, *Sydney Ferries Cost Review, Final Report to IPART,* January 2012.

years and passenger satisfaction with the current service is 96% (compared to 81% and 86% with train and bus services respectively).[6]

Sapere Research Group was engaged to estimate the external benefits generated by Sydney Ferries services, finding that the value of Sydney Ferries external benefits is small.[7] They found that Sydney Ferries services do not substantially reduce traffic congestion, or reduce pollution associated with travel. Therefore the benefits of Sydney Ferries services to the community as a whole are low (much lower than those for CityRail services, for example).

This means that there is little **economic** justification for taxpayers to subsidise the costs of these services. We have decided that passengers should pay their fair share of efficient costs. To achieve this level of funding, fares need to increase by around 40% (or 20% plus inflation). However, to reduce the impact of this increase on passengers, we have decided to transition the necessary fare increases over 7 years, rather than increase them by this amount in the 2013 determination period.

IPART's draft determination is based on the costs and benefits of the Inner Harbour and Manly services only. Fare increases would have been considerably higher if the costs and benefits of the high cost, low patronage Parramatta River service were taken into account. The Parramatta service accounts for around 25% of Sydney Ferries total costs and only 10% of patronage. Thus, its costs per passenger are significantly higher than those of the other services. It also competes with rail for passengers travelling between the City and Parramatta, with train fares cheaper than ferry fares and the journey time shorter. Under the current fare structure, it is not possible to set separate fares for the Parramatta service to recover an adequate percentage of costs without all passengers paying higher fares. We do not support this outcome and therefore propose the same increases for fares used for the Parramatta River service as for the other 2 services.

1.4 Manly ferry fares should be deregulated

The draft determination recommends that government deregulate fares on the Manly to Sydney City route. There is considerable competition in the provision of passenger transport services between Manly and Sydney City, as well as competition on the Manly to Circular Quay ferry route itself.

6 Bureau of Transport Statistics, 2011 Transport customer survey – customer satisfaction with public transport services, 2011.

7 Sapere Research Group, *External benefits of Sydney Ferry services - Final report to IPART*, August 2012.

Regulation is generally only necessary in a monopoly market – where a lack of competition can lead to higher prices and poorer services. The private sector operators of the (unregulated and unsubsidised) fast ferry services on the Manly route have introduced innovations that are clearly valued by passengers, with the level of competition on the Manly route delivering passenger benefits beyond those that can be achieved through regulation.

Therefore, we recommend that from 2013, IPART's role in relation to Sydney Ferries fares on the Manly route should be to monitor these fares only. We would resume fare regulation only if we found that competition (or potential competition) on this route had decreased or that Sydney Ferries was exercising monopoly power. If maximum fare regulation continues to apply to the Manly service this may disadvantage the Government-owned service in terms of innovation and fare flexibility compared to the fast ferry services.

The 4.9% maximum average increase (including inflation) across all Sydney Ferries tickets is based on current ferry patronage, including the Manly service. If the government accepts IPART's recommendation to end fare regulation for Manly services, we propose that fares for MyFerry2 tickets (which would cover travel longer trips on the Parramatta River service) should increase at the same rate as MyFerry1 tickets, ie, 7.5%.

1.5 How does our draft determination affect the new operator of Sydney Ferries services?

We consider that our draft determination is not likely to have a significant impact on Harbour City Ferries Pty Ltd and partners - the new operator of Sydney Ferries services. The payment arrangements under the new service contract mean that our fare determinations do not directly affect the revenue that Harbour City Ferries receives for providing Sydney Ferries services. Our determination of the efficient costs and external benefits associated with the obligations and service standards required under the service contract is **independent** of who operates these services.

1.6 How does our draft determination effect the NSW Government

In the past, we have set a maximum fare for each of the tickets used for Sydney Ferries services. However, this time we have decided to set the average change in fares instead. This means that we will set a limit on the amount by which Sydney Ferries fares can increase on average during the determination period, and the Government will set the actual fares for individual tickets. This should help facilitate the introduction of the Government's electronic ticket for public transport in the greater Sydney area, the Opal card.

Over the 4 years of this determination, as a proportion of total efficient costs we expect the fares collected from passengers to increase from 42% to 53%. After 7 years, this farebox revenue should recover 63% of efficient costs. However, we note that without the Government's contribution for concessions and other subsidies, passengers would be expected to fund almost all of the efficient costs of service provision.

The Government's contribution covers social policies that involve the provision of free or reduced fares to some passengers. These policies include providing free ferry travel for school students and concession fares for other passengers, subsidising Family Funday Sunday tickets and providing an additional discount to frequent ferry users through the multi-mode MyMulti tickets (compared to the 20% discount on single fares available through TravelTen tickets).

We consider that the cost of these social policies should be paid for by taxpayers rather than passengers. This is in addition to the subsidy that is justified by the external benefits. However, we recommend that the additional subsidy for ferry travel offered by MyMulti1 tickets be removed and that these tickets are no longer valid for travel on Sydney Ferries.

1.7 Structure of this report

The following chapters explain how and why we reached our draft determination in detail:

- Chapter 2 sets out the scope, context and process for this fare review.
- Chapter 3 explains the approach we used to make this determination, and why we consider this approach to be the best way of setting maximum fares for Sydney Ferries services.
- Chapter 4 provides an overview of our draft decision on the efficient costs of providing Sydney Ferries services and discusses the individual components of this draft decision, including the efficient operating costs, the value of the assets used in providing ferry services, and the allowances for a return on assets and depreciation (the return of assets).
- Chapters 5 considers the quality of the services Sydney Ferries provides.
- Chapter 6 explains our draft decision on forecast patronage growth on the core network, and how this decision influences the value of the external benefits and the level of fares.
- Chapter 7 discusses our draft decision on the value of the external benefits generated by the provision and use of Sydney Ferries services.
- Chapter 8 explains our draft decision on how much of the efficient costs of providing Sydney Ferries services passengers should fund through fares, and the average fare increase required to recover this amount.

- Chapter 9 discusses our draft decision to determine the maximum average increase in fares for Sydney Ferries services, rather than set each maximum fare individually.
- Chapter 10 discusses the implications of the draft determination for the affordability of fares, the Government and the environment.

The draft determination itself is also available on our website.

2 Scope, context and process for this ferry fare review

This review focuses on the maximum fares Sydney Ferries can charge for its services from 1 January 2013. However, only the following tickets are included in the scope of the review:

- **Single tickets** – MyFerry1 and MyFerry2
- **Return tickets** – MyFerry1 and MyFerry2, and
- **TravelTens**[8] – MyFerry1 and MyFerry2.

Fares for multi-mode tickets that can be used for Sydney Ferries services (such as the MyMulti1 weekly ticket or the MyMulti day pass) are not included because they are set through our determinations on CityRail fares. We are currently reviewing CityRail fares, and intend to make our draft determination on those fares in September 2012. Fares for Pensioner Excursion Tickets (PETs) and other concession fares that can be used for Sydney Ferries services are also not included, as these are set by the Government.

The sections below discuss the matters we considered in reviewing and making our draft decisions on Sydney Ferries fares – particularly the contextual factors – and sets out the process we followed in conducting the review.

2.1 Matters we considered in making this draft determination

In making ferry fare determinations, we are required to consider a range of matters listed in section 16AE of the *Passenger Transport Act 1990,* and to set maximum fares in a way that appropriately balances these considerations. For example, these matters include the cost of providing the services concerned, the protection of consumers from abuses of monopoly power, and the need for greater efficiency in the supply of services.

However, we also need to take into account the specific context of each review, as contextual factors influence what we can achieve through our determination, and place constraints on the approach we can feasibly use to make the determination. These factors generally relate to Government policy decisions.

8 TravelTen tickets involve the purchase of 10 trips at a 20% discount to the single ticket price. See http://www.131500.com.au/tickets/fares (accessed 6 September 2012).

For this review, the most important contextual factors we took into consideration are:

- the new franchising arrangements, under which Sydney Ferries is now operated by a private company under a service contract with Transport for NSW
- the planned introduction of an electronic ticketing system for Sydney's public transport services
- the current structure and level of fares for Sydney Ferries services
- the extent to which current fares recover the costs of providing Sydney Ferries services
- the different operating conditions across the 3 individual services that Sydney Ferries provides (ie, the Inner Harbour, Manly and Parramatta River services).

2.1.1 New franchising arrangements for Sydney Ferries

On 28 July 2012, a private company – Harbour City Ferries Pty Ltd and partners – began operating Sydney Ferries services under a service contract between it and Transport for NSW.[9] Under this franchising arrangement, the Government retains ownership of Sydney Ferries, and the private operator effectively leases, maintains and operates its fleet. The Government maintains control over the routes Sydney Ferries provides. IPART continues to be responsible for regulating maximum fares for Sydney Ferries services.

The service contract between the operator and Transport for NSW sets out the services the operator must deliver, and the standards these services must meet. The contract also imposes safety and staffing obligations on the operator, and requires it to report on its service performance regularly. Transport for NSW pays the operator to provide the services and service standards specified in the service contract. It then retains the revenue generated by fares, to offset some of the costs of these payments.

These franchising arrangements affect the extent to which we can create incentives to improve the efficiency of service provision through our fare determinations, and the main parties affected by the determinations. In particular, the payment arrangements under the service contract mean that our fare determinations do not directly affect the revenue the operator receives. Therefore, our fare determination cannot provide signals or incentives for the operator to increase its efficiency or restructure its services to better meet the needs of its passengers. Instead, these incentives are provided through the terms of the service contract with Transport for NSW. We have no role in setting or enforcing the service contract.

In addition, the franchising arrangements – together with the fact that ferry fares recover less than half the cost of Sydney Ferries services (discussed in section 2.1.4 below) – mean that the main parties affected by our determination are ferry passengers, and the Government and taxpayers.

---

9 See http://www.transport.nsw.gov.au/media-releases/new-sydney-ferries-operator-begins-five-months-early (accessed 31 August 2012).

2.1.2 The introduction of electronic ticketing

Transport for NSW is currently working with the Pearl Consortium to introduce an electronic ticketing (e-ticketing) product and infrastructure for public transport services in the greater Sydney area.[10] On 13 September 2011, the Government announced that the e-ticket will be called 'the Opal',[11] and will be valid on trains, buses, Sydney Ferries and light rail services. The infrastructure for the Opal will be installed for Sydney Ferries services first, beginning at the end of 2012.[12]

A customer will use their Opal to 'tap on' at a reader or gate at the start of a journey and 'tap off' at the end of the journey. Under this 'pay-as-you-go' system, the fare will be calculated and deducted from the money stored on the card. Customers will be able to top up the value (or money) on their card.[13]

2.1.3 Current structure and level of fares for Sydney Ferries services

On 18 April 2010, the Government introduced a new fare structure for public transport services in Sydney and the surrounding regions called 'MyZone'. This structure includes 'MyFerry' for Sydney Ferries services, which has 2 fare bands instead of the previous 5:

- MyFerry1 (0-9km), which covers all destinations except those covered by MyFerry2)
- MyFerry2 (9km plus), which covers Kissing Point, Meadowbank, Rydalmere/Sydney Olympic Park, Parramatta and Manly.[14]

The ferry service contract between the operator of Sydney Ferries and Transport for NSW provides for the Government to continue to set MyFerry fares until IPART makes a new determination on Sydney Ferries fares.[15]

On 1 January 2012, the Government increased fares for MyFerry single, return and TravelTen tickets by between 5.7% and 7.7%.[16] The current fares for these tickets are listed in Table 2.1.

---

10 See http://www.transport.nsw.gov.au/content/opal-ticketing-system (accessed 6 September 2012).

11 See http://www.transport.nsw.gov.au/sites/default/files/b2b/releases/110913_media_release_minister_announces_name_of_ets_will_be_opal_0.pdf (accessed 6 September 2012).

12 See https://neutrinodata.s3.amazonaws.com/pttc/userfiles/111031ministers-budget-estimates-update.pdf (accessed 6 September 2012).

13 See http://www.transport.nsw.gov.au/content/opal-ticketing-system (accessed 6 September 2012).

14 See http://www.transport.nsw.gov.au/content/ferry-system-contract, Section 10 and Schedule 3, accessed 6 February 2012.

15 See IPART, *Statement on MyZone fare changes*, 1 April 2010.

16 See http://www.transport.nsw.gov.au/media-releases/public-transport-fare-rise-half-iparts-recommendation (accessed 6 September 2012). IPART calculations.

Table 2.1 Current fares for Sydney Ferries services

		MyFerry1	MyFerry2
Single	Adult	$5.60	$7.00
	Concession	$2.80	$3.50
Return	Adult	$11.20	$14.00
	Concession	$5.60	$7.00
TravelTen	Adult	$44.80	$56.00
	Concession	$22.40	$28.00

Source: http://www.131500.com.au/tickets/fares, accessed 31 July 2012.

2.1.4 The existing level of cost recovery through fares

Currently, the fares paid by ferry passengers do not fully recover the costs of providing Sydney Ferries services, or the payments to the private operator. Rather, the Government bears these costs, and ferry fare revenue offsets some of them. The extent to which this revenue offsets the costs of providing the services is known as the farebox cost recovery ratio.

Farebox cost recovery can be measured in a number of different ways, depending whether or not the costs of providing free and concession fares are explicitly identified. We calculated the level of farebox cost recovery for Sydney Ferries services over the period 2004/05 to 2009/10 using the following method:

Farebox		Costs
• Reported fare revenue from passengers	**Divided by**	• Reported operating expenses: fleet running expenses, employee benefits, depreciation, general operating expenses.

We note that this does not include all capital costs. The opportunity cost of capital (or return on capital) is not included. We found that over this period, Sydney Ferries farebox cost recovery ratio decreased from 48% to 36% (Table 2.2). Up to 2008/09, farebox revenue and costs both increased in nominal terms each year. But farebox revenue grew at a much slower annual average rate (2.6%) than costs (9.8%[17]), so the farebox cost recovery ratio fell by around 12 percentage points. In 2009/10 the farebox revenue and costs both decreased by 6% to 7%, so farebox cost recovery remained the same.

17 This is a relatively large increase and resulted in around a 50% increase in costs over the 4 years to 2008/09 (IPART calculations).

Table 2.2 Sydney Ferries: farebox cost recovery ratio

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Revenues ($m)	45.1	45.3	48.0	48.9	48.6	45.8
Costs ($m)[a]	93.3	102.4	117.5	128.5	135.7	126.3
Cost recovery	48%	44%	41%	38%	36%	36%

a Note that costs do not include a return on capital component.

Source: Sydney Ferries Annual Reports 2009/10, 2007/08, 2005/06, Note 2 to Financial Statements.

The decline in the farebox cost recovery ratio is significant, because it means over the past decade, the Government – and thus NSW taxpayers – have been paying an increasingly large share of the costs of providing Sydney Ferries services. Therefore, as part of this determination we need to carefully consider both the efficiency of Sydney Ferries costs (discussed in Chapter 4) and the appropriate level of cost sharing between Sydney Ferries passengers and taxpayers (discussed in Chapter 8).

However, we note that the above measure might understate the underlying level of cost recovery through fares for several reasons:

- The Manly Jetcat service was discontinued in December 2008[18], however while revenue from fares for this service ceased, inevitably there were costs associated with discontinuing it; and
- Previously, an allocation was made to Sydney Ferries for fare revenue from the sale of multi-mode tickets.[19] However, now only the fare revenue associated with tickets actually sold by Sydney Ferries is reported. This excludes fare revenue from tickets sold at State Transit Authority and CityRail associated venues (eg, newsagents and rail stations) and used for ferry services.

2.1.5 The different operating conditions across the 3 services

Sydney Ferries services are provided across 3 distinct regions – the Inner Harbour, Circular Quay to Manly and the Parramatta River.[20] The service in each region differs in terms of the vessels used, the subsequent cost structure, patronage levels and cost recovery through fares.

18 See Sydney Ferries, *Annual Report 2009/10*, p 8.

19 These are the MyMulti tickets that permit travel on rail, ferries and buses. In the past, fare revenue from the sale of all these tickets across the public transport network was allocated between each of the modes of transport they that they cover according to a specified formula. See Sydney Ferries, *Annual Report 2009/10*, p 9.

20 An overview of Sydney Ferries operations and the Sydney Ferries route map is provided in Appendix A.

Each of the 8 routes underlying these services feeds into a central hub at Circular Quay. The Inner Harbour service covers 6 routes:

1. Balmain/Woolwich
2. Darling Harbour
3. Neutral Bay
4. Mosman
5. Taronga Zoo and
6. Eastern Suburbs.

Of the 6 different vessel classes that Sydney Ferries operates, 3 are used for the Inner Harbour service:

1. The First Fleet class, comprising 9 vessels with passenger capacities of between 393 and 400.
2. The Lady class, comprising 2 older (and iconic) vessels with a passenger capacity of 815 and 554, which are used primarily for the tourist-based Taronga Zoo route.
3. The SuperCat class, comprising 4 high-speed catamarans that are used primarily for the Eastern Suburbs route. Each vessel has a passenger capacity of 250.

The Freshwater class comprises 4 vessels used for the route to Manly. These vessels are the largest in the fleet with a passenger capacity of 1,100. The RiverCat class, comprising 7 catamarans specially designed to create low wash, is used on the Parramatta River and each has a passenger capacity of 230. The HarbourCat class comprises 2 vessels. These vessels are the smallest in the fleet with a passenger capacity of 150 and are used to provide back-up services for other vessels.[21]

In general, the Parramatta River service attracts just over 10% of the patronage across all Sydney Ferries services, and accounts for around 25% of the total costs of these services. By comparison, the Inner Harbour service accounts for around 50% of patronage and 40% of costs, while the Manly service attracts 40% of patronage and accounts for 35% of costs.[22] This means the per passenger cost of providing Sydney Ferries services varies widely on the different routes.

The Government's current fare policy means there is no scope to for us to set fares to take the different costs of each service into account. As indicated in Chapter 1 we consider that maximum fare regulation for the Manly service can be removed. We also do not support all passengers paying higher fares to fund the Parramatta River service.

---

21 *Report of the Special Commission of Inquiry into Sydney Ferries Corporation*, 31 October 2007, Bret Walker SC, p 42.

22 IPART calculations based on information provided by Sydney Ferries.

2.2 Process for this fare review

The process we followed in conducting this fare review included public consultation and detailed analysis. As part of this process, we:

- Released an issues paper in February 2012 that outlined our proposed approach to the review, discussed the key issues to be considered, and invited all interested parties to make a submission in response to this paper.
- Considered all submissions and stakeholder comments.
- Engaged consultants to provide expert analysis and advice on key aspects of the review. In particular:
  - We engaged L.E.K. Consulting (LEK) to assist us in estimating the efficient costs of providing Sydney Ferries contracted ferry services.
  - We engaged Sapere Research Group (SRG) to quantify the value of the external benefits generated by Sydney Ferries contracted ferry services.
- Published the consultants' reports on our website.

We are now seeking submissions on this draft report and determination and invite comments from interested parties. Submissions are due by 12 October 2012. Details on how to make a submission can be found on page iii at the front of this report. We will consider all the submissions we receive before finalising our report and determination.

We will release our final report and determination in November 2012.

3 The approach we used to set fares

For this determination, we developed a new approach for setting fares for Sydney Ferries services. This approach takes account of the matters we are required by legislation to consider in determining ferry fares, as well as the range of contextual factors that affect this review. As Chapter 2 discussed, these contextual factors include the new franchising arrangements and service contract for Sydney Ferries, the planned introduction of the Opal e-ticket and infrastructure, the existing fare structure and levels, the existing cost recovery ratio, and the different cost and patronage levels across Sydney Ferries Inner Harbour, Manly and Parramatta River services.

The sections below explain our draft decisions on our fare setting approach, set out the detailed analytical approach that supports this current determination and discuss the key steps in this approach.

3.1 Our draft decisions on our fare setting approach

1 IPART's draft decisions on our fare setting approach are:

- to recommend that maximum fare regulation be removed for the Manly service.
- that while maximum fare regulation for the Manly service remains, in making this determination we will:
  - determine the average increase in maximum fares for Sydney Ferries services based on the efficient costs of providing services on a core network of the Inner Harbour and Manly services only
  - determine the share of efficient costs to be recovered through fares by considering the external benefits generated by these services
  - determine the average change in fares rather than individual maximum fares, recommending that MyFerry2 fares (which should reflect the costs and benefits associated with the Manly service) increase less than MyFerry1 fares (which should reflect the costs and benefits associated with the Inner Harbour service)
  - make a 4-year determination, for the period 1 January 2013 to 31 December 2016.

– That when maximum fare regulation for the Manly service has been removed, we will determine maximum fares for all Sydney Ferries services based on the efficient costs and external benefits associated with the Inner Harbour routes only.

3.1.1 Recommend that maximum fare regulation for the Manly service be removed

Under the *Passenger Transport Act 1990*, we are currently required to determine maximum fares for all of Sydney Ferries services (ie, on all 3 service areas). Nevertheless, we have considered whether the removal of maximum fare regulation may be warranted on any of these routes, on the grounds that the market for ferry services on the route is competitive.

We concluded that the Manly service does not need maximum fare regulation. Therefore, we are recommending to Government that maximum fare regulation for the Manly service be removed and be replaced with price monitoring.

Manly to Sydney City: competitive and contestable

There is competition across the Manly to Sydney City route from a number of modes of transport: car, bus, Sydney Ferries service and 2 'fast' ferry services. In terms of market share, according to the last Journey to Work survey undertaken by the Bureau of Transport Statistics (BTS) in 2006, around 30% of work trips made by residents of the Manly Local Government Area (LGA) to the Sydney City LGA were made by ferry.[23] In 2006, these trips would have been made on either Sydney Ferries 'slow' Manly service or the Jet Cat (discontinued in December 2008).

The Manly ferry route itself is now both competitive and contestable. At present there are 2 private operators providing fast ferry services between Circular Quay and Manly, with no taxpayer subsidy, in direct competition with Sydney Ferries service. The experience with the entry of a second fast ferry operator (while the first operator continued) demonstrates the contestability of this market.

This suggests that the service is highly competitive and that the extension of competition through the fast ferry operators has improved services for Manly commuters. We consider that the dynamic nature of this market warrants consideration of a different approach to fare regulation.

[23] See http://www.bts.nsw.gov.au/Statistics/Journey-to-Work/default.aspx#top (accessed 6 September 2012).

Benefits of deregulation:

A number of studies have demonstrated that the deregulation of services improves productivity and increases innovation.[24] The fast ferry services on the Manly route have introduced innovations that are clearly valued by passengers. In particular, they have initiated flexibility in fare setting, using time of use pricing comprising peak fares or off-peak discounts.[25] They have also improved service offerings with attractions such as newspapers and fruit during morning commuter journeys. This has occurred through competition rather than regulation. The removal of fare regulation may encourage the new operator of Sydney Ferries services to compete with other modes in the same way as the fast ferry operators compete – competitive, innovative pricing, better service and flexible, electronic ticketing. While we acknowledge that the incentives for innovation may be limited by the form of service contract agreed between the Government and the new operator, we consider that innovation is more likely in the absence of, rather than under, regulation.

Costs of regulation

Fare regulation is not costless. There is the direct cost of the regulatory process and compliance (although the marginal costs associated with regulating fares for the Manly service may be small). There is potentially a more significant cost in the stifling of price and service innovation through regulation.

In addition, if maximum fare regulation continues to apply to the Manly service this may disadvantage the Government-owned service compared to the fast ferry services.

If fares for Sydney Ferries Manly service continue to be regulated, then we consider a smaller increase should apply to MyFerry2 fares compared to MyFerry1 fares. If the average fare increase is applied to MyFerry2 fares, this may result in the cross-subsidisation of the other services by Manly passengers and a switch by passengers to the fast ferry services. If patronage on Sydney Ferries Manly service decreases, then fares for the remaining services will need to increase to offset this.

---

24 See, for example, Crafts, Nicholas (2006), *Regulation and Productivity Performance,* Oxford Review of Economic Policy, Oxford University Press, vol. 22(2), pp 186-202, Summer.

25 See http://www.sydneyfastferries.com.au/ticket-fares.aspx and http://www.manlyfastferry.com.au/fares-info (accessed 6 September 2012).

Proposed approach for the future

In our Issues Paper we suggested that, for Manly services operated by Sydney Ferries, as there is direct competition, we could either:

- not set a maximum fare but monitor fares across this route or
- set a maximum fare, based on efficient costs and benefits.

Transport for NSW support fare regulation for the Manly service on the grounds that the Government has committed to retaining full control over fares and service levels under the franchising model. [26] Action for Public Transport appears to support the regulation of all fares across the Manly route (including for services provided by private operators).[27] NCOSS suggests that if a price monitoring approach on the Manly route is implemented, then regulation should recommence immediately if competition is reduced. The price monitoring system should be transparent, and should incorporate a regular reporting mechanism.[28]

We consider that fare regulation for the Manly service should be removed and a price monitoring regime adopted, to be administered by IPART. We understand that the removal of fare regulation for the Manly service could be facilitated by amending the current ferry service contract. We would recommend the resumption of fare regulation only in the event that we found competition (or the potential for competition) on the Manly route had reduced or that Sydney Ferries was exercising monopoly power.

Draft Recommendation

1 IPART recommends that the Government remove maximum fare regulation for Sydney Ferries' Manly route, and replace it with a price monitoring regime to be undertaken by IPART.

In this context, price monitoring is used as a form of incentive regulation. The intent is to put pressure on the operator of Sydney Ferries to achieve acceptable outcomes across the Sydney City to Manly route in terms of key factors, such as prices and quality. We would use the reporting process to state publicly whether we are satisfied with the outcomes and whether further action, such as price control, is warranted.

The Government would need to ensure IPART has adequate information gathering powers to undertake price monitoring. While we would develop a guideline setting out our approach to this task, the framework for our approach is set out in the box below.

---

26 See Transport for NSW submission to Review of Fares for Sydney Ferries Services from January 2013, April 2012, p 4.

27 See Action for Public Transport submission to Review of Fares for Sydney Ferries Services from January 2013, April 2012, p 1.

28 See Council of Social Service of New South Wales, submission to Review of Fares for Sydney Ferries Services from January 2013, April 2012, pp 3-4.

Box 3.1 Framework for price monitoring

Transparency – the method for monitoring prices should be known, conclusions (where made) or further action should be based on observations and the results of monitoring activities (where not confidential) should be published.

Flexibility – reporting should be sufficiently flexible so that IPART reports on areas of concern (eg, barriers to entry may not be considered to be substantial at the beginning of a monitoring regime and therefore not reported, but this may change over time).

Timeframe – Price monitoring should not be indefinite (we note that the Productivity Commission recommended 3 years or less or 5 years in exceptional cases).

Non-intrusive – price monitoring should not be intended as a form of price control or to entail unwarranted intrusion into the operation of businesses.

Not costly to administer or comply with – reporting requirements should not be overly onerous on the businesses being monitored.

3.1.2 While maximum fare regulation for the Manly service remains, determine fares based on efficient costs of providing services over a core network of Inner Harbour and Manly services only

As Chapter 2 discussed, Sydney Ferries provides services in 3 distinct areas – the Inner Harbour, Manly and the Parramatta River – and these services have different operating conditions and patronage levels. In particular, the River service accounts for around 25% of Sydney Ferries total costs and only 10% of patronage. Thus its costs per passenger are significantly higher than those of the other services, especially Manly. It also competes with rail for passengers travelling between the City and Parramatta and train fares are cheaper than ferry fares and the journey time is shorter.

These differences mean that if we include the River service in our determination of efficient costs, then all passengers pay higher fares (to fund this service). We do not support this outcome.

Therefore, we decided to set fares based on the efficient costs of providing ferry services on a core network of the Inner Harbour and Manly routes only.[29] This approach is consistent with the one we use in setting Sydney metropolitan and outer metropolitan bus fares, where there are similar patterns of costs and patronage levels across the service contract areas.

[29] We have included the Manly service in this fare determination as we are legally required to. However, we recommend that maximum fare regulation for this service be replaced with price monitoring.

3.1.3 Determine the share of costs to be recovered through fares by considering the external benefits

As Chapter 2 discussed, Sydney Ferries recent farebox cost recovery ratio has been less than 40%. Therefore, setting fares to fully recover the costs of providing its services over a short period of time would require very large price increases, and this may have a negative impact on affordability and patronage levels.

Fares for public transport services are typically subsidised to some extent by governments (or taxpayers). There is general agreement in Australia and other jurisdictions that this subsidisation is warranted by the external benefits generated by public transport services. These are the indirect benefits that accrue to the wider community (rather than the individuals who use the services), such as reduced road congestion and air pollution. We share this view, and also consider that the level of government subsidy should be linked to the value of the external benefits generated by the services concerned.

Therefore, we decided to determine what share of the efficient costs of providing Sydney Ferries services on the core network should be recovered through fares primarily by estimating the value of the external benefits generated by these services, and subtracting this value from the efficient costs. This approach is consistent with the one we use in regulating other public transport services, including CityRail and Sydney's metropolitan and outer metropolitan bus services.

We have found previously that train and bus travel in Sydney results in significant reductions in people using cars and justifies taxpayers contributing at least half of the efficient costs of providing these services. In the case of Sydney Ferries, our analysis indicates the size of the these benefits (in aggregate) is small.[30] That the external benefits associated with Sydney Ferries services are small implies that there is little justification for a taxpayer subsidy of Sydney Ferries services on *economic* grounds and that passengers should fund almost all of the efficient costs through fares.

3.1.4 Determine the average change in fares rather than set individual fares

In the past, we have set a maximum fare for each of the ferry tickets included in the scope of our determination. However, this time we have decided to set the average change in fares instead. This means we will set a limit on the amount by which Sydney Ferries fares can increase on average during the determination period. (For example, this amount will be expressed as X% + the change in general inflation.)

We consider this approach is preferable to setting individual maximum fares, as it should facilitate the introduction of the electronic ticket by Government during the determination period and enables the Government to undertake fare reform while at the same time allowing farebox recovery.

[30] See Chapter 7 for discussion of the external benefits associated with Sydney Ferries services.

Taking into account the different levels of patronage and cost-recovery on Sydney Ferries services, we suggest that over the next 4 years:

- fares for MyFerry2 tickets (which cover travel on the Manly service and longer trips on the Parramatta River service) increase on average by 0.2% per year (plus an adjustment for inflation) and
- fares for MyFerry1 tickets (which cover travel on the Inner Harbour service and shorter trips on the Parramatta River service) increase on average by 5.2% per year (plus an adjustment for inflation).

If the NSW Government accepts our recommendation and fare regulation for the Manly service is removed, we propose that fares for MyFerry2 tickets (which would cover travel longer trips on the Parramatta River service) should increase at the same rate as MyFerry1 tickets, ie, 5.2%.

3.1.5 Make a 4-year determination

In our Issues Paper, we proposed to set a 1-year determination, rather than establishing a multi-year determination (as we have done previously in setting maximum fares for CityRail and metropolitan and outer metropolitan bus services). We considered that this would give the Government a greater degree of flexibility in implementing the Opal, and stakeholders generally supported this proposal.

However, we have decided to set a 4-year determination, because we consider that a longer determination period, combined with determining the average change in fares (rather than setting individual fares) provides both certainty to Government regarding the maximum fare levels they must work within and scope to implement the Opal.

3.1.6 If maximum fare regulation for the Manly service is replaced by price monitoring, determine fares based on efficient costs and external benefits of the Inner Harbour services only

If our recommendation to remove fare regulation on the Manly route is accepted, then we would determine maximum average fare change for Sydney Ferries services based on the efficient costs and external benefits associated with the Inner Harbour service only. Our analysis suggests that this would result in an average annual fare increase of 5.2% (plus an adjustment for inflation), compared to 2.6% when we use a core network of the Inner Harbour and Manly. This is because at present the Manly service has a higher level of both patronage and average fares – and therefore a greater level of cost recovery through fares – than the Inner Harbour service.

3.2 Our detailed analytical approach for this determination

We are required to determine a maximum fare for Sydney Ferries Manly service as part of this current determination. Our analytical approach to making the determination includes the following key steps:

1. First, we determined the target revenue to be recovered through ferry fares by:
   a) estimating the efficient costs of providing the contracted ferry services (at the required quality or standard of service) on a core network of the Inner Harbour and Manly routes, based on a detailed analysis of forecast costs and the scope for efficiency gains
   b) making an assumption about the potential growth in the patronage of Sydney Ferries services over the core network in the future
   c) estimating the value of the external benefits generated by providing these services
   d) deciding how much of the efficient costs it is appropriate for passengers to fund through fares by subtracting the value of the external benefits and the estimated cost to Government of funding concession fares
2. Next, we calculated how much fares need to change per year to recover this target revenue based on:
   a) 'MyFerry equivalent' pricing
   b) an indicative 7-year price path.
3. We then set an average annual change in fares for the next 4 years in line with this price path.
4. Before finalising our decisions, we considered whether the average annual change in fares was reasonable in terms of its implications for the affordability of fares and potential impacts on patronage, the Government, and the environment.

The following sections provide a brief overview of these steps, while the chapters that follow explain each step in detail.

3.2.1 Estimating the efficient costs of the core network services

We estimated the efficient costs of providing Sydney Ferries services on the core network (to the required service standards) independently of who operates those services.

One option would be for us to utilise any available information on costs provided through the recent franchising process for the operation of Sydney Ferries services. It is reasonable to assume that a market-testing process produces bids that at least cover the efficient costs of providing the contracted ferry services. However, the presence of policy constraints that impact an operator's ability to achieve efficient costs (eg, regarding the Sydney Ferries labour force) means that such market-testing

data is unlikely to reveal efficient costs. Therefore while we would have regard to any available market-testing data, we undertook our own analysis of efficient costs.

We used a 'building block' approach[31] in estimating the total efficient costs of providing Sydney Ferries services across the whole network, and then estimated how much of these costs are associated with services on the core network of the Inner Harbour and Manly.

3.2.2 Making a patronage growth assumption

Our decision on forecast patronage growth is important, as it affects our decision on the value of the external benefits of Sydney Ferries services and has a major impact on the fare change needed. We considered recent trends in Sydney Ferries patronage levels, and a range of factors that can influence ferry patronage, including employment and population growth, the number of tourists visiting Sydney, service levels, and the likely impact of fare increases resulting from our determination.

3.2.3 Estimating the external benefits of the core network services

We estimated the value of the external benefits of providing Sydney Ferries services over the core network of the Inner Harbour and Manly services only, consistent with our approach to estimating the efficient costs of providing these services. To estimate this value, we engaged a consultant, Sapere Research Group (SRG), to analyse and quantify those benefits that are relevant for the purpose of for the purpose of setting ferry fares. We also considered stakeholders' comments on the external benefits.

3.2.4 Deciding how much of the efficient costs it is appropriate for passengers to fund through fares

To decide how much of the efficient costs of providing Sydney Ferries services it is fair for passengers to fund through fares, we deducted the value of the external benefits generated by the services from these costs. This gave us an estimate of the amount passengers should fund through fares.

We also deducted the estimated cost to the Government of providing concession fares for the core network services concession fares. We consider that the provision of concession fares is part of the Government's social policy, and therefore its costs should be funded through a taxpayer subsidy, and not by other ferry passengers.

[31] The building block approach 'builds up' the revenue required by the business to cover the efficient costs of providing services that meet the contracted requirements. This is a rigorous, transparent approach that is consistent with the approach we use in regulating other industries.

3.2.5 Calculating how much fares need to change per year using 'MyFerry equivalent' pricing

In calculating the fare change needed per year to recover the amount to be funded through fares, we used 'MyFerry equivalent' pricing so that the Government, and not passengers, funds the extra discount offered for regular ferry travel on multi-mode tickets.

As Chapter 2 discussed, the Government introduced the MyFerry fare structure as part of its MyZone fare structure for all public transport services in the greater Sydney area. MyFerry includes 2 distance-based fare bands: MyFerry1 for trips under 9 km and MyFerry2 for trips 9 km and over. Passengers can buy a single or return ticket or a TravelTen.

However, Sydney Ferries passengers also have access to MyMulti tickets, which are valid on all modes of public transport in the Sydney area. These tickets have a time-based and distance-based zonal fare structure, and can offer a greater discount to regular passengers than the MyFerry TravelTen ticket. For example, the price of a weekly MyMulti1 – which includes unlimited travel on all Sydney Ferries services for 7 days – is less than the prices of both MyFerry1 and MyFerry2 TravelTens. So for commuters and other frequent ferry passengers – even those who only use Sydney Ferries services – it is cheaper to buy a MyMulti1 weekly than a MyFerry TravelTen.

By using 'MyFerry equivalent' pricing in calculating the fare change needed to recover the amount to be funded through fares, we have treated the additional discount available from MyMulti tickets as a Government contribution (or taxpayer subsidy) rather than as a cost to be recovered from all ferry passengers. We consider this appropriate, as this discount reflects Government policy rather than the costs of providing ferry services on a MyMulti ticket.

3.2.6 Using an indicative 7-year price path

While we have made a draft decision to set a 4-year determination, we based our calculation of the fare change needed on a 7-year price path. We did this because the difference between the current farebox revenue and the target revenue is significant, so making it up over 4 years could impact on the affordability of ferry fares and patronage levels.

We chose to calculate the required fare change over 7 years because this will allow for a more gradual transition to the target fare levels. It is also consistent with the length of the service contract between the Government and the new operator of Sydney Ferries services.

3.2.7 Setting an average annual change in fares for the next 4 years

Once we calculated the fare change needed, we used it to make a draft determination of the maximum average increase each year in the fares for Sydney Ferries services. The Government will set the fares for individual tickets so that the average fare increase is equal to, or below, the average increase we set (weighted by ticket sales). This approach ensures that on average prices reflect the changes in costs and benefits of providing Sydney Ferries services.

3.2.8 Considering implications for consumers, the Government, and the environment

As required by Section 16AE of the *Passenger Transport Act 1990,* before finalising our draft determination we considered its implications for the affordability of fares (and the potential impact on ferry patronage), for the Government and for the environment. In relation to the affordability of fares, we considered why people use Sydney Ferries services, the employment and income profile of Sydney Ferries passengers, and the availability of concession and off-peak fares. In relation to the Government, we assessed how the draft determination is likely to affect the proportion of the costs of providing Sydney Ferries services the Government recovers through fare revenue. In relation to the environment, we took account of the feasible pricing policy options to protect the environment.

4 Efficient costs of providing Sydney Ferries services over the core network

As Chapter 3 discussed, the first step in our approach for setting maximum fares for Sydney Ferries services was to determine the efficient annual costs of providing the contracted services on the core network over the determination period. To do this, we:

- Estimated the total efficient costs of providing the services across the whole network (the Inner Harbour, Manly and Parramatta River service areas), including:
  - the efficient operating expenditure likely to be incurred in providing the ferry services
  - appropriate returns of and on the assets used in providing the services.[32]
- Then, we estimated how much of these costs are associated with services on the core network (the Inner Harbour and Manly routes only) by allocating the costs across the 3 routes and subtracting those allocated to the Parramatta River route from the total.

The sections below discuss our approach to assessing total efficient costs and our draft decisions on the main components of these costs. The final section discusses the allocation of costs across the 3 service areas and summarises our draft decision on the efficient costs of providing the contracted ferry services over the core network.

4.1 Approach to assessing total efficient costs

Figure 4.1 provides an overview of the approach we used to determine total efficient costs, and the inputs we considered to apply this approach. Our approach reflects our view that passengers should make a fair contribution to the efficient costs of providing Sydney Ferries services – so we need to consider **all** the efficient costs of providing these services. This includes the operating and capital costs incurred by ferry operator, **and** the costs incurred by Roads and Maritime Services (RMS) in maintaining and improving the necessary wharf facilities. Some of these RMS-incurred costs are accounted for in the efficient operating expenditure component. This is because the ferry operator pays RMS wharf access fees in respect of the Circular Quay and Manly wharves.

[32] We call this a 'building block' approach to estimating efficient costs as it effectively 'builds up' the revenue required by the business to cover the efficient costs of providing services that meet the contracted requirements.

However, the costs incurred by the RMS in relation to the Sydney Commuter Wharf Upgrade Program[33] also need to be included, as the ferry operator does not currently pay access fees for these wharves. RMS expects to spend some $97.2 million on improving wharf facilities on Sydney Harbour.[34] Sydney Ferries passengers will directly benefit from this expenditure. Therefore, we have included this expenditure when calculating the value of assets used in providing ferry services and estimating the allowances for depreciation and a return on these assets. However, in line with commercial practice, we consider it would be preferable for RMS to explicitly charge Sydney Ferries for access to these wharves.

Draft Recommendation

2 IPART recommends that Sydney Ferries pay access charges at wharves for which is has non-exclusive access, including those that are part of the Sydney Commuter Wharf upgrade program.

The inclusion of RMS-incurred expenditure in the efficient costs is important in ensuring that passengers make a fair contribution to the efficient costs of providing Sydney Ferries services. For example, it:

- ensures the total costs of providing the ferry services are measured and monitored in a rigorous and transparent way
- creates a link between State Government expenditure on ferry infrastructure that benefits passengers and the fares they are charged
- ensures that the total costs, and the impact of changes in them on both ferry fares and taxpayers, are publicly disclosed, and
- encourages ferry passengers to factor all relevant costs into their decision on how to travel.

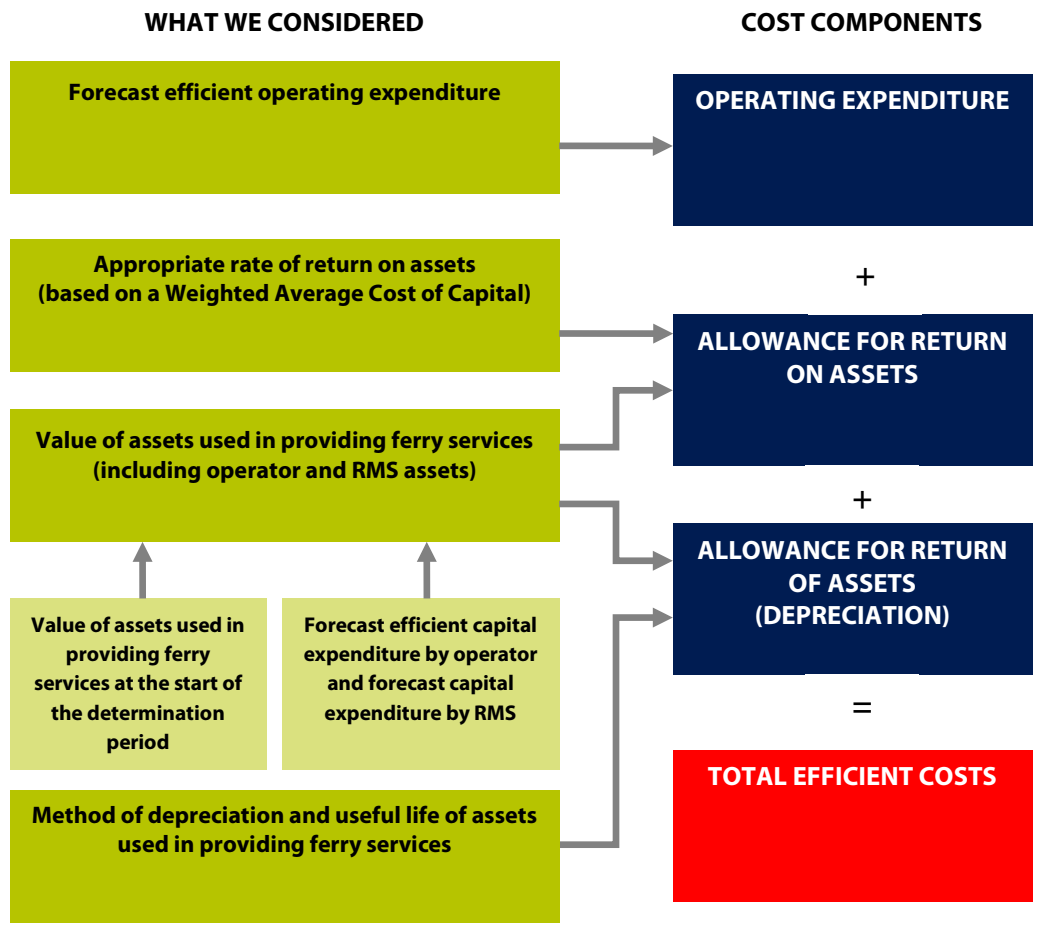
The inclusion of this expenditure is also consistent with the approach IPART uses in regulating other businesses, including metropolitan and outer metropolitan buses. We will maintain this approach while Sydney Ferries does not incur a charge to access the wharves being upgraded under the Program.

---

33 Upgrades of Milsons Point wharf and Neutral Bay wharf (Hayes Street) have been completed. According to the RMS website the following wharves are also scheduled to be upgraded in the coming 12 months: Rose Bay (Lyne Park), Balmain (Thames Street) and Huntley Point (Huntley Point Road). Other ferry wharves to be upgraded as part of stage one of the Program are: Balmain East (Darling Street), Birchgrove (Louisa Road / Longnose), Cremorne Point (Milson Road), Double Bay (Bay Street), McMahons Point (Henry Lawson Avenue), Mosman Bay (Avenue Road) and Watsons Bay (Military Road). The order of upgrade of these sites is yet to be determined. http://www.rta.nsw.gov.au/maritimeprojects/projects/wharf_upgrades/scheduled_upgrades.html (accessed 15 August 2012).

34 See the Hon Gladys Berejiklian, Minister for Transport, General Purpose Standing Committee No. 3, Tuesday 25 October 2011. Available from: http://www.parliament.nsw.gov.au/prod/parlment/committee.nsf/0/a966fd9e1deb4e33ca2579350019758c/$FILE/20111025_Transport.pdf.

Figure 4.1 Approach used to determine the total efficient costs of providing contracted ferry services



4.2 Efficient operating expenditure

Operating expenditure includes the day-to-day costs incurred by the ferry operator in conducting its business and maintaining its assets, such as wages paid to ferry crew, fuel, mechanical repairs and maintenance. To make our draft decision on how much operating expenditure to include in the total efficient costs, we engaged L.E.K. Consulting Pty Ltd (L.E.K.) to undertake a total cost review and recommend the level of expenditure an efficient operator is likely to incur in providing Sydney Ferries contracted services. We required L.E.K. to take into account the particular service and performance standards set out in the existing Sydney Ferries service contract, and the specific operating environment.

The sections below set out our draft decision, outline L.E.K's methodology for the total cost review, and summarise its key findings and recommendations and our considerations in making our draft decision. More information on L.E.K.'s review can be found in its report,[35] which is available on our website.

4.2.1 Draft decision on efficient operating expenditure

3 IPART's draft decision is that, for the purpose of making this determination, the efficient operating expenditure required to provide Sydney Ferries services is as shown in Table 4.1.

Table 4.1 Efficient operating expenditure ($'000, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
Inner Harbour	44,126	42,768	43,164	36,046	35,500
Manly	37,547	37,117	37,446	33,406	33,049
Parramatta	**27,630**	**27,323**	**21,913**	**17,629**	**17,373**
Total Sydney Ferries	109,303	107,208	102,523	87,081	85,922

Note: These are LEK's efficient cash costs less capital expenditure and major periodic maintenance (which is capitalised for the purpose of financial modelling). Totals may not add due to rounding. The fall in efficient operating expenditure in 2014/15 reflects: 1) a fall in the business-as-usual (BAU) forecast of operating costs (compared to 2013/14) and 2) a higher level of assumed efficiency savings (compared to 2013/14) due to gains achievable through partial fleet renewal and the reform of industrial relations.

Source: L.E.K. Consulting, *Sydney Ferries Cost Review, Final Report to IPART*, January 2012. Adjusted for assumed inflation of 2.5% per annum. Sydney Ferries route costing model.

4.2.2 L.E.K.'s methodology

To estimate the level of expenditure an efficient operator will incur in providing Sydney Ferries contracted ferry services, LEK undertook extensive analysis that involved examining:

- The forecast cash costs of providing the services over the period 2011/12 to 2015/16. These cash costs included operating expenditure and capital expenditure. This was a 'business-as-usual' forecast made in mid-2011 by the then operator of Sydney Ferries. These costs included the forecast operating and capital expenditure incurred by the ferry operator.
- The particular service and performance obligations Sydney Ferries is required to meet under the service contract (such as providing a certain number of services along particular routes at certain times).
- The particular environment Sydney Ferries operates in (such as route distances, size of the ferry fleet and number of passenger trips).
- The operating costs, service and performance obligations and operating environments of ferry operators in Australia and other countries.

35 L.E.K. Consulting, *Sydney Ferries Cost Review,* Report to IPART, January 2012.

It then used benchmarking techniques to assess the efficiency of Sydney Ferries operations compared to other ferry operators, and quantify the potential for the ferry operator to achieve efficiency savings in operating and capital expenditure.

4.2.3 L.E.K.'s findings and recommendations

L.E.K. found that Sydney Ferries forecast annual cash costs (that is, the sum of operating expenditure and capital expenditure) were expected to total around $125 million in 2015/16 (in real terms) under a 'business as usual' scenario. However, there is potential to reduce these costs by making efficiency savings. In particular, L.E.K. identified opportunities to reduce the forecast cash costs for 2015/16 by $30 million or 24% (in real terms)[36] by:

- **Improving labour productivity.** L.E.K. observed that compared to the benchmark ferry operators, Sydney Ferries vessel operations have higher staffing levels (especially on the Inner Harbour routes), and above-market remuneration levels. Its wharf operations also have higher costs per employee than the benchmarks.
- **Reducing the Parramatta River service.** L.E.K. found that the cost-efficiency of the Parramatta River service is lower than that of the Inner Harbour and Manly services. Combined with much lower patronage, this results in significantly higher costs per passenger on the river service. These costs could be lowered by reducing the service outside peak periods (when patronage levels are particularly low).
- **Renewing part of the fleet.** L.E.K. found that the efficiency of Sydney Ferries repair and maintenance costs is lower than that of benchmark operators because 2 of its vessel classes (Lady and Freshwater) are relatively expensive to maintain compared to other vessels. The efficiency of these costs could be improved by replacing vessels in these 2 classes.[37]
- **Reforming industrial relations.** L.E.K. found that industrial relations reforms to enable Sydney Ferries vessel, wharf and shipyard labour productivity costs to be brought fully into line with those of benchmark operators would further improve its operational efficiency.

L.E.K. also found that Sydney Ferries overhead costs are high compared to those of the benchmark operators. However, this is primarily due to its above average non-labour costs, including costs that smaller and less complex operators would not be expected to have (eg, communications infrastructure, IT systems and government

[36] Or from $141 million to $107 million including assumed inflation of 2.5% per annum. Sydney Ferries forecast its cash costs to grow at 3.8% over the 5 years from 2010/11 including inflation (the 'business as usual' forecast), based on a labour cost growth guideline of 2.5% pa issued by the NSW Government. A higher growth in labour costs could result in a significantly faster growth in total costs than 3.8% per year.

[37] Replacing the entire fleet with new vessels would bring further cost reductions, but would require a capital outlay that would most likely outweigh the benefits.

compliance costs). Therefore, it did not consider there was potential to reduce these costs.

Table 4.2 sets L.E.K.'s recommendations on Sydney Ferries forecast efficient cash costs and the efficiency savings included in these recommendations.

Table 4.2 L.E.K.'s recommendations on Sydney Ferries forecast efficient cash costs (operating expenditure and capital expenditure) ($2010/11, millions)

	2010/11 (actual)	2011/12	2012/13	2013/14	2014/15	2015/16
Forecast cash costs	116.8	**122.4**	**124.2**	**126.0**	**117.4**	**124.5**
Less opportunity to make efficiency savings by						
- Improving labour productivity			(3.8)	(4.7)	(4.7)	(4.8)
- Reducing river service				(5.6)	(5.5)	(5.5)
- Partial fleet renewal					27.7[a]	(5.8)
- Reforming industrial relations					(5.5)	(13.8)
Recommended forecast efficient cash costs		**122.4**	**120.3**	**115.7**	**129.4[a]**	**94.6**

[a] Includes capital expenditure on new fleet of $33.6 million ($2010/11).

Note: Cash costs include operating expenditure and capital expenditure. Totals may not add due to rounding.

Source: L.E.K. Consulting, *Sydney Ferries Cost Review*, 13 January 2012. Adjusted for assumed inflation of 2.5% per annum.

4.2.4 IPART's considerations

After carefully considering L.E.K.'s analysis, we decided to accept its recommendations on efficient forecast cash costs, including efficient forecast operating expenditure.

In making this decision, we recognise (and have previously acknowledged)[38] that there is no standard method for establishing the comparability of different businesses, particularly in relation to efficient costs. However, we consider that L.E.K.'s use of benchmarking is appropriate and sound. We note that the use of benchmarking techniques to assess the relative efficiency of businesses is not uncommon, and regulators frequently use such techniques both in setting prices and monitoring the performance of regulated utilities.

38 IPART, *Investigation into Water and Wastewater Service Provision in the Greater Sydney Region - Issues Paper*, May 2005, p 26.

We also recognise that aspects of Sydney Ferries operations may make it difficult to compare it to other ferry operators. For example, these aspects include the length and number of routes and stops, the density of the population served, the age of the vessels and other assets, as well as differences in government policy or required service and safety standards. However, we are satisfied that L.E.K. has taken appropriate account of these differences in its analysis.

Finally, we note that Government policy may affect the ability of an operator to capture potential cost savings. For example, Government policy regarding service frequency may prevent an operator from reducing the off-peak service on the Parramatta River. In this instance, we consider that the costs of such policies should be funded by taxpayers through a Government subsidy of ferry fares, rather than recovered from passengers.

4.3 Allowances for depreciation and a return on assets

A range of assets are used in providing ferry services – including ferries, maintenance facilities, ticketing infrastructure and wharf facilities. We have included an allowance for a return *of* these assets – that is, for depreciation – in the total efficient costs to provide a means of spreading the net cost of the assets over their estimated life. We have also included an allowance for a return *on* these assets in the total efficient costs to recognise the opportunity cost of the capital invested in them. This return represents compensation for the NSW Government for bearing the risks associated with providing Sydney Ferries services.

To make our draft decisions on these allowances, we took 2 main steps:

- calculating an annual value for the assets used in providing the contracted ferry services, and
- deciding on an appropriate rate of return for ferry service operators.

We then calculated the allowances for depreciation and a return on assets using the outputs of these steps.

The section below sets out our draft decisions on the allowances for depreciation and a return on assets. The subsequent sections discuss our main steps in reaching these decisions in more detail.

4.3.1 Draft decisions on allowances for depreciation and a return on assets

4 IPART's draft decision is that for the purpose of calculating the total efficient costs of providing Sydney Ferries services the appropriate allowance for depreciation is as shown in Table 4.3.

Table 4.3 Draft decision on the allowance for depreciation of the assets used in providing Sydney Ferries services ($'000, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
Depreciation	11,543	15,893	18,759	19,415	19,364

5 IPART's draft decision is that for the purpose of calculating the total efficient costs of providing Sydney Ferries services the appropriate allowance for a return on assets is as shown in Table 4.4.

Table 4.4 Draft decision on the allowance for a return on the assets used in providing Sydney Ferries services ($'000, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
Return on assets	6,451	7,255	7,873	8,433	8,464

4.3.2 Calculating an annual value for the assets used in providing the contracted ferry services

Draft decision on the value of assets used in providing Sydney Ferries services

6 IPART's draft decision is that the value of the assets used in providing Sydney Ferries services is as shown in Table 4.5.

Table 4.5 Draft decision on the value of the assets used in providing Sydney Ferries services ($'000, as at 30 June, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
Regulatory asset base	121,760	132,888	141,908	153,123	143,106

To calculate an annual value for the assets used to provide Sydney Ferries contracted ferry services, we:

- established an initial value of the assets used to provide Sydney Ferries services, or the opening value of Regulatory Asset Base (RAB)
- decided on the methodology for rolling forward this opening value to provide a value for the RAB in future years
- decided on the level of forecast capital expenditure to be incorporated into the RAB each year when rolling it forward
- decided on the methodology and asset lives to use for depreciating the RAB when rolling it forward (and for calculating the allowance for depreciation).

For a detailed discussion of our considerations in calculating an annual value for the assets used in providing Sydney Ferries contracted ferry services, see Appendix C.

Draft decision on the opening value of the Regulatory Asset Base (RAB)

7 IPART's draft decision is that the opening value of RAB used to provide Sydney Ferries services (as at 30 June 2011) is $107.3 million.

To establish the opening value of the RAB, we first considered what assets should be included in this asset base.[39] Consistent with previous reviews, we chose to include all assets relevant to the provision of Sydney Ferries services, including ferry operator and RMS assets. In relation to ferry operator assets, we included all of Sydney Ferries assets used in providing ferry services. In relation to RMS assets, we included a portion of its past capital expenditure under the Sydney Commuter Wharf Upgrade Program (section 4.1 explains our rationale for this).

Next, we considered what methodology should be used to value the operator assets at the start of the period. There are several methods that could potentially be used – for example, estimating the opportunity cost (or scrap value) of the assets, or the historical cost of the assets, or the deprival value of the assets (which is the lower of the optimised depreciated replacement cost or the economic value). However, we chose to use Sydney Ferries book value, as we consider this provides the best indication of the actual value of assets in their current use. This value was $101.6 million at 30 June 2011.[40]

For the RMS assets, we chose to include in the opening value of the RAB 75% of the RMS expenditure up to 2010/11 identified as being for the upgrade of specific wharves used by Sydney Ferries.[41] This value was $5.6 million, resulting in a total opening value for the RAB of $107.3 million at 30 June 2011. We consider that this value reflects the appropriate amount of capital required to provide the ferry services stipulated in the service contract.[42]

Draft decision on methodology for rolling forward the RAB

8 IPART's draft decision is that that the value of the RAB will be rolled forward using the method ***Opening RAB + efficient capital expenditure - depreciation - disposals + indexation = Closing RAB***, and that:

- Only capital expenditure deemed to be efficient and prudent will be incorporated into the RAB. Capital expenditure deemed to be efficient will be incorporated in the year that it is incurred, but will only be 'locked in' if we deem it to have been prudent when we make our next fare determination.
- The value of regulatory depreciation of the assets will be deducted from the RAB, consistent with previous IPART decisions.

---

39 We note that our analysis does not include any consideration of the costs of implementing and maintaining the Opal card.

40 See Sydney Ferries, *Annual report 2010/11*, pp 38 -54.

41 That is, on the Milsons Point wharf upgrade.

42 We have not considered efficiency in the broader sense of the efficient network, routes and timetable, but what value of the asset held by the operator is appropriate given the services stipulated under the service contract.

- The value of assets no longer used in providing ferry services will be deducted in the year that they cease to be used.
- The movement in the CPI will be used to adjust the value of the assets for general economy-wide price increases, consistent with previous IPART decisions.

The purpose of rolling forward the RAB each year is to reflect changes in the value of these assets over time. Changes in the value of the RAB used to provide Sydney Ferries services might occur for several reasons – for example:

- if the operator, RMS or Government invests in new assets to provide Sydney Ferries services, or sells or retires existing assets
- if the operator or RMS undertakes capital expenditure to improve or extend the life of existing assets, and
- the impact of general inflation.

Our draft decision on the methodology we will use for rolling forward the value of the RAB is consistent with the approach we use in regulating prices in other industries, including fares for CityRail and metropolitan and outer metropolitan bus services. In general, we would expect to use the same methodology in future reviews.

In our view, adopting a clear and consistent methodology (or set of rules) for rolling forward the value of the RAB simplifies and improves the efficiency of the regulatory regime. Unless extenuating circumstances arise, we do not propose to reconsider the opening value of the RAB for providing Sydney Ferries services once we have made our final decision on this value, except to apply the methodology for rolling the value forward outlined above.

Draft decision on level of capital expenditure to be incorporated when rolling forward the RAB

9 IPART's draft decision is to incorporate the capital expenditure shown in Table 4.6 when rolling forward the RAB.

Table 4.6 Draft decision on capital expenditure to be incorporated when rolling forward the value of the assets ($'000, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
Efficient operator expenditure	14,689	14,689	14,689	43,808	9,873
RMS expenditure	10,181	12,764	13,600	8,320	0
Total	24,869	27,452	28,288	52,128	9,873

Note: Totals may not add due to rounding.

To apply our methodology for rolling forward the RAB, we need to decide on the level of forecast capital expenditure (and asset disposals) to be incorporated in each year of the regulatory period. In making this decision, we accepted the findings of L.E.K.'s total cost review (discussed in section 4.2.3 above), and L.E.K.'s recommendations on the efficient annual level of forecast capital expenditure (and asset disposals) by the operator to 2015/16.

In relation to capital expenditure by RMS, we understand the works under the Sydney Commuter Wharf Upgrade Program are competitively tendered. Therefore, we have decided to incorporate 75% of the forecast RMS expenditure identified as being for the upgrade of specific wharves used by Sydney Ferries services into the RAB at cost.[43]

We decided to include 75% (rather than 100%) of the expenditure for 2 main reasons. First, while the wharves being upgraded under the program are used by Sydney Ferries services, Sydney Ferries does not have exclusive access to these wharves. Second, one of the aims of the Commuter Wharf Upgrade Program is to increase the passenger accessibility of the wharves and thus encourage more ferry travel. We consider the costs associated with increasing accessibility should be funded by taxpayers through Government subsidy, rather than by Sydney Ferries passengers.

Draft decision on methodology for depreciating the RAB and associated asset lives

10 IPART's draft decision is to use the straight line depreciation method and the asset lives shown in Table 4.7 below to calculate the depreciation to be deducted when rolling forward the RAB, and the allowance for depreciation.

Table 4.7 Draft decision on asset lives for purpose of calculating depreciation to be deducted from the RAB and the allowance for depreciation

Asset class	Remaining lives of existing assets (years)	Expected lives of new assets (years)
Ferries	8	15
Land	n/a	n/a
Buildings and improvements	20	40
Plant and equipment	6	12
Other non-current assets	20	20
Wharf improvements	20	40
RMS Commuter Wharf Upgrade Program	38	40

Source: Sydney Ferries, *Annual Report 2010/11*; IPART calculations; LEK (2012).

[43] That is, $5.6m in 2010/11 (being 75% of the Milson's Point wharf upgrade expenditure of $7.5 million) as well as $44.4 million between 2011/12 and 2014/15 (being 75% of the forecast expenditure of $59.2 million for the upgrade of 11 other wharves).

To apply our methodology for rolling forward the RAB, we also need to decide on the methodology we will use to calculate the depreciation to be deducted from the RAB in each year of the regulatory period. In particular, we need to decide on what depreciation method we will use, and the useful lives of the assets included in the RAB. These decisions are also used to calculate the allowance for depreciation.

We decided to use the straight line depreciation method.[44] We then established appropriate asset lives (and thus depreciation rates) for the groups of **existing** and **new** assets used to provide Sydney Ferries services and multiplied the annual value of each asset group by the appropriate depreciation rate.

For ferries, we have adopted an asset life of 15 years for new vessels, consistent with L.E.K.'s total cost review. For existing vessels we have been advised that a review of the condition of all ferries in service found that, on average, the fleet has a remaining life of around 8 years and we have adopted this value. We based the asset lives of other assets on those used in Sydney Ferries Annual Report for 2010/11, which we consider to be reasonable and realistic.

4.3.3 Deciding on an appropriate rate of return for ferry service operators

Draft decision on appropriate rate of return

11 IPART's draft decision is that for the purposes of calculating the return on assets, a real post-tax rate of return of 5.5% is appropriate.

Our decision on the appropriate rate of return is a key input to our calculation for the allowance for a return on assets. (We calculate this allowance by multiplying the annual value of the RAB, discussed above, by this rate of return.)

We reached our draft decision on the rate of return by calculating a feasible range for the real post-tax weighted average cost of capital (WACC) for ferry operators. We then selected the value within this range we consider to be most appropriate for calculating the allowance for a return on the assets used in providing Sydney Ferries services. This approach is consistent with the one we use in regulating the water, rail and bus industries.

Our analysis indicates that the real post-tax WACC is in the range of 3.8 to 5.5%. However, due to the continuing fall in the risk free rate, there is a growing discrepancy between the WACC calculated using short-term averages of market data compared to long-term averages.

[44] Historically, we have adopted a straight-line approach to calculating depreciation. This method takes an equal amount from the asset value in each year of the assets' economic life so that the real written down value describes a straight line over time.

The midpoint WACC obtained using short-term averages of market data (4.7%) is significantly lower than the midpoint WACC calculated using long-term averages (6.4%). Further, there is no overlap in the ranges derived from the long- and short-term averages: the WACC range calculated using short-term averages is 3.8% to 5.5%, compared to a range of 5.7% to 7.3% using long-term averages.

In light of this, and consistent with our other recent decisions on the WACC, we consider that a WACC at the upper end of the range calculated using short-term averages is appropriate for the assets used to provide ferry services. We therefore made a draft decision to use a real post-tax WACC of 5.5% to calculate the return on assets.

The parameters we used to calculate the WACC range are shown in Table 4.8 below. These parameters were based on market conditions sampled to 1 June 2012. More information on how we determined the value of each of these parameters is provided in Appendix D. We intend to update the parameters just before we make our final determination, to reflect the market conditions at that time.

Table 4.8 Draft decision on the range for the real post-tax WACC for providing ferry services

Parameter	Value
Nominal risk free rate	2.6%
Inflation	2.6%
Market risk premium	5.5 to 6.5%
Debt margin	3.5 to 4.4%
Debt to total assets (gearing)	60 to 40%
Gamma	0.25
Equity beta	0.8 to 1.0
Cost of equity (nominal post-tax)	7.0 to 9.0%
Cost of debt (nominal pre-tax)	6.1 to 7.0%
WACC (real post-tax)	3.8 to 5.5%

Note: Input parameters for IPART draft decision were sampled to 1 June 2012.
Source: See Appendix D.

4.4 Efficient costs associated with providing services on the core network only

As Chapter 3 discussed, our approach for this determination is to set prices based on the efficient costs of providing Sydney Ferries contracted services on the core network – that is, the services on the Inner Harbour and Manly routes only. Therefore, once we calculated the efficient costs of providing the services on the whole network, our next step was to identify the direct costs of operating services on those routes (eg, the wages paid to crew on vessels and wharves) and decide on an

appropriate way to allocate shared costs between services on all routes (eg, head office costs).

The section below sets out our draft decision on our approach for allocating costs between the 3 service areas. The subsequent sections discuss our application of this approach to allocate the total efficient operating and capital expenditures and the value of the RAB in 2013 to these service areas.

4.4.1 Draft decision on approach for allocating costs

12 IPART's draft decision is that for the purpose of determining the efficient costs of providing Sydney Ferries services on the core network only, the total efficient costs should be allocated between services on the 3 service areas (Inner Harbour, Manly and Parramatta River) based on a route costing model developed by Sydney Ferries.

There are many possible approaches for allocating shared costs. Ideally, this allocation should be based on cost causation, ie, the driver behind the cost. Potential drivers of the costs of operating Sydney Ferries services include the number of passengers carried, the number of journeys made, the amount of time spent on the water by a vessel or the amount of fuel consumed.

Sydney Ferries has developed a route costing model, which allocates its annual expenses to individual routes. In general, costs are allocated directly to specific vessel classes and routes wherever possible. For example, the costs associated with crew on the Freshwater class of vessels is allocated directly to the Manly route (as these vessels are only used for the Manly service).

Where a vessel class serves more than one route, most costs are allocated to individual routes, and (subsequently) to the 3 service areas, in proportion to the operating hours spent by the vessel class in servicing the particular route. Where costs cannot be directly allocated to a specific vessel class, they are generally allocated based on the vessel class' share of crewing costs or direct maintenance spend.

We consider this route costing model provides a reasonable basis for allocating costs between services on the 3 service areas. Therefore, we decided to use this model as the basis for our cost allocation approach.

4.4.2 Allocation of total efficient costs between services

In line with the above draft decision, we used Sydney Ferries' route costing model to allocate the costs included in our draft decisions on the total efficient costs of providing Sydney Ferries services between the 3 service areas.

This resulted in around 40% of total efficient costs being allocated to the Inner Harbour service, 35% to the Manly service and 25% to the Parramatta River service. However, we note that as around 60% of total costs at present are shared costs, the amount allocated to individual routes or services is highly dependent on the allocation methodology used.

For RMS assets, of the 12 wharves being improved under the Commuter Wharf Upgrade Program, 6 are used by services on the Inner Harbour routes only, 1 by the Parramatta River service only, and the remaining 5 are used by services on both these routes.[45] Therefore, we allocated RMS expenditure on the basis of the number of times in the weekly timetable that a particular service stops at the wharf being upgraded.

4.4.3 Allocation of opening value of the RAB between services

Consistent with our treatment of total efficient costs, we also allocated the opening value of the RAB used to provide Sydney Ferries services between the 3 service areas. For operator assets, we allocated vessel values based on the routes that they service, and other asset values in line with Sydney Ferries' route costing model.

This resulted in around 35% of the RAB being allocated to the Inner Harbour service, 45% to the Manly service and 20% to the Parramatta River service. However, as with efficient operating and capital expenditure, we note that as around 50% of the RAB is shared between the 3 service areas, the amount allocated to individual routes or services is highly dependent on the allocation methodology used.

In terms of RMS assets, the Milsons Point wharf is used by both the Inner Harbour and Parramatta services. We also allocated the RMS asset value on the basis of the number of times in the weekly timetable that these services stops at the wharf being upgraded.

4.4.4 Summary of draft decision on efficient costs

13 For the purpose of making this determination, IPART's draft decision is that the efficient costs of providing Sydney Ferries services on the core network are as shown in Table 4.9.

[45] See http://www.rta.nsw.gov.au/maritimeprojects/projects/wharf_upgrades/scheduled_upgrades.html and http://www.131500.com.au/upload/images/sydney-ferry/Network%20Map_17Dec2011_FINAL_lg.jpg (accessed 6 September 2012).

Table 4.9 Efficient costs of providing Sydney Ferries services on the core network ($'000, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
Efficient operating expenditure	81,673	79,885	80,610	69,451	68,549
Allowance for return of assets (depreciation) (operator and RMS)	9,099	12,234	14,446	14,997	14,859
Allowance for return on assets (operator and RMS)	5,132	5,802	6,349	6,890	6,954
Allowance for tax and return on working capital[a]	851	1,006	1,169	1,264	1,430
Total efficient costs for purpose of making draft determination	96,775	98,928	102,574	92,602	91,793

a As we use a post-tax rate of return on assets, we also calculated a notional allowance for tax. Our estimate of efficient costs also includes a return on working capital, calculated using the post-tax rate of return and a regulatory value of working capital calculated using 20 days of receivables and 30 days of payables (consistent with our previous transport fare reviews) and 18 days of inventory (in line with Sydney Ferries' actual inventory).

Note: The fall in efficient operating expenditure in 2014/15 reflects: 1) a fall in the business-as-usual (BAU) forecast of operating costs (compared to 2013/14) and 2) a higher level of assumed efficiency savings (compared to 2013/14) due to gains achievable through partial fleet renewal and the reform of industrial relations.

5 The quality of Sydney Ferries services

Service standards are an important element of our approach to fare setting. We have estimated the efficient costs of providing the quality or standard of ferry services that is specified under the service contract. This chapter looks at how Sydney Ferries has been performing against these service quality targets.

5.1 Sydney Ferries' recent performance

Over the past few years Sydney Ferries has delivered a high level of reliability and customer satisfaction. Service reliability has improved over the past 3 years and in some instances is about service contract obligations. 96% of Sydney Ferries customers were overall satisfied with its performance[46].

There is a new service contract between Harbour City Ferries Pty Ltd and partners and Transport for NSW. The Harbour City Ferries service contract is not publicly available at this time. The following historical analysis is based on the previous service contract.[47]

The previous service contract specified performance indicators and targets for:

- A variety of safety measures (eg, collisions and groundings, passenger injuries, incidence of staff injuries).
- Service reliability
  - percentage of services that actually run
  - percentage of services that run on time.
- Operational efficiency
  - total cost per service hour.
- Network effectiveness
  - boardings per service hour.
- Customer satisfaction
  - customer satisfaction index (based on a customer satisfaction survey)

---

46 Bureau of Transport Statistics, *2011 Transport customer survey – customer satisfaction with public transport services*, 2011.

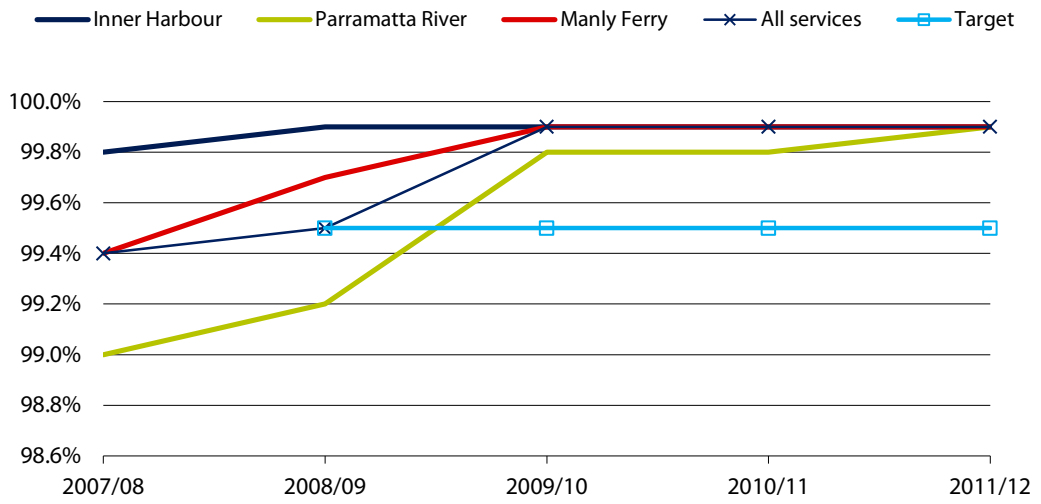
47 Ferry System Contract between Director-General of Department of Transport and Infrastructure and Sydney Ferries, Schedule 4 - Performance Benchmarks, March 2010.

- complaints response time.

- Staff development.

In terms of service reliability, Sydney Ferries' performance exceeds its service obligation. In 2011/12, 99.9% of Sydney Ferries scheduled services were operated.[48] This is higher than the target of 99.5% in the previous service contract and indeed performance has been above the target for all 3 service areas in the 3 years to June 2012 (see Figure 5.1).

Figure 5.1 Service reliability: % of scheduled services operated, 2007/08 to 2011/12



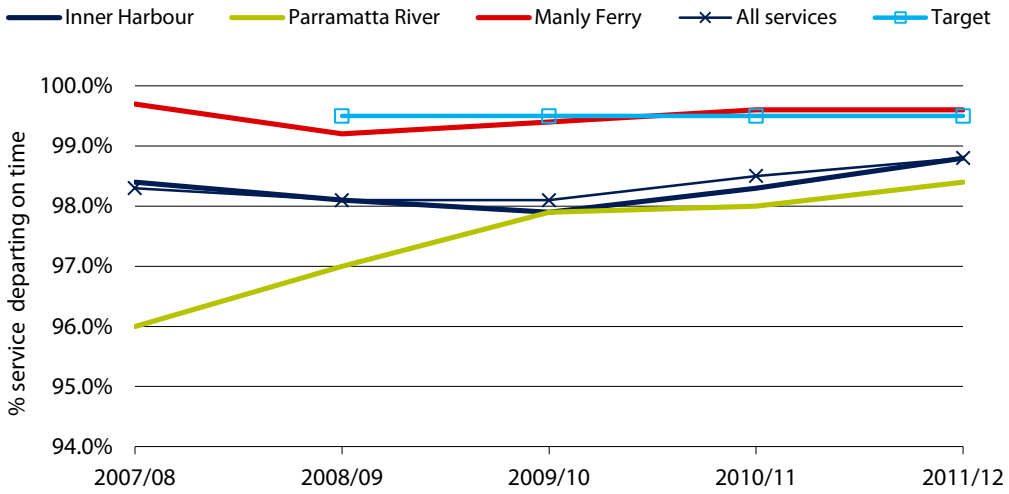
Note: Does not include Manly JetCat service which ceased operating on 31 December 2008.
Data sources: Previous Sydney Ferries website and Transport for NSW website.

Sydney Ferries on time running performance[49] has also improved over the last 3 years although it remains below the 99.5% target in the service contract. The Manly service has consistently been the most punctual, while the Parramatta River service has consistently been the least punctual (see Figure 5.2).

48 See http://www.transport.nsw.gov.au/sites/default/files/b2b/ferry/sydney-ferries-june-2012-reliability.pdf

49 On time running is defined as the proportion of ferries departing within 5 minutes of the scheduled departure time from the first wharf on the service, excluding delays caused by events outside Sydney Ferries control.

Figure 5.2 On time running, 2007/08 to 2011/12



Note: On time running, adjusted for force majeure. Does not include Manly JetCat service which ceased operating on 31 December 2008.

Data source: Previous Sydney Ferries website and Transport for NSW website.

The number of complaints received (per 100,000 passengers) about Sydney Ferries services fell to 3.3 in 2011/12. This is the lowest incidence of complaints in the past 5 years.[50]

A 2011 survey of public transport passengers by the BTS found that 96% of Sydney Ferries passengers were satisfied overall with the ferry service. This level of satisfaction compares very favourably with the overall satisfaction levels of rail passengers (81%) and bus passengers (86%).[51] Satisfaction with Sydney Ferries services was consistent across the different ferry routes.

The aspects of the service that passengers had the highest levels of satisfaction with were:

- Ease of boarding the ferry (96% satisfied)
- Feeling safe while on ferry (95%)
- Ability to catch the ferry you intended to (95%) and
- Journey comfort (smoothness of ride) (94%).

50 See http://www.transport.nsw.gov.au/sites/default/files/b2b/ferry/sydney-ferries-june-2012-complaints-received.pdf

51 Bureau of Transport Statistics, *2011 Transport customer survey – customer satisfaction with public transport services*, 2011, p 5.

While the aspects of service that passengers had the lowest levels of satisfaction with were:

- Availability of parking near the wharf (26% dissatisfied)
- Frequency of service (19% dissatisfied), and
- Comfort at the wharf (10% dissatisfied).[52]

52 Bureau of Transport Statistics, *2011 Transport customer survey – customer satisfaction with public transport services*, 2011, p 42.

6 Forecast patronage growth

After we established the efficient costs of providing Sydney Ferries services over the core network we considered the likely patronage growth in these services over the determination period. Our decision on forecast patronage growth is important, as it affects our decision on the value of the external benefits of Sydney Ferries services (discussed in the next chapter) and has a major impact on the fare change required (discussed in Chapter 8).

The decision on forecast patronage growth affects the value of the external benefits because these benefits primarily arise when people choose to use Sydney Ferries services instead of cars. Therefore, generally speaking, a higher forecast number of passenger journeys over the determination period will lead to a higher value for the external benefits. In turn, a higher value for the external benefits will lead to lower fare increases, because it suggests that a higher share of the Government's costs in providing ferry services should be recovered from taxpayers rather than passengers.

The decision on forecast patronage growth affects the level of fares because we set this level based on the forecast number of tickets sold for each fare type. In general, higher forecast patronage growth will lead to lower fare increases, because it means that passengers' contribution to the efficient costs of providing the services can be recovered from a higher number of ticket sales.

The section below sets out our draft decision on the forecast patronage growth over the core network for the determination period. The subsequent sections discuss the factors we considered in reaching our draft decision.

6.1 Draft decision on forecast patronage growth

14 IPART's draft decision is to assume forecast patronage growth of 1.5% per annum over the determination period.

The level of patronage on Sydney Ferries services fluctuates from year to year, as it is influenced by a range of factors, including employment and population growth, the number of tourists visiting Sydney and the likely impact of fare increases resulting from our determination.

Given this year to year variation, we consider that a long-term growth rate is most appropriate when establishing a price path for ferry fares. We concluded that it is reasonable to assume patronage growth of 1.5% per annum over the determination

period. This is consistent with the long-term average growth in the patronage of Sydney Ferries services over the whole network.

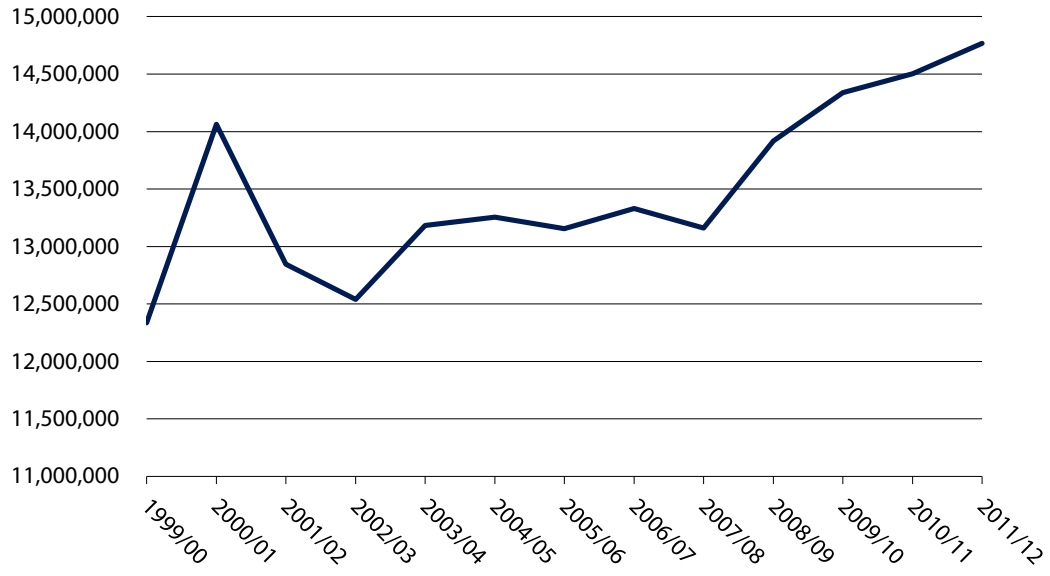
6.2 Recent trends in Sydney Ferries patronage levels

We considered the recent historical trends in patronage levels as these trends can provide a reasonable indication of future growth, provided that historical patterns of population settlement, macroeconomic conditions and travel behaviour remain reasonably consistent. However, we didn't rely solely on these, as many factors can affect patronage.

Over the last 12 years, the total number of passenger journeys undertaken on all Sydney Ferries services grew by 19.7%, which represents average patronage growth of 1.5% per annum.[53] As Figure 6.1 shows, much of this growth has occurred since 2007/08, when the average annual growth rate has been 2.9%, although clearly patronage peaked around the time of the Sydney Olympics.

On balance, we consider that the historic trends suggest it is reasonable to expect patronage growth of around 1.5% per annum, in line with the long-term average growth over the last 12 years. However, we also need to consider the likely impact of other factors, as discussed in the following sections.

Figure 6.1 Sydney Ferries Annual patronage



Data sources: State Transit Authority Annual Report 2003/04, Data from Sydney Ferries,http://www.transport.nsw.gov.au/sites/default/files/b2b/ferry/sydney-ferries-june-2012-partonage.pdf.]

53 We consider it appropriate to calculate patronage growth excluding the JetCat service, in order to enable a 'same route' comparison across years.

6.3 Forecasts of CBD employment, population growth and tourism

In 2006 Booz Allen Hamilton identified CBD employment, population growth and tourism as key drivers of ferry patronage growth in the short term.[54] In forecasting travel patterns within the Greater Metropolitan Area of Sydney to 2036, the Bureau of Transport Statistics (BTS) has adopted an employment growth forecast of 1.0% per annum and a population growth forecast of 1.1% per annum.[55] The Tourism Forecasting Committee[56] forecast that inbound visitor nights in Sydney will grow by 4.4% between 2010/11 and 2015/16 and 3.4% between 2015/16 and 2020/21.[57]

We took these factors into consideration in making our draft decision to use a patronage growth assumption of 1.5% per year. Although we consider that Sydney's employment, population and tourism will continue to be significant determinants of Sydney Ferries patronage growth, we do not expect that these factors will cause it to deviate from its historical average over the determination period.

6.4 Fare increases that result from this determination

We considered whether our decisions on fares will affect patronage growth on Sydney Ferries services over the determination period. As we have noted in previous reports, the demand for public transport is relatively inelastic, and many factors influence peoples decisions to use these services.[58] Therefore, modest fare increases are unlikely to have a significant impact on Sydney Ferries patronage.

In 1996, we commissioned Professor David Hensher of the Institute of Transport Studies to estimate the effect price has on the pattern of demand for transport services in the Sydney region.[59] Hensher found low levels of market share elasticity for ferries, in particular for single tickets.[60] This means that that a change in ferry fares does not result in a significant change in the *proportion* of people choosing to travel by ferry (rather than by rail, bus or private car).[61] We intend to examine the effect price has on the demand for Sydney Ferries services in the future.

---

54 See Booz Allen Hamilton, *Review of Patronage Trends and Projections for Sydney Ferries*, September 2006. Around half the trips on Sydney Ferries services are made by commuters and around half are made by leisure travellers (see Chapter 7).

55 Bureau of Transport Statistics, *TransFigures – Travel Forecasts 2006-2036*, February 2012.

56 The Tourism Forecasting Committee is an independent body charged with providing present and potential tourism investors, industry and governments with consensus forecasts across the international, domestic and outbound tourism sectors. Publications are available at http://www.ret.gov.au/tourism/research/tra/publications/2012/Pages/2012.aspx#_forecasts_2

57 Tourism Forecasting Committee, *Forecast 2012, Issue 1, Regional Forecasts tables*, April 2012, p 2.

58 See IPART, *Review of fares for metropolitan and outer metropolitan bus services from January 2010 - Final Report*, December 2009.

59 Hensher and Raimond, *Estimation of Public Transport Fare Elasticities in the Sydney Region*, 1996.

60 IPART, *Estimation of Public Transport Fare Elasticities in the Sydney Region*, October 1996.

61 For example, the estimated elasticity of -0.183 for ferry trips made by commuters on a single ticket implies that a 10% increase in the price of a single ticket will result in a 1.8% reduction in the proportion of daily commuter trips (across all modes – ferry, rail, bus and private car) made on a ferry single ticket.

7 Value of the external benefits of Sydney Ferries services

After making our draft decision on the efficient costs of providing Sydney Ferries services on the core network over the determination period, the next step in our approach was to estimate the annual value of the external benefits generated by these services. This value was one of the key factors we considered in making draft decisions on how much of the efficient costs passengers should fund through ferry fares, and what fare change is required to recover that share of those costs (discussed Chapter 8).

In general, the external benefits of a service are indirect benefits that accrue to the wider community as a result of the availability and use of that service (as opposed to the internal benefits, which accrue to the individuals who use the service). For example, the external benefits of public transport services may include reduced road congestion, reduced traffic accidents and reduced air pollution.

IPART considers, in line with the general view in Australia and other jurisdictions, that the external benefits generated by public transport services (including ferry services) justify government subsidisation of the fares for these services. We also consider that the level of government subsidisation should be linked to the value of the external benefits generated by the services concerned.

To estimate the value of the external benefits generated by Sydney Ferries services, we engaged a consultant, Sapere Research Group (SRG), to analyse and recommend this value.[62] We considered SRG's findings and recommendations, and the views on external benefits expressed in stakeholder submissions, to make our draft decision.

The section below sets out our draft decision on the estimated value of the external benefits of Sydney Ferries services on the core network over the determination period. The subsequent sections discuss what external benefits should be included in estimating this value, SRG's analysis and recommendations on this value and our considerations in reaching our draft decision.

7.1 Draft decision on value of external benefits

15 IPART's draft decision is that the value of the external benefits of Sydney Ferries services on the core network is as shown in Table 7.1.

62 See SRG, *External benefits of Sydney Ferry services - Final report to IPART*, August 2012.

Table 7.1 Draft decision on the value of the external benefits generated by providing Sydney Ferries services on the core network ($'000, real $2011/12)

	2011/12	2012/13	2013/14	2014/15	2015/16
External benefits	1,831	1,877	1,924	1,972	2,021

This draft decision is in line with SRG's recommendation on the value of the external benefits. It reflects SRG's quantification of the net external benefits generated by people choosing to travel by a Sydney Ferries service rather than by an alternative mode of transport (or the costs that would be imposed on the community if the existing ferry services were not available).

7.2 What external benefits should be included?

It is relatively easy to identify the direct benefits that passengers receive from public transport services. For example, these generally include access to their place of work, essential services, and shopping and leisure facilities, plus the personal benefits that flow from this level and type of mobility. In the case of Sydney Ferries services, they also generally include a pleasant and aesthetic journey.

However, the external benefits of those services – those that accrue to the wider community – are not always as clear. These benefits can also be difficult to quantify.

In our view, the most significant, quantifiable and relevant types of external benefits generated by ferry services are the same as those generated by other public transport services, including rail and bus services. These benefits arise from the reduction in the number of people using cars in the metropolitan region due to the availability and use of public transport services. For example, our most recent review of CityRail fares found that the major external benefits generated by CityRail services fall into 2 categories:

- reduced (or avoided) road congestion, and
- reduced (or avoided) general air pollution and greenhouse gas emissions.[63]

Our most recent review of metropolitan and outer metropolitan bus fares found that the main external benefits generated by bus service fall into these same categories.[64] In our view, the main external benefits of Sydney Ferries services also fall into these 2 categories. However, we note there are likely to be significant differences in the **value** of these types of benefits across the different modes of public transport.

---

63 Other potential external benefits, including avoided road accidents, were considered but were not directly quantified. See IPART, *Review of CityRail fares, 2009-2012 - Final Report and Final Determination*, December 2008.

64 See IPART, *Review of fares for metropolitan and outer metropolitan bus services from January 2010 - Final Report*, December 2009.

We considered several other potential external benefits, which are often discussed in relation to Sydney Ferries in particular, and to public transport services in general. These include the 'iconic value' of Sydney Ferries services, as well as the social and agglomeration benefits of these services. In our view, these benefits should **not** be included in estimating the value of the external benefits for the purpose of setting ferry fares, for a variety of reasons.

The 'iconic value' of Sydney Ferries services relates to the view that ferry services on Sydney Harbour are one of the quintessential attractions of Sydney as a city and tourist destination. Thus, they generate spillover benefits to the wider Sydney and NSW economies. SRG considered this value, and concluded that it is derived from the availability of ferry services as a **whole**, and not from the **amount** of service being offered by Sydney Ferries.[65] Thus, this iconic value is not relevant to pricing fares for Sydney Ferries services. We agree with this conclusion.

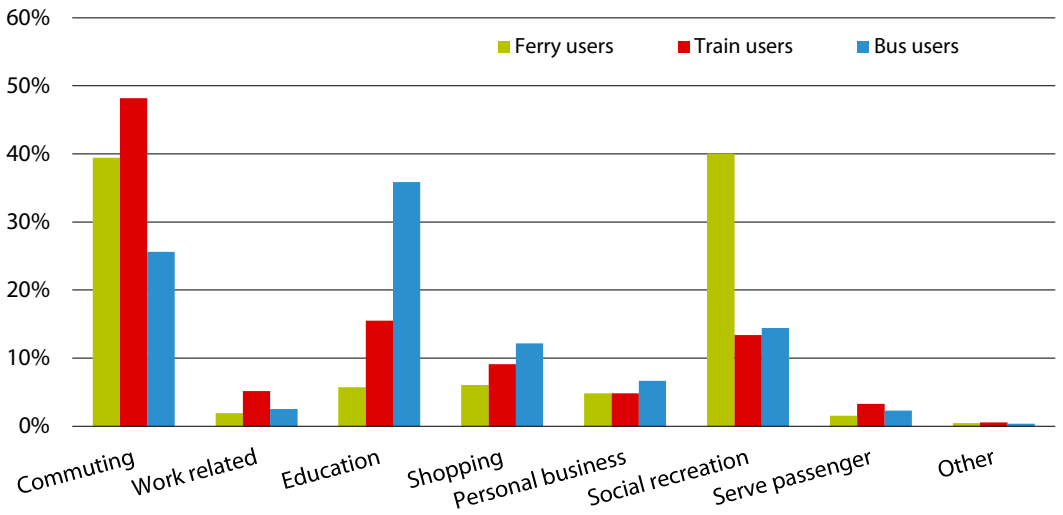
The social benefits of public transport services (including ferry services) relate to the improved access and mobility they provide to particular users, such as those with low incomes and less access to alternative modes of transport. While we accept that these social benefits may be associated with ferry services, we do not consider they should be included in the estimated value of the external benefits for the purpose of setting ferry fares. In our view, the best way to achieve these social benefits is to ensure that government investment in ferry services meets the needs of passengers with limited access to other transport modes, and that a well-targeted concession program is in place. We consider that this is more appropriate and likely to be more effective in generating social benefits than increasing taxpayer subsidisation of the fares paid by all passengers.

Agglomeration benefits arise because the availability of affordable public transport services is one of the factors that facilitate the creation of a larger and deeper labour market in the Sydney area, broader customer bases for businesses and the potential for learning, information exchange and knowledge sharing. We do not consider these benefits should be included in the estimated value of the external benefits for the purpose of setting ferry fares because their value is not readily quantifiable, and the role of transport services in attaining them is not established.[66] In addition, they are not likely to be significant, given around half of Sydney Ferries patronage can be expected to relate to social recreation (see Figure 7.1), and that the total amount of ferry patronage is very small compared to other forms of transport such as rail or buses (see Figure 7.2).

65 See SRG, *External benefits of Sydney Ferry services - Final report to IPART*, August 2012, pp 32-33.

66 This is consistent with the conclusion we reached in our reviews of fares for CityRail and metropolitan and outer metropolitan bus services. See IPART, *Review of CityRail fares, 2009-2012 - Final Report and Final Determination*, December 2008 and IPART, *Review of fares for metropolitan and outer metropolitan bus services from January 2010 - Final Report*, December 2009.

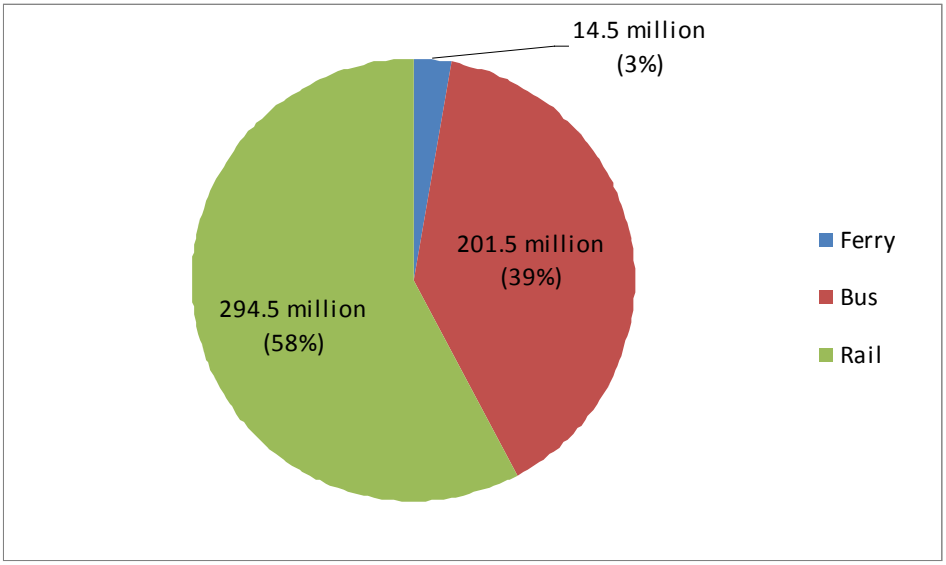
Figure 7.1 Purpose of ferry trips on an average weekday compared to bus and rail, 2010/11



Note: Includes residents of Sydney Greater Metropolitan area and excludes journeys by Sydney non-residents.

Data source: Bureau of Transport Statistics, Household Travel Survey (based on 5 waves of data from 2006/07 and 2010/11).

Figure 7.2 Greater Sydney metropolitan area: public transport passenger journeys 2010/11



Data source: Sydney Ferries, *Annual Report 2010/11*; RailCorp, *Annual Report 2010/11*; Transport for NSW, *Annual Report 2010/11*.

7.3 SRG's analysis and recommendation on the value of the external benefits

To analyse the value of the net external benefit[67] generated by Sydney Ferries contracted services, SRG quantified the external costs that are avoided when people travel by ferry instead of car. To do this, it obtained information from the Bureau of Transport Statistics (BTS). Based on the existing level of ferry service, SRG asked the BTS to:

- provide information on how many people currently travel by car, train, bus and ferry, how long their trips are, and how much time these trips take
- model what would happen if the existing ferry services were not available – in particular, how many extra people would travel by car, train and bus under these circumstances, how long their trips would be, and how much time they would take.

Using this information, SRG estimated the marginal external cost of the extra car travel that would occur if ferries were not available.[68] Specifically, SRG estimated:

- the costs associated with increased traffic congestion (a function of how many extra people travel by car and the change in the speed of car trips)
- the costs of increased air pollution and greenhouse gas emissions from cars (a function of how many people travel by car and how far they travel) less the cost of pollution caused by ferries.

It then totalled these costs to derive an estimated value for the net external benefits of Sydney Ferries services. SRG found that in 2011 this value was $1.9 million for the year.[69]

Overall, SRG's analysis indicates that Sydney Ferries services provide an external benefit for commuter journeys, because these journeys relieve some congestion on Sydney's roads. However, they provide no external benefit for non-commuter or tourist journeys. This is because relieving congestion on Sydney's roads is relatively unimportant during the hours when non-commuters and tourists are most likely to travel (ie, non-peak periods and weekends).

---

67 That is, the external benefits less the external costs.

68 The external benefits of ferry use primarily results from people choosing to travel by ferry instead of driving a car because it avoids the external costs associated with car travel. There are no external benefits from people catching a ferry if they chose to catch the ferry instead of walking, cycling or catching the train or bus because unlike car travel, these alternative forms of transport do not impose costs on other people.

69 See SRG, *External benefits of Sydney Ferry services - Final report to IPART*, August 2012, p 49. We acknowledge that there is a deadweight loss associated with the raising of state taxes to fund this level of subsidy, and that the level of benefits might be adjusted downwards to reflect this. However, our approach to setting fares is based on an allocation of total efficient costs using a beneficiary pays principle. Taxpayers (as a proxy for motorists in Sydney) pay a share of the costs commensurate with the total external benefits of ferry services that accrue to the wider community (essentially congestion benefits). Fares recover a share equal to the total efficient costs less the total external benefits.

This finding, together with the fact that non-commuter and tourist journeys account for around half of all Sydney Ferris trips and the total number of trips is very small compared to other forms of transport, helps to explain why SRG's recommended value for the external benefits is much lower than the external benefits values we adopted in making our CityRail and metro buses determinations. Another reason for this is that ferry passengers would be more likely to use other modes of public transport (ie, bus or rail) than cars if a ferry service was not available. Sydney Ferries services avoid less general air pollution and greenhouse gas emissions costs than CityRail and metro bus services.

7.3.1 SRG's estimate of optimal ferry fares

SRG also used the framework underpinning its estimate of the value of the external benefits of Sydney Ferries services to estimate the optimal level for maximum ferry fares. The external benefits arising from Sydney Ferries services can be thought of as the optimal level of taxpayer subsidy of these services. The optimal maximum fares are then calculated as the difference between the external benefit per ferry trip and the efficient cost of that ferry trip (given by the long run marginal cost[70]).

SRG's analysis suggests that optimal ferry fares would be close to the long run marginal cost because the external benefits Sydney Ferries services are relatively small. This is particularly the case for non-commuter or leisure ferry trips.

Based on data reflecting the actual costs of a trip on Sydney Ferries services, SRG's results indicate that overall the optimal fare for these services is around 50% higher than current fares.[71] However, we note that there are differences between routes.

We note that this analysis is highly sensitive to the inputs and assumptions used, and that the results may change where efficient trip costs are different to actual trip costs.[72] However, the findings are consistent with what is observed in practice – 2 private operators are providing fast ferry services between Circular Quay and Manly with no subsidy.

70 The Long Run Marginal Cost (LRMC) is the additional cost that an operator incurs due to an increase in demand for ferry trips when capital, labour and all inputs can be varied.

71 We define 'current fares' as the cost of a single trip using either a MyFerry1 or MyFerry2 TravelTen ticket.

72 We also note that these results reflect a marginal excess burden (MEB) of taxation of zero. The optimal fare increase implied when the MEB of taxation is 0.1 is around 100% (See SRG, *External benefits of Sydney Ferry services - Final report to IPART*, August 2012, p 46).

7.4 IPART's considerations

After considering SRG's analysis and stakeholder comments on the external benefits of Sydney Ferries services, we decided to accept SRG's recommended value for these benefits. As section 7.2 discussed, we agree with SRG's view that the most significant and relevant external benefits of ferry services (for our purpose in setting fares) are avoided road congestion costs and avoided costs associated with general air pollution and greenhouse gas emissions from cars.

In general, when we make a public transport fare determination, we consider the value of the external benefits generated by that public transport service to help us decide what level of taxpayer subsidy of fares is justified on economic grounds. When this amount is subtracted from the total efficient costs of providing the service, the remainder provides us with a target level of revenue to be recovered through maximum fares. This approach assumes that taxpayers should pay a share of the efficient costs that is roughly equal to the value of the external benefits that accrue to the general community. Therefore, maximum fares should be set to recover the remaining share of the efficient costs. However, Government can elect, for other (non-economic) reasons, to use taxpayer funds to further subsidise public transport fares.

We allocated the value of the external benefits associated with Sydney Ferries services to the Inner Harbour, Manly and Parramatta service areas based on the patronage on each area. We established the external benefits of services on the core network by subtracting the external benefits of the Parramatta River service from the total value of the external benefits of Sydney Ferries services, and increased this value by our assumed rate of patronage growth over each year in the determination period (discussed in Chapter 6). This value was then used to estimate the amount passengers should fund through fares (discussed in Chapter 8).

8 How much of the efficient costs should be funded by passengers through fares

The next step in our approach for setting fares was deciding how much of the efficient costs of providing Sydney Ferries services should be funded by passengers. To do this, we considered how much government subsidy of ferry services is justified over the determination period, given the value of the external benefits generated by these services (discussed in Chapter 7) and other factors. We then subtracted this amount from the total efficient costs of providing Sydney Ferries services across the core network over this period (discussed in Chapter 4). We also subtracted the estimated cost to the Government of providing concession fares and the cost of the additional discount offered for regular ferry travel on the multi-mode MyMulti tickets. This gave us an estimate of the amount passengers should fund through fares.

Once we had this amount, we translated it into an annual increase in fares. In doing this, we used a 'glide path' approach to reach the amount passengers should fund through fares in 2019. Given how far away current fares are from their target level, we do not reach the target level of fares until 2019. We chose to transition fares over a 7-year period as this corresponds with the length of the ferry service contract between the Government and the new private operator. However, we have made a four-year determination and will make a new determination of maximum fares from January 2017 to update our analysis for any changes.

The sections below set out our draft decision on the amount passengers should fund through fares, and discuss how we made this decision in more detail.

8.1 Draft decision on amount passengers should fund through fares

16 IPART's draft decision is that passengers should contribute the amounts shown in Table 8.1 in each calendar year of the determination towards the efficient costs of providing Sydney Ferries services.

Table 8.1 Draft decision on the amount passengers should fund through fares ($'000, real $2012, core network, calendar years)

	2013	2014	2015	2016
Amount passengers should fund through fares	76,680	72,422	65,877	63,902
Annual real increase in fares required to recover this amount [a]	2.6%	2.6%	2.6%	2.6%

[a] These fare increases are for MyFerry single, return and TravelTen tickets only .

Note: In addition to the increases shown above, fares will be adjusted by the change in the CPI each year.

8.2 Estimating the amount passengers should fund through fares

As Chapter 7 discussed, we consider that government subsidy of ferry fares is justified because ferry services generate external benefits, and that the level of subsidy should be related to the value of the external benefits. Therefore, to estimate how much of the efficient costs of providing Sydney Ferries services passengers should fund through fares we subtracted the value of the external benefits over the core network from the efficient costs of providing Sydney Ferries services over this network.

In addition, we note that the NSW Government's policy of providing concession fares further subsidises ferry fares. We consider that this subsidy should be funded by taxpayers and not passengers. Therefore, we also subtracted the estimated cost to the Government of providing concession fares over the core network from the efficient costs of providing Sydney Ferries services on this network.[73]

While concession fares apply to pensioners, students, children, job seekers and people with certain disabilities, they also apply to Family Funday Sunday tickets. For $2.50 per person, these tickets allow a family unlimited travel on all trains, buses, ferries and light rail in the greater Sydney area.[74] We consider that this subsidy should also be funded by taxpayers, rather than by passengers.

Fares are determined on a calendar year basis (fares apply from January to December) but our estimates for the costs and external benefits were calculated on a financial year basis. To estimate the amount of revenue that passengers should fund through fares, we converted our estimates of the costs and external benefits from financial years to calendar years.[75]

---

73 We also subtracted 50% of the revenue Sydney Ferries earns from advertising, interest, rent and other sources/activities. This revenue is considered unregulated income as it is not set or determined by IPART. However, we consider that deducting some or all this revenue from the total efficient costs provides an appropriate balance between passing the benefits of additional revenue onto customers (through lower prices) and providing the business with an incentive to pursue further opportunities of this nature.

74 See http://www.cityrail.info/tickets/which/funday (accessed 2 September 2012).

75 We have allocated costs to calendar years by assuming that 50% of the costs for each financial year occur between 1 July and 31 December, and 50% occur between 1 January and 30 June. We have also converted the costs from 2011/12 prices to 2012 prices by adding forecast inflation for the 6-month period 1 January to 30 June 2012.

Once we estimated the amount of costs that passengers should fund through fares, we calculated the increase in fares that would be required to cover this amount based on our estimate of patronage growth and the number of ferry trips that would be made in each year of the determination.

In calculating the required fare increase we adopted the following approach:

- We used a starting point of Sydney Ferries' actual costs and patronage over the core network for 2012 less the external benefits associated with these services and the estimated Government costs of providing concession fares.
- We used an end point of the efficient costs of operating Sydney Ferries services over the core network as given by the building block approach (discussed in Chapter 3) less the external benefits associated with these services and the estimated Government costs of providing concession fares.
- We calculated an average annual change in maximum ferry fares to move from the starting point to the end point, using our patronage growth assumption of 1.5% per annum and adjusting for our draft decisions to use:
  - 'MyFerry' equivalent pricing
  - A glide path approach to reaching the target share of efficient costs from fares in 7 years.

Our draft decisions on these adjustments are discussed in turn below. Table 8.2 shows the resulting efficient costs, external benefits, estimated Government costs of providing concession fares (and the additional MyMulti discount), adjustment for non-fare revenue and amount that passengers should fund through fares.

Table 8.2 Estimated amount passengers should fund through fares ($'000, real $2012, core network, calendar years)

	2013	2014	2015	2016
Total efficient costs of providing Sydney Ferries services over the core network	101,404	98,220	92,794	91,983
Less other revenue	417	417	417	417
Less value of external benefits	1,913	1,960	2,009	2,059
Less estimated Government costs of providing concession fares[a]	16,904	17,702	18,532	19,396
Less estimated costs of MyMulti ticket discount[b]	5,489	5,719	5,959	6,209
Amount passengers should fund through fares	76,680	72,422	65,877	63,902

a We estimated this by calculating the difference between the fares that concession passengers actually pay and the fares they would pay if they made the same number of trips but did not have access to a concession.

b We estimated this by calculating the difference between 1) farebox revenue where we treat a trip on a MyMulti periodical ticket as if it generated the same amount of revenue as a trip on a MyFerry TravelTen and 2) farebox revenue where all tickets used to travel on Sydney Ferries services (ie, including MyMulti tickets) increase at 2.6% per year (ie, the average fare increase under this draft determination plus an adjustment for inflation).

8.2.1 'MyFerry equivalent' pricing

Draft decision on the treatment of the additional discount offered by MyMulti weekly tickets

17 IPART's draft decision is that the required fare increase for Sydney Ferries services over the determination period should be calculated using 'MyFerry equivalent' pricing.

As set out in Chapter 3, in calculating the required fare increase we used 'MyFerry equivalent' pricing so that the Government, and not passengers, funds the extra discount offered for regular ferry travel on multi-mode tickets. As Chapter 2 discussed, the Government introduced the MyFerry fare structure as part of its MyZone fare structure for all public transport services in the greater Sydney area. MyFerry includes 2 distance-based fare bands: MyFerry1 for trips under 9 km and MyFerry2 for trips 9 km and over. Passengers can buy a single or return ticket or a TravelTen.

However, Sydney Ferries passengers also have access to MyMulti tickets, which are valid on all modes of public transport in the Sydney area. These tickets have a time-based and distance-based zonal fare structure, and can offer a greater discount to regular passengers than the MyFerry TravelTen ticket. For example, the price of a weekly MyMulti1 – which includes unlimited travel on all Sydney Ferries services for 7 days – is less than the prices of both MyFerry1 and MyFerry2 TravelTens. So for commuters and other frequent ferry passengers – even those who only use Sydney Ferries services – it is cheaper to buy a MyMulti1 weekly than a MyFerry TravelTen.[76]

By using 'MyFerry equivalent' pricing in calculating the fare change needed to recover the target revenue, we have treated the additional discount available from MyMulti tickets as a Government contribution (or taxpayer subsidy) rather than as a cost to be recovered from all ferry passengers. In practice, this means that when we calculated the required change in maximum fares, we treated a trip on a MyMulti periodical ticket as if it generated the same (ie greater) amount of revenue as a trip on a MyFerry TravelTen. In this way we have set the fare change for MyFerry single, return and TravelTen tickets independent of MyMulti ticket prices. We consider this approach appropriate, as the discount offered by some MyMulti tickets reflects Government policy rather than the costs of providing ferry services on those tickets.

We note that at present around a quarter of ferry trips are made using a MyMulti weekly ticket, and around a third are made using some form of concession ticket (including the Family Funday Sunday ticket).[77] This means that currently over half of the trips on Sydney Ferries services are made using a ticket that is subsidised by taxpayers well in excess of the subsidy that is warranted by the external benefits generated by that trip.

---

76 See http://www.131500.com.au/tickets/fares (accessed 6 September 2012).
77 IPART calculations.

8.2.2 Glide path to target fare level over 7 years

Draft decision on achieving the required fare increase

18 IPART's draft decision is that the required fare increase for Sydney Ferries services over the determination period should be calculated using a glide path approach over 7 years.

Given how far away fares are from recovering the target share of efficient costs, we used a 'glide path' approach to reach the required level of fares in 7 years, and provide an indicative annual fare change to 2019.[78] We chose to transition fares over a 7 year period as this corresponds with the length of the ferry service contract between the Government and the new private operator. We have established an indicative price path for the period to 2019, with equal fare increases in each year of the service contract period.

Our indicative price path to 2019 is an average fare increase based on the efficient costs and external benefits associated with the Inner Harbour and Manly services. However, as discussed in Chapter 3, we consider that a smaller increase should apply to MyFerry2 fares compared to MyFerry1 fares. If the average fare increase is applied to MyFerry2 fares, this may result in the cross-subsidisation of the other services by Manly passengers and a switch by passengers to the fast ferry services. If patronage on Sydney Ferries' Manly service decreases, then fares for the remaining services will need to increase to offset this.

If our recommendation to remove fare regulation for the Manly service is accepted, then the price path for all Sydney Ferries services would be based on the efficient costs and external benefits associated with the Inner Harbour service only. This results in an average fare increase of 5.2% each year (plus an adjustment for inflation).

78 This is different to the 'NPV neutral' approach we generally use in our determinations, which makes the net present value (NPV) of revenue from fares equal to the NPV of the passenger share of costs over the determination period. An NPV neutral approach would have resulted in even greater fare increases.

9 Determining the average change in fares rather than individual fares

In the past, we have set maximum fares for each ticket that can be used for Sydney Ferries services. In our last review of Sydney Ferries fares, we set 12 different maximum fares, depending on where passengers travelled to and the type of ticket used (single or TravelTen). The Government set additional concession fares, such as those for pensioners and concession card holders.

As set out in Chapter 2, in 2010 the Government reduced the number of tickets used for Sydney Ferries services when it introduced MyZone. Our determination therefore applies to 6 tickets – MyFerry 1 and 2 single, return and TravelTens tickets.

Our draft decision is to set the maximum **average** increase in fares for the services represented by these tickets, rather than set the maximum fare for each ticket. The Government will then set the fares for individual tickets so that the average fare increase is equal to, or below, the average increase we set (weighted by ticket sales). This approach ensures that **on average** prices reflect the changes in costs and benefits of providing Sydney Ferries services.

The Government can choose to increase all fares by the average fare increase. Alternatively, it may increase some fares by more than the average, provided that these increases are offset by changes in other fares that are lower than the average increase. We have established a compliance process to check that the Government's fares are within the determined maximum average increase.

As part of this draft report, we have recommended to the Government that travel on Sydney Ferries services be removed from the multi-mode MyMulti1 tickets. Given the discount for frequent ferry travel provided by MyFerry TravelTen tickets, we see no need to include ferry travel on MyMulti1 tickets.

The sections below set out our draft decisions on determining the maximum average change in fares for Sydney Ferries services, and discuss how we made these decisions.

9.1 Determining the maximum average change in fares for Sydney Ferries services

19 IPART's draft decision is to determine a maximum average increase in fares for each year of the determination period, rather than to determine individual maximum fares.

We consider that setting a maximum average increase for ferry fares, rather than setting maximum fares for each individual ticket, will facilitate:

- Fare reform, while at the same time providing for farebox cost recovery. Our approach enables the Government to recover the farebox revenue allowed under the determination even if it chooses to restructure fares. If this was prevented, a larger subsidy may be required from taxpayers than is justified by the external benefits generated by ferry services.
- The introduction of the Government's electronic ticket for public transport in the greater Sydney area, the Opal card. The Government will have flexibility over fare structure when translating the maximum average fare increases into individual fares.

The section below further explain these reasons. Appendix E explains the process for ensuring that the individual fares proposed by the Government comply with our determination.

9.1.1 Setting a maximum average increase provides the Government flexibility to introduce electronic ticketing

IPART's draft decision on Sydney Ferries fare levels is based on determining the appropriate level of funding of Sydney Ferries services that should come from passengers and taxpayers. We consider that our approach to fare setting should not limit the Government in recovering the revenue allowed by IPART if it chooses to undertake fare reform. Any farebox revenue forgone requires a larger subsidy from taxpayers that is not justified by the external benefits produced by these services.

The MyZone fare restructure demonstrates the importance of providing fare flexibility in a multi-year price determination. Because IPART had set maximum fares over the medium term, the fare structure and maximum fare schedules remain out of alignment until we make a new determination, causing the Government to forgo revenue across the determination period.[79]

In its submission to our issue paper, Transport for NSW noted that the introduction of the Opal may require different approaches to fare setting. Setting a maximum average increase in fares, rather than setting individual fares, will facilitate the introduction of the Opal because the Government will not have to forego revenue if it restructures fares at any stage during the determination period.[80]

[79] The Government also forwent revenue as a result of its decision to freeze fares in 2011.

[80] See Transport for NSW submission to Review of Fares for Sydney Ferries Services from January 2013, April 2012, p 4.

In its submission to our issues paper, Action for Public Transport was concerned that more complex fares may result if IPART sets the average maximum fare increase instead of all maximum fares.[81] We consider that this is unlikely because, as discussed, the Government has significant discretion to determine fare structure regardless of whether we set all maximum fares, or we set the average maximum fare increase. We also note that in recent years the Government has rationalised the number of public transport products or tickets, rather than increasing their complexity.

9.2 No cap on individual fares is required

In making our determination, we are required to consider the protection of consumers from abuses of monopoly power in terms of prices and pricing policies and to consider the social impact of our determination and recommendation.

Setting the maximum average fare increase ensures that, on average, fare increases will be limited to 2.6% (plus an adjustment for inflation) to ensure that prices reflect the changes in costs and benefits of providing Sydney Ferries services.

We recognise that substantial fare changes for individual fares can impose significant adjustment costs on passengers. While NCOSS supported greater flexibility for fares during the transition to electronic ticketing, it considered that IPART should provide some limitations around the extent to which the fares for different services can be varied to protect low income and marginalised transport users from being disadvantaged.[82]

However, this fare determination will only apply to 6 tickets – single MyFerry1 and 2 tickets, return MyFerry1 and 2 tickets and MyFerry1 and 2 TravelTens. At present the fare for a return ticket is set at twice the single ticket fare, and the fare for a TravelTen ticket is set at 8 times the single ticket fare (ie, a 20% discount). Given the relationship between the 6 tickets, there is limited scope for the Government to dramatically change one or more fares while complying with the overall average increase. Therefore, we consider that no limits or side constraints be required for individual fares for Sydney Ferries services.

9.3 Travel on Sydney Ferries services should be removed from MyMulti1 tickets

20 IPART recommends that, for travel on Sydney Ferries services, using either a MyMulti2 ticket or a MyMulti3 ticket is required.

81 See Action for Public Transport submission to Review of Fares for Sydney Ferries Services from January 2013, April 2012, p 3.

82 See Council of Social Service of New South Wales submission to Review of Fares for Sydney Ferries Services from January 2013, April 2012, p 4.

The current MyFerry TravelTen tickets provide a 20% discount compared to the price of purchasing 10 single tickets. The MyMulti1 weekly ticket (used for around 25% of ferry boardings) provides an even larger discount for regular ferry travel (see Table 9.1 below).[83]

The table shows that if 10 trips are taken between Circular Quay and Manly (ie, across the MyFerry2 zone) in a week, it costs $70 using single tickets, $56 using a TravelTen and $43 using a weekly MyMulti1. The TravelTen ticket represents a discount of 20% compared to the single ticket fare, while the MyMulti1 weekly ticket offers a discount of 39%. If the same passenger also takes 10 trips within the MyBus1 zone in that week (in addition to the 10 MyFerry2 trips), the discount offered by the MyMulti weekly ticket (compared to single fares) increases to 53%.

Table 9.1 Cost of sample weekly journeys (2012 fares)

Sample weekly journeys (10 trips per mode)					
Ferry + Bus + Train	Inner harbour	Outer harbour	Inner harbour MyBus1	Outer harbour MyBus1	Outer harbour MyTrain2
Cost using:					
Single fares	$56	$70	$77	$91	$112
TravelTens[a]	$44.80	$56	$61.60	$72.80	$89
MyMulti1	$43	$43	$43	$43	$43
MyMulti 2	$51	$51	$51	$51	$51
MyMulit3	$60	$60	$60	$60	$60
Discount compared to **single fares**					
TravelTens	20%	20%	20%	20%	20%
MyMulti1	23%	39%	44%	53%	62%
MyMulti2	9%	27%	34%	44%	54%
MyMulti3	-7%	14%	22%	34%	46%

a In the case of trains this cost would be the weekly ticket fare.

Source: http://www.131500.com.au/tickets/fares accessed 17 August 2012.

For this fare review, we decided to use 'MyFerry equivalent' pricing. This means we calculate the fare change needed so that the Government, and not passengers, funds the extra discount offered for regular ferry travel on the multi-mode MyMulti tickets.[84]

Consistent with this approach, we have recommended to Government that travel on Sydney Ferries services be excluded from MyMulti1 tickets, and available only for MyMulti2 and MyMulti3 tickets.

[83] See http://www.131500.com.au/tickets/fares (accessed 6 September 2012). IPART calculations.

[84] The additional Government subsidy for ferry trips made on periodical MyMulti tickets will be approximately $5.5 million in 2013 (IPART calculation).

We recognise that multi-mode tickets provide benefits to those passengers that use several transport modes to complete a journey, including the convenience of not having to buy individual, mode-specific tickets. However, we do not consider that the additional discount available to regular ferry passengers by using MyMulti1 tickets (compared to TravelTen tickets) is justified. We therefore consider that either a MyMulti2 or a MyMulti3 ticket should be required for travel on ferries.

If the Government accepts this recommendation then:

- Passengers that only use Sydney Ferries services will still receive a discount for frequent travel (as it will be cheaper for most of these passengers to use a MyFerryTen ticket rather than single tickets).[85] These passengers will also contribute their fair share of funding for the services and this would not require an additional Government subsidy.
- Passengers that use more than one mode to complete their journey will have their costs capped at either the MyMulti2 or MyMulti3 price. The table above shows that both these tickets currently provide a larger discount compared to purchasing discounted weekly or TravelTen tickets for each mode individually (particularly where rail is required).

[85] Although we note that, assuming the relativities between MyFerryTen fares and MyMulti fares remain constant, it will still be cheaper for 1) MyFerry2 users to buy monthly, quarterly or annual MyMulti2 tickets than to purchase the equivalent number of MyFerryTen tickets and 2) MyFerry1 users to buy quarterly or annual MyMulti2 tickets than to purchase the equivalent number of MyFerryTen tickets.

10 Implications of fare changes for consumers, Government and the environment

As required by Section 16AE of the *Passenger Transport Act 1990,* before finalising our draft determination we considered its implications for the affordability of fares and other social impacts, for the Government and for the environment.

In relation to the affordability of fares, we considered why people use Sydney Ferries services, the employment and income profile of Sydney Ferries passengers, and the availability of concession and off-peak fares. We concluded that average annual fare increases of 2.6% above inflation per year under the draft determination are not likely to significantly reduce the affordability of fares or have other unreasonable social impacts.

In relation to the Government, we assessed how the draft determination is likely to affect the proportion of the efficient costs of providing Sydney Ferries services over the core network the Government recovers through fare revenue. Over the determination period, we expect the level of cost recovery of these costs through the fares paid by passengers to increase from 42% to 53%. With Government funding of the costs of concessions and the additional discount given by MyMulti periodical tickets, the level of cost recovery will be 97%.

In relation to the environment, we took account of the feasible pricing policy options to protect the environment. In our view, the potential for pricing policies such as the structure and level of ferry fares to help protect the environment is limited. In addition, the relatively inelastic demand for ferry services means that different fare policies are unlikely to create significantly different environmental outcomes. Therefore, we concluded that our draft decisions are unlikely to lead to a significant change (either positive or negative) in the use of ferries. In considering the external benefits of Sydney Ferries services and the optimal level of fares for these services we also considered the environmental impacts associated with ferry travel.

10.1 Implications for the affordability of fares and social impacts

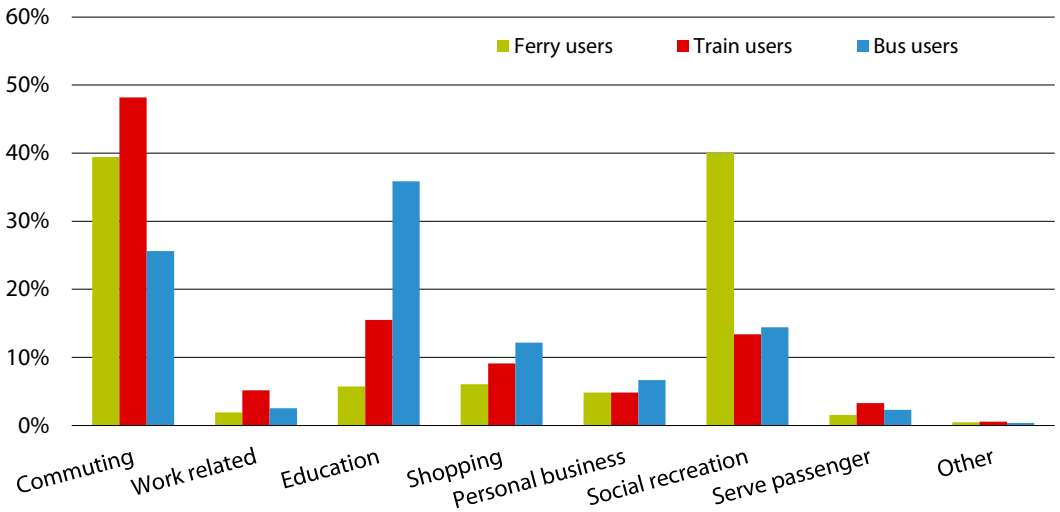
After deciding on the fare increases required (see Chapter 8), we checked to ensure the decision was reasonable and balanced in terms of its likely effect on the affordability and patronage of Sydney Ferries services. To do this, we considered why people use Sydney Ferries services, the employment and income profile of Sydney Ferries passengers, and the availability of concession and off-peak fares. We concluded that average annual fare increases of 2.6% above inflation per year under

the draft determination are not likely to significantly reduce the affordability of fares or have any impact on patronage.

10.1.1 Trip purpose of passengers using Sydney Ferries services

Bureau of Transport Statistics (BTS) surveys indicate that on an average weekday the 2 most common reasons for travelling by ferry were commuting to and from work (39%) and social or recreational purposes (40%) (see Figure 10.1 below). This is consistent with SRG's report on ferry externalities,[86] which estimates that tourism and commuter-based demand for ferry services are approximately equal. A significantly higher proportion of ferry trips are for social and recreational purposes than bus trips (14%) and train trips (13%).

Figure 10.1 Purpose of ferry trips on an average weekday compared to bus and rail, 2010/11



Note: Includes residents of Sydney Greater Metropolitan area and excludes journeys by Sydney non-residents.

Data source: Bureau of Transport Statistics, household travel survey (based on 5 waves of data from 2006/07 and 2010/11).

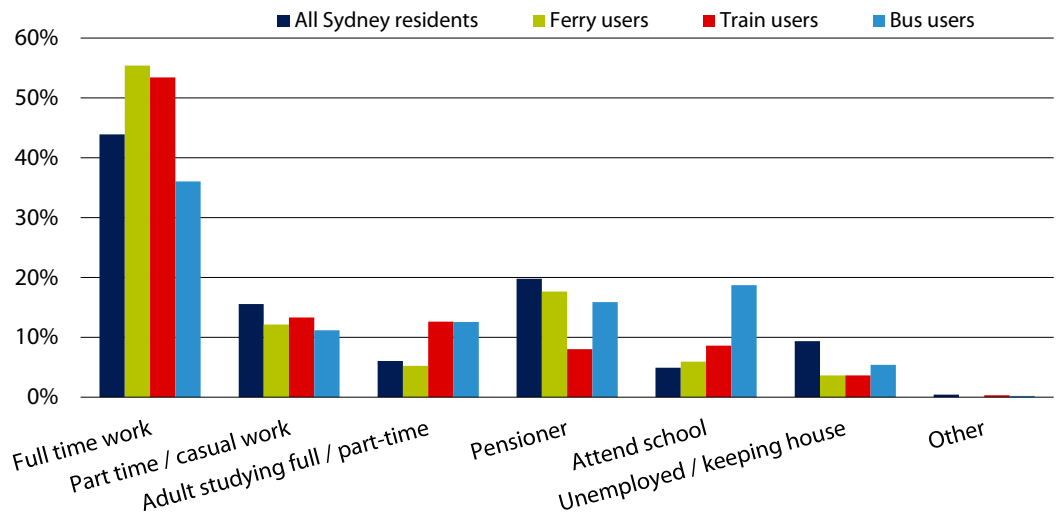
Most of the available information about the characteristics of ferry passengers comes from the BTS Household Travel Survey. This survey is of Sydney residents and does not include visitors to Sydney, so it is likely to underestimate the extent of ferry travel for tourism (social and recreational) purposes.

86 Sapere Research Group, *External benefits of Sydney Ferry services – Final report to IPART*, August 2012 piii.

10.1.2 Employment and income profile of Sydney Ferries passengers

The results of the BTS Household Travel Survey indicate that on weekdays, 55% of Sydney Ferries passengers resident in the greater Sydney metropolitan area are full-time workers, and 12% are part-time or casual workers. A smaller proportion of passengers are pensioners and school children (18% and 6% respectively). (See Figure 10.2 below.)

Figure 10.2 Labour force status of Sydney Ferries passengers, 2010/11

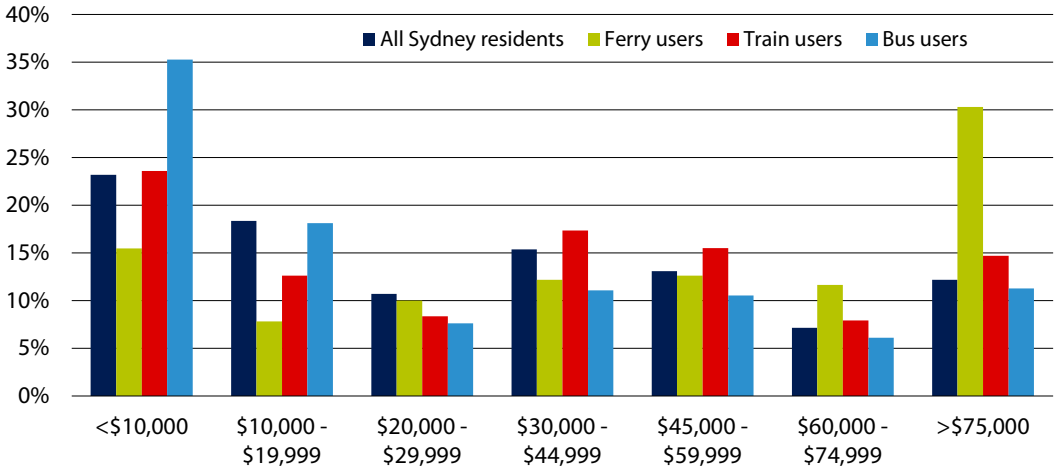


Note: Includes residents of Sydney Greater Metropolitan area and excludes journeys by Sydney non-residents .and residents under 15 years.

Data source: BTS, Household Travel Survey 2010/11

The BTS' 2009/10 Household Travel Survey indicates that 30% of Sydney Ferries passengers belong to households in the top income bracket (over $75,000) compared to 12% of the Sydney population as whole. Conversely, 16% of ferry users were in the lowest income group compared to 23% of the resident Sydney population. While a significant proportion of Sydney Ferries passengers have higher annual incomes than the Sydney population as a whole, we note that not all ferry passengers have high incomes (see Figure 10.3 below).

Figure 10.3 Personal income of ferry users (annual), 2010/11



Note: Includes residents of Sydney Greater Metropolitan area and excludes journeys by Sydney non-residents .and residents under 15 years. Income is adjusted to 2006 dollars.

Source: Bureau of Transport Statistics, Household travel survey (5 waves of data 2006/07 to 2011/12).

10.1.3 Availability of concessional tickets

We consider that the social impact of any fare increases should be considered in the context of the availability of concession fares and other social policies (for example, the Pensioner Excursion Ticket and School Student Transport Scheme) which may mitigate the impact of fare increases on particular groups. The Government is responsible for determining social policy relevant to ferry travel and for determining the eligibility criteria for concession fares.

The NSW Government currently funds a concession program for public transport services. There are a number of concession tickets available for ferry travel including:

- free travel for school students under the School Students Travel Scheme (STSS)
- concession rates for pensioners of $2.50 to travel throughout the greater metropolitan area on any mode of transport for a single day (Pensioner Excursion Ticket, PET)
- free travel for children aged 3 or under
- half-price travel for students and job seekers[87]
- free travel for people with certain disabilities
- half-price travel for the first child aged 4 to 15 and free travel for additional children, under the Family Fare Deal

87 Half price travel only for certain ticket types.

- $2.50 Family Funday Sunday tickets available to families travelling together with at least 1 child.[88]

About 30% of Sydney Ferries passengers travel on some form of concession ticket.[89] Access to concession tickets depends on the particular circumstances of the traveller and the level of concession varies across these groups. Our fare determinations impact on some of these concession fares, as these fares are generally linked to the prices we set. However, we consider that the impact of the draft determination on these fares, and the passengers that have access to them, is reasonable. In our view, the current concession program will mitigate the impact of the proposed fare increases for lower income passengers.

10.2 Implications for the NSW Government

As Chapter 2 discussed, the Government pays the operator of Sydney Ferries to provide the contracted ferry services. The fare revenue collected by the operator is effectively returned to the Government to recover the costs of the contract payments. But it does not recover all these costs. The unrecovered portion represents the Government's (and hence taxpayers) *actual* subsidy of ferry fares.

Under our approach to this determination, the level of government subsidy we have assumed reflects our view on the value of external benefits to the broader community (and not just passengers) that are provided by Sydney Ferries services. The majority of passengers – those travelling over the core network, who account for 90% of all passenger trips[90] – will pay fares that reflect the efficient costs and external benefits of the ferry services they use.

In addition, the Government has a number of social policies that involve the provision of free or reduced fares to some passengers. As set out above these policies include providing free ferry travel for school students (under the School Student Transport Scheme), subsidising Family Funday Sunday tickets and providing an additional discount to frequent ferry users through the multi-mode MyMulti tickets.

We consider that the cost of these social policies should be paid for by taxpayers rather than passengers. This is in addition to the subsidy that is justified by the external benefits.

88 See http://www.131500.com.au/tickets/concessions (accessed 2 September 2012).
89 IPART calculation.
90 See Chapter 2.

We considered how the draft decision would affect the NSW Government and in particular the implications for the recovery of the efficient costs of providing Sydney Ferries services and the level of Government funding for related social policies. Based on our draft decision to increase fares by 11% in real terms over the next 4 years, and our assumption that patronage on Sydney Ferries services will grow at an average of 1.5% per year, we expect farebox revenue[91] as a proportion of total efficient costs to increase from 42% to 53% (Table 10.1). After 7 years, farebox revenue should recover 63% of efficient costs. However, we note that without the Government's contribution for concessions and other subsidies (which equals around 34% of efficient costs in 2019), passengers would be expected to fund almost all of the efficient costs of service provision.

Table 10.1 Expected recovery of efficient costs to 2019 ($'000, real $2012, core network, calendar year)

	2012	2013	2014	2015	2016	2017	2018	2019
Efficient costs	98,475	101,404	98,220	92,794	91,983	90,569	89,059	86,314
Less								
Other revenue and	417	417	417	417	417	417	417	417
External benefit	1,866	1,913	1,960	2,009	2,059	2,110	2,163	2,217
Equals								
Amount to be recovered through fares	96,192	99,074	95,843	90,368	89,507	88,041	86,479	83,680
Made up of								
Government share								
-Concessions/ PETs	16,159	16,904	17,702	18,532	19,396	20,295	21,231	22,206
-MyMulti discount	5,298	5,489	5,719	5,959	6,209	6,469	6,740	7,022
Target passenger share	74,735	76,680	72,422	65,877	63,902	61,277	58,508	54,452
Actual passenger fares	41,328	43,021	44,734	46,520	48,381	50,322	52,344	54,452
% of efficient costs	42%	42%	46%	50%	53%	56%	59%	63%

Source: IPART calculations.

91 That is, the contribution passengers make through fares.

10.3 Implications of the environment

Section 16AE of the *Passenger Transport Act 1990* requires that we consider ecologically sustainable development in determining fares for ferry services. In particular, Clause 5 (d) provides that in making a determination, we must consider, among other things:

> …the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991)* by appropriate pricing policies that take account of all of the feasible options to protect the environment.

Section 6 of the *Protection of the Environment Act 1991* (PEA Act) defines ecologically sustainable development in terms of process rather than outcomes, stating that it requires 'the effective integration of economic and environmental considerations in decision-making processes'.[92] It also sets out principles and programs that are likely to achieve economically sustainable development. One of these is particularly relevant to our determinations – namely improved valuation, pricing and incentive mechanisms so that environmental factors are included in the value of assets and services.

In our view, the potential for pricing policies such as the structure and level of ferry fares to help protect the environment is limited. There is no evidence that any alternative fare structure better encourages ferry usage than others. In addition, the relatively inelastic demand for ferry services means that different fare policies are unlikely to create significantly different environmental outcomes. We consider that our decision to use a price cap to determine maximum fares and the level at which we've set the cap are unlikely to lead to a significant change (either positive or negative) in the use of Sydney Ferries services.

We integrated economic and environmental considerations by adopting an approach for setting fares that included valuing the external benefits of Sydney Ferries services (which include environmental benefits). We then used this value to guide our decision on how much of the efficient costs of these services should be funded by the Government. This placed economic and environmental impacts on a comparable footing, allowing for integrated decision making.

As Chapter 7 discussed, we estimated the value of the external benefits that will be generated by the provision and use of Sydney Ferries services over the determination period. This involved quantifying the external costs avoided when people travel by ferry instead of car.

The estimated value of the external benefits was an important factor in our decision on how much of the efficient costs passengers should be required to fund through ferry fares (see Chapter 8) and consequently the level of fares.

92 *Protection of the Environment Administration Act 1991.*

The PEA Act notes that ecologically sustainable development can be achieved through improved valuation, pricing and incentive mechanisms for incorporating environmental factors into valuation of assets and services. Our approach explicitly valued environmental factors such as reduced greenhouse gas emissions and air pollution and incorporated these values into the valuation of the external benefits Sydney Ferries services.

Appendices

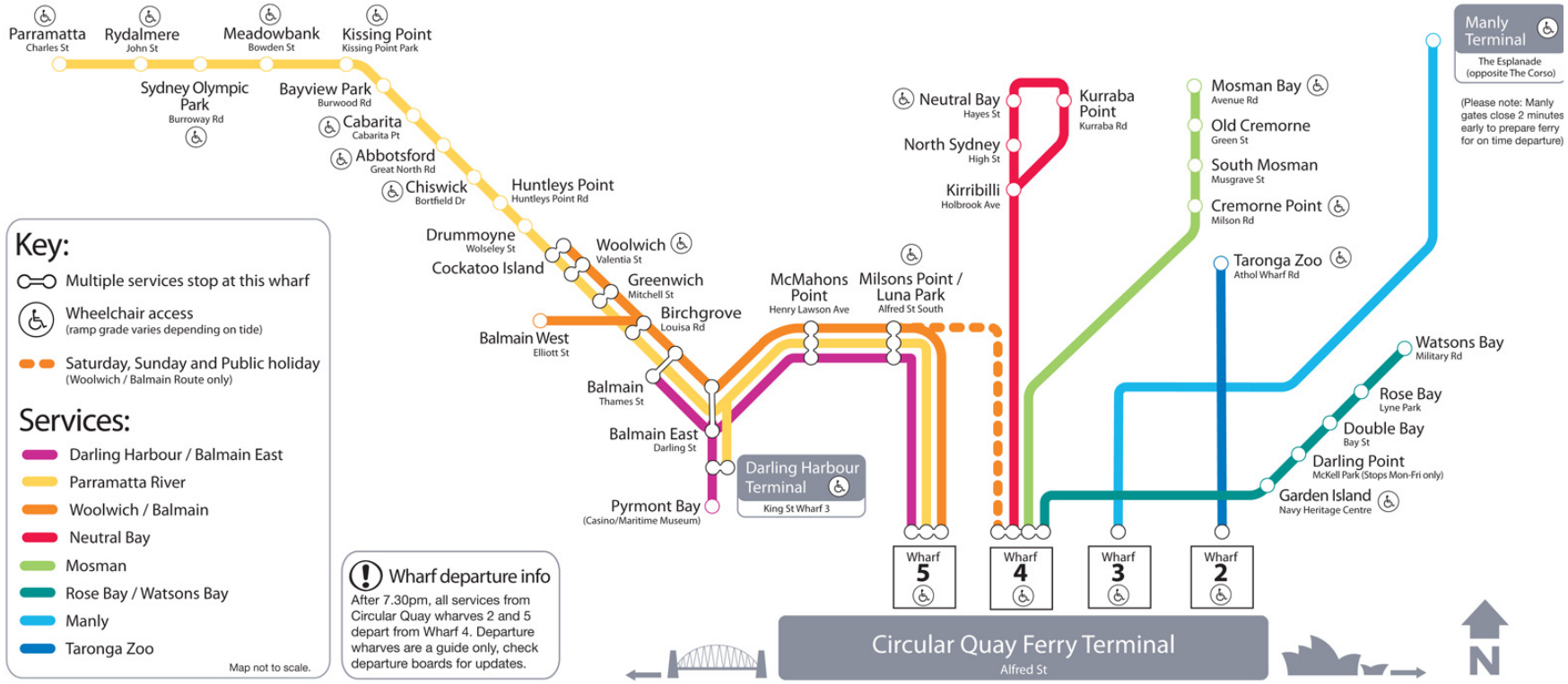
A Sydney Ferries operations and route map

Table A.1 Overview of Sydney Ferries operations

	2010/11
Fleet	28 vessels (6 classes)
Services	168,532 scheduled services 40 destinations 8 routes
Passengers	14.502,758

Source: Sydney Ferries *Annual Report 2010/11*.

Figure A.1 Route map of Sydney Ferries services



Source: http://www.131500.com.au/upload/images/sydney-ferry/Network%20Map_17Dec2011_FINAL_lg.jpg (accessed 6 September 2012).

B Matters to be considered

Section 16AE of the *Passenger Transport Act 1990* states that:

1. This section applies to any ferry service contract that authorises or otherwise provides for the fares charged by the contract holder to be determined in accordance with this section.
   Note: If its ferry service contract does not provide for this matter, Sydney Ferries may make an order under section 85 of the *Transport Administration Act 1988* determining fares.
2. The Independent Pricing and Regulatory Tribunal (the "Tribunal") is to conduct investigations and make reports to the Minister on the following matters:
   a) the determination of appropriate maximum fares for regular ferry services supplied under contracts to which this section applies,
   b) a periodic review of fare pricing policies in respect of such services.
3. In respect of an investigation or report under this section, the Minister may require the Tribunal to consider specified matters when making its investigations.
4. Division 7 of Part 3 of the *Independent Pricing and Regulatory Tribunal Act 1992* is taken to apply to an investigation under this section in the same way as it applies to an investigation under Part 3 of that Act.
5. In making a determination under this section, the Tribunal is to consider the following matters:
   a) the cost of providing the services concerned,
   b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service,
   c) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers,
   d) the need to maintain ecologically sustainable development (within the meaning of section 6 of the Protection of the Environment Administration Act 1991) by appropriate pricing policies that take account of all of the feasible options to protect the environment,
   e) the social impact of the determination,
   f) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise) and any suggested or actual changes to those standards,
   g) contractual arrangements prevailing in the industry,
   h) such other matters as the Tribunal considers relevant.

6. A ferry service contract to which this section applies is taken to include a term to the effect that the contract holder must not charge a passenger of the service a fare that exceeds the maximum fare determined under this section from time to time for the provision of such a service to a passenger of that kind.
7. Any contravention of the term implied in a ferry service contract by subsection (6) may be remedied at law or in equity as though the term were an essential term to which the parties had by contract agreed.
8. A ferry service contract to which this section applies may make provision for maximum fares for the provision of regular ferry services concerned to passengers pending the first determination of maximum fares under this section.
9. Any provision of the kind referred to in subsection (8) ceases to have effect as part of the ferry service contract on and from the first determination of maximum fares under this section that applies to the provision of the regular ferry services to which the contract relates.

Protection of the Environment Administration Act 1991 – section 6(2)

Section 6 of the *Protection of the Environment Administration Act (1991)* states that:

2. For the purposes of subsection (1) (a), ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:
   a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

      In the application of the precautionary principle, public and private decisions should be guided by:

      i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

      ii) an assessment of the risk-weighted consequences of various options,

   b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

   c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

   d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:

      i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

C Valuing the Regulatory Asset Base (RAB)

One of the key inputs into our decisions on the allowances for a return on assets and depreciation is the value of the asset base used to provide ferry services. Calculating the value of assets to be included in the asset base involves:

1. Establishing what assets should be included in the asset base.
2. Establishing the value of the assets at the start of the determination period (the opening value of the assets) or initial capital base (ICB).
3. Establishing the methodology for rolling forward the value of the assets to the end of the determination period, to reflect changes in its value over this period.
4. Determining the level of forecast capital expenditure to be incorporated into the value of the assets each year when rolling forward this value.

For this review, we propose to determine fares based on the service categories of Inner Harbour, Manly and River services. As such, we need to determine the value of the ICB for each of these service categories and roll in forecast capital expenditure accordingly.

C.1 What assets should be included in the asset base?

Sydney Ferries services rely on the use of assets owned by Sydney Ferries and other sectors of government. Assets used to provide ferry services that are owned by Sydney Ferries include:

- ferries
- plant and equipment
- buildings and improvements
- land
- other non-current assets including environmental, general IT and other minor projects
- wharf improvements.

Ferry services also rely on the use of wharves owned and maintained by Roads and Maritime Services (RMS). RMS has a Wharf Access Deed with Transport for NSW that sets out the terms and conditions of access to wharves to provide commuter ferry services. This includes payment of an access charge for exclusive use of wharves at Circular Quay and Manly.

Passengers also require a ticket to travel on a Sydney Ferries service. Ticketing assets, including machines and offices, are primarily owned by Transport for NSW and stationed on wharves. In addition, Sydney Ferries has installed some of its own ticketing assets on wharves, which are included as wharf improvements.

A key question is whether Sydney Ferries' capital base should incorporate all capital used to provide ferry services, including some or all of that owned by RMS and Transport for NSW, or only that which is owned by Sydney Ferries. This follows our review of fares for metropolitan and outer metropolitan bus services in 2009, where we included an allowance for expenditure incurred by the former Roads and Traffic Authority (now RMS) in providing strategic bus corridor infrastructure.

To the extent that capital expenditure on wharves and ticketing assets contribute to the benefits provided by Sydney Ferries services and that costs are not recovered through other means, it is appropriate to include this capital in Sydney Ferries' asset base. The reasons for this are that:

- External benefits generated by the service arise because of costs incurred in providing the service. If some costs are excluded, then the value of external benefits may be overstated.
- It may be inconsistent to treat costs incurred to provide ferry services differently depending on the party that incurs those costs. This may provide perverse incentives for cost shifting between entities.

Box C.1 Inclusion of RTA expenditure in metropolitan and outer metropolitan bus services fare review 2009

In our Final Report for the review of fares for metropolitan and outer metropolitan bus services from January 2010, we considered that it was appropriate to include an allowance for expenditure incurred by the RTA that could be clearly attributed to providing bus services.

Half of the RTA's forecast capital expenditure on the Inner West Busway was included from 2010/11. Another $25 million in other bus priority measures predominately designed to improve bus services was also included. No allowance for local council capital expenditure related to bus stops and interchanges was included on the basis that it was fully recovered through other means.

Previous expenditure on RTA assets was not included in the asset base because we decided that past expenditure was not made with a view to being recovered in fares. As such, the value of the nominal 'ICB' for RTA assets was set at zero as of 1 July 2009.

Source: IPART, *Review of fares for metropolitan and outer metropolitan bus services from January 2010 - Final Report*, December 2009, pp 55-56.

C.1.1 Roads and Maritime Services commuter wharf capital expenditure

RMS is responsible for the upgrade and maintenance of around 240 public ferry wharves and associated services across the state. These activities benefit a wide range of customers including private recreational and commercial vessels and pedestrians.

RMS funds these costs from commercial revenue receipts from a variety of sources including recreational boating (registrations, license fees, mooring fees), commercial vessels (survey fees, registrations), shipping (wharfage, channel fees), property (rents and leases) and other sources.

In general, revenue from boating, commercial vessels, shipping, property and other commercial sources fully covers all RMS' operational activities, as well as providing for the replacement of wharves and jetties, navigation aids, land and buildings, plant and equipment, computers, vehicles and office fittings and roads. However, RMS receives government grants to fund specific capital upgrade projects as per government priorities.

The Sydney Commuter Wharf Upgrade Program

In 2006/07, the former NSW Maritime (now RMS) took control of all Sydney Harbour commuter ferry wharves. RMS began a program of wharf maintenance and upgrades for the wharves being transferred, which was funded by government grants. RMS also undertook an extensive upgrade of the Manly Wharf commuter terminal at a cost of $15 million, which was completed in 2007.

In 2008, the NSW Government formally commenced the Commuter Wharf Upgrade Program to improve facilities, safety and accessibility of ferry services for passengers at 12 selected commuter wharves in Sydney Harbour.[93]

The program objectives are to:

- repair, renew and upgrade the wharves in order to extend the life of the structures and allow for cost effective ongoing maintenance
- upgrade passenger facilities to meet the increasing needs and expectations of commuters, including to:
  - increase the speed at which passengers embark and disembark
  - improve security lighting and emergency help points
  - provide more sheltered space and seating
  - provide safety gates and glass screens
- significantly improve disabled access by incorporating current disabled access standards into wharf designs
- create a functional and distinctive design to unify and identify commuter wharves.

In the 2011/12 budget estimates, the NSW Government committed $97.2 million for significant upgrades to commuter wharves by the end of 2014/15, including works already undertaken. An upgrade of Milsons Point wharf has been completed. According to the RMS website the following wharves are scheduled to be upgraded in the coming 12 months: Neutral Bay (Hayes Street), Rose Bay (Lyne Park), Balmain (Thames Street) and Huntley Point (Huntley Point Road). Other ferry wharves to be upgraded as part of stage one of the Program are: Balmain East (Darling Street), Birchgrove (Louisa Road / Longnose), Cremorne Point (Milson Road), Double Bay (Bay Street), McMahons Point (Henry Lawson Avenue), Mosman Bay (Avenue Road) and Watsons Bay (Military Road). The order of upgrade of these sites is yet to be determined.

Sydney Ferries Wharf Access Fees

Sydney Ferries has a Wharf Access Deed with Transport for NSW, which sets out the terms and conditions of its access to commuter wharves managed by RMS. Under the Deed, wharves are categorised as 'exclusive access', 'priority access' and 'other' commuter wharves.

Sydney Ferries pays a wharf access fee for the wharves for which it has exclusive access rights. These wharves are Circular Quay and Manly (West). Sydney Ferries does not pay a wharf access fee for 'priority access' wharves or 'other' commuter wharves.

---

93 See http://www.rta.nsw.gov.au/maritimeprojects/projects/wharf_upgrades/balmain/documents/ferry_wharves_upgrade_program_display.pdf

The wharves earmarked for upgrading under the Commuter Wharf Upgrade Program are priority access wharves for which Sydney Ferries pays no wharf access fees.

IPART's consideration

In general, we consider that all efficient capital expenditure that is used to provide Sydney Ferries services should be included in determining passenger fares, regardless of whether it is spent by Sydney Ferries or another government entity. However, where that capital expenditure is funded through other means or where Sydney Ferries already pays compensation through its operating expenditure, we do not propose to include any allowance in the RAB.

Since RMS funds general maintenance and minor upgrades of commuter wharves through commercial revenue receipts, we do not propose to recover any of these costs through Sydney Ferries fares.

We also do not propose to include any allowance for previous upgrade works undertaken on the Manly commuter wharf, because Sydney Ferries pays a wharf access fee to the NSW Government for exclusive access to Manly wharf.

However, we consider that Commuter Wharf Access Program expenditure should be taken into account in determining Sydney Ferries fares because:

- the benefits of the program accrue primarily to Sydney Ferries passengers
- the program expenditure is not recovered through other sources of commercial revenue received by RMS
- Sydney Ferries makes no financial contribution towards the capital costs of upgrading these wharves through wharf access fees or other means.

The amount that should be included is a matter of judgment. Including the total $97.2 million cost of the program in Sydney Ferries' asset base is the simplest and most transparent option; however, we have no certainty that all of this expenditure is efficient as it has not been subject to LEK's efficiency review. Around $38 million has been spent on the program to date, but the outcomes of this expenditure are not clearly identifiable from RMS' financial records. In addition, while RMS has a procurement framework in place to ensure that all contracts for more than $250,000 are awarded through an open tender process, we have no certainty that the scope of works are efficient and have been subject to a thorough cost benefit analysis.

The wharves that are earmarked for upgrade under the program are designated as priority access wharves under the Wharf Access Deed between Sydney Ferries and RMS. Sydney Ferries does not have exclusive use of these wharves. Outside of Sydney Ferries' designated priority time allotments, commercial operators and other users also have access to the wharves.

We have included in Sydney Ferries' RAB the expenditure under the program that has been identified as being made to upgrade specific wharves used by Sydney Ferries services. This expenditure includes the Milson's Point wharf upgrade ($7.5 million in 2010/11) as well as 59.2 million in future expenditure identified as being for the upgrade of 11 other wharves.

We have included 75% of this expenditure on the basis that Sydney Ferries does not have exclusive access to these wharves, so commercial operators and other users will also benefit from these upgrades. In addition, one of the aims of the Commuter Wharf Upgrade Program is to increase the passenger accessibility of the wharves and thus encourage more ferry travel. We consider the costs associated with increasing accessibility should be funded by taxpayers through Government subsidy, rather than by Sydney Ferries passengers. This equates to 50 million in total - $5.6 million of RMS assets will be included in the ICB and $44.4 million in capital expenditure will be rolled into the RAB over the next 4 years.

C.1.2 Ticketing assets

Passengers require a ticket to travel on a Sydney Ferries service. Ticketing assets, including machines and offices, are provided on commuter wharves and primarily owned by Transport for NSW. Where ticketing assets have been installed by Sydney Ferries, these are accounted for in the asset base as wharf improvements.

Sydney Ferries pays rent for the use of office space and equipment on wharves. This includes the use of ticketing assets owned by Transport for NSW and is included in Sydney Ferries' operating expenditure. As such, we consider that no value of ticketing assets owned by Transport for NSW should be included in Sydney Ferries' ICB as Sydney Ferries already pays compensation for the use of these assets.

C.2 Establishing the initial capital base (ICB)

C.2.1 Methodology for valuing the ICB

A range of approaches could be used to value the assets that make up the ICB for an existing business, including estimating:

- the opportunity cost (or scrap value) of the assets
- the historical or actual cost of the assets
- the book value of the assets
- the deprival value of the assets, which is the lower of the optimised depreciated replacement cost (ODRC) or economic value.

The value of the ICB could vary widely, depending on which of these approaches is used. The lower band of the potential range for this value is zero. This would occur if all past capital expenditure was considered to be neither efficient nor prudent, and the existing assets were considered to be 'sunk assets' with no scrap value or opportunity cost. The upper bound of the potential range is likely to be equal to the ODRC element of the deprival value of the assets.

Opportunity cost of assets

Opportunity cost values assets in their next best alternative use. Valuing assets at opportunity cost may underestimate the true value of the asset.

The largest component of Sydney Ferries' asset base is the actual ferries, which make up around half of the value of all assets. Commuter ferries are highly specialised and their value in their current use is higher than the costs that could be recovered by selling them. Valuation also depends on the existence and strength of a second hand market.

Historical or actual cost of assets

Assets are valued at their historical or actual cost when first acquired, usually with an allowance made for depreciation over time. Valuation based on historical or actual cost is a straightforward way of valuing assets. However, it may not take into account the opportunity cost of the use of an asset for another purpose or give an accurate measure of the current value of an asset. It may also pose a problem where historical expenditure was not considered prudent.

Book value of assets

The book value is simply the value of an asset according to its balance sheet account balance. It is generally based on the original cost of the asset less any depreciation, amortization or impairment costs.

Valuing the asset base at book value would be consistent with the approach we took in the review of fares for metropolitan and outer metropolitan buses. In that review, we calculated a proxy RAB based on the book value of all assets except land in the 4 largest contract regions. The book value of these assets was based on the depreciated historical cost of assets. Land was valued at its market value, given its existing use.

Deprival value of assets

The deprival value of assets is the lower of the optimised depreciated replacement cost or economic value. Economic value is typically measured as the discounted value of the cash flows generated by the assets over a selected period of time.

The benefits of this approach are that it:

- is commonly used for valuing private and public companies
- is transparent, because it uses publicly available data and growth forecasts for revenue and expenses
- provides a value greater than zero
- is useful if past capital expenditure is not deemed to have been prudent or efficient.

The CityRail fare review calculated a RAB based on the deprival value of assets using discounted cash flows. However, economic value is a rather circular way of determining fares. The economic value used to set the ICB reflects current revenue, but is then used as a basis for determining future revenue and prices.

C.2.2 IPART's consideration

For the purpose of determining ferry passenger fares, we consider that the value of the ICB should reflect the actual value of the assets in their current use as closely as possible. As such, we have established an ICB equal to the book value of Sydney Ferries' assets as of 1 July 2011. This is consistent with the approach taken in our review of fares for metropolitan and outer metropolitan buses from January 2010.

Sydney Ferries' book value of most classes of assets is based on historical cost, taking into account depreciation. Where an asset is acquired at no cost, it is valued at 'fair value', which is determined having regard to the highest and best use of the asset on the basis of current market selling prices for the same or similar assets. Where market selling price is not available, the asset's fair value is measured at depreciated replacement cost. Non-specialised assets with short useful lives are measured at depreciated historical cost.

Each class of physical non-current asset is re-valued at least every 5 years or with sufficient regularity to ensure that the carrying amount of each asset in the class does not differ materially from its fair value at reporting date. The last revaluation for ferries was completed on 30 June 2010. Freehold land, buildings and wharf improvements were valued on 30 June 2009 based on an independent assessment.[94] For this reason, the overall book value of Sydney Ferries' assets is likely to be close to its ODRC.

The book value of Sydney Ferries' assets as at 1 July 2011 is $101.6 million. The largest component of the asset base is ferries, which make up around half of the value of Sydney Ferries' asset base or $51.1 million. The value of RMS' assets as at 1 July 2011 is $5.6 million (based on the commissioned value of the Milson's Point wharf upgrade). The proposed ICB for Sydney Ferries is summarised in Table C.1 below.

[94] See Sydney Ferries, *Annual Report 2010/11*, pp 46, 56.

Table C.1 Valuation of ICB for Sydney Ferries and RMS ($2010/11m)

Category	Book value as at 1 July 2011 ($2010/11m)
Ferries	$51.1
Land	$5.7
Buildings	$6.6
Plant and equipment	$7.2
Other non-current assets	$13.4
Wharf improvements	$17.6
Total	$101.6
RMS - Commuter Wharf Upgrade Program	$5.6

Source: Sydney Ferries *Annual Report 2010/11*, page 56; NSW Government Budget Papers.

C.3 Allocation of the ICB between services

Consistent with our treatment of costs, we propose splitting Sydney Ferries' ICB between Inner Harbour, Manly and Parramatta River services. We have allocated vessels based on the routes that they service. Other ICB values have been allocated to routes in line with the Sydney Ferries route costing model.

For the RMS expenditure, of the 12 wharves being upgraded, 6 service the inner harbour routes only, 1 services the River only and the remaining 6 service both. [95] Hence, the RMS capital has been allocated on the basis of the number of times in the weekly timetable that the particular service stops at the wharf being upgraded.

The resulting ICB for each of the services is illustrated in Table C.2 below.

Table C.2 ICB by service category ($2010/11m)

ICB category	Inner Harbour ($2010/11m)	Manly ($2010/11m)	River service ($2010/11m)
Ferries	$16.1	$26.3	$8.8
Land	$2.3	$2.0	$1.4
Buildings and improvements	$2.6	$2.3	$1.6
Plant and equipment	$2.9	$2.5	$1.8
Other non-current assets	$5.3	$4.7	$3.3
Wharf improvements	$7.1	$6.2	$4.4
Total	**$36.3**	**$44.0**	**$21.4**
RMS Commuter Wharf Upgrade Program	$4.9	-	$0.7

Source: IPART calculations.

95 See http://www.rta.nsw.gov.au/maritimeprojects/projects/wharf_upgrades/scheduled_upgrades.html and http://www.131500.com.au/upload/images/sydney-ferry/Network%20Map_17Dec2011_FINAL_lg.jpg (accessed 6 September 2012).

C.3.1 Mechanism for rolling forward the asset base each year

The value of the RAB can change if:

- new assets are acquired during the period
- efficient and prudent capital expenditure is incurred to improve or extend the life of existing assets, or
- existing assets are sold or become redundant.

Our draft decision is to determine the ICB and roll it forward each year as follows:

Opening RAB + efficient capital expenditure - depreciation - disposals + indexation = Closing RAB

Our draft decision on the methodology we will use for rolling forward the value of the RAB is consistent with the approach we use in regulating prices in other industries, including fares for CityRail and metropolitan and outer metropolitan bus services. In general, we would expect to use the same methodology in future reviews.

In our view, adopting a clear and consistent methodology (or set of rules) for rolling forward the value of the RAB simplifies and improves the efficiency of the regulatory regime. Unless extenuating circumstances arise, we do not propose to reconsider the opening value of the RAB for providing Sydney Ferries services once we have made our final decision on this value, except to apply the methodology for rolling the value forward outlined above.

C.3.2 Capital expenditure, disposals and indexation

Capital expenditure that is deemed to be efficient and prudent will be incorporated into the RAB in the year that it is incurred. This capital expenditure will be 'locked into' the RAB for the next determination period if IPART deems it has been prudent as part of the next fare review. Assets will be removed from the RAB only if those assets are no longer used in providing Sydney Ferries services.

The movement in the CPI will be used to adjust the RAB for general economy-wide price increases, consistent with previous IPART decisions.

C.3.3 Calculating depreciation

The value of regulatory depreciation of assets will be deducted from the RAB each year. This allows the net cost of assets to be spread over the estimated life of the assets.

In order to calculate depreciation, we need to adopt a method of depreciation and determine the remaining lives of the ICB assets and expected lives of new assets for each asset category. Historically, we have adopted a straight-line approach to calculating depreciation. This method takes an equal amount from the asset value in each year of the assets' economic life so that the real written down value describes a straight line over the life of the asset. We propose to adopt the same method for valuing depreciation of Sydney Ferries assets.

As noted previously, the ferry vessels constitute the largest proportion of Sydney Ferries' asset base. We have been advised that a review of the condition of all ferries in service found that, on average, the fleet has a remaining life of around 8 years. In its efficiency review, LEK estimated the life of new ferry assets to be an average of around 15 years. We have adopted these values of expected new and remaining lives of ferries in our analysis of fare outcomes.

We have decided that for all other existing and new assets, asset lives should be based on those used in Sydney Ferries' annual report 2010/11, as we consider these to be reasonable and realistic.

The life of new non-ferry assets is based on the average of the range in the annual report 2010/11. The life of existing non-ferry assets is also based on the average of the asset life range with the exception of non-current assets and the RMS Commuter Wharf Access Program. Non-current assets include works in progress that are assigned to other asset categories once they are commissioned. Therefore, they do not have a remaining life. RMS wharf upgrades effectively renew the life of the asset up to its maximum, except for Milsons Point wharf, which was commissioned in November 2010 and has already experienced some depreciation.

Since Sydney Ferries' asset base is not large, the asset lives do not have a significant impact on fare outcomes.

The asset lives for each asset class are given in Table C.3 below.

Table C.3 Asset lives

Asset class	Remaining lives of existing assets (years)	Expected lives of new assets (years)
Ferries	8	15
Land	n/a	n/a
Buildings and improvements	20	40
Plant and equipment	6	12
Other non-current assets	20	20
Wharf improvements	20	40
RMS Commuter Wharf Upgrade Program	38	40

Source: Sydney Ferries, *Annual Report 2010/11*; IPART calculations; LEK (2011).

D The Weighted Average Cost of Capital (WACC)

Determining the allowance for a return on assets to be included in Sydney Ferries' notional revenue requirement is an important step in our review. We have decided to use a real post-tax weighted average cost of capital (WACC), consistent with our new approach to incorporating company tax in our decisions.[96]

The WACC for a regulated business is the expected cost of its various classes of capital (debt and equity) over the determination, weighted to take into account the relative share in its capital structure. To determine this cost for Sydney Ferries, we used our usual approach for price setting purposes. This approach involves 2 steps:

1. Estimating the possible range for the WACC, by calculating values for each of the parameters that influence the cost of debt and the cost of equity in the regulated business.
2. Making a judgement on the appropriate point estimate for the regulated business' WACC within this range.

We then calculated the return on assets by multiplying the regulated asset base by this point estimate WACC value.

A real post-tax WACC more accurately estimates the tax liability for a similar well-managed, privately-owned business. Instead of accounting for company tax through the rate of return, tax is estimated as a separate cost building block.

We found that the appropriate post-tax real range for WACC is 3.8% to 5.5% based on market conditions to 1 June 2012. Due to the reduction in the risk free rate, there is a discrepancy between the WACC calculated using short-term averages of market data compared to long-term averages. As shown in Table D.1, the midpoint WACC obtained using short-term averages of market data (4.7%) is significantly lower than the midpoint WACC calculated using long-term averages (6.4%). In the current market circumstances, there is some evidence to support the view that expectations for the market risk premium have risen as bond yields have fallen. However, it is difficult to measure these short term variations in expectations for the Market Risk Premium (MRP). In light of this, and consistent with our recent decisions for other industries on the WACC, we consider that a WACC point estimate above the midpoint is appropriate for the assets used to provide ferry services. We therefore

[96] See IPART, *The incorporation of company tax in price determinations*, December 2011.

made a draft decision to use a post-tax real WACC of 5.5% to calculate the return on assets.

Our draft decision has also reduced the level of gearing from our typical assumption of 60% for other regulated transport companies to a range of 40% to 60%.

Our draft decision on the WACC is summarised in Table D1. Our draft decision on the individual parameters is discussed below.

Table D.1 Draft decision on WACC for Sydney Ferries

Parameter	Draft decision (sampled to 1 June 2012)	Long-term averages
Nominal risk free rate	2.6%	5.2%
Inflation adjustment	2.6%	2.5%
Debt margin	3.5% to 4.4%	2.2%
Market risk premium	5.5% to 6.5%	5.5% to 6.5%
Debt to total assets (gearing)	60% to 40%a	60% to 40%
Gamma	0.25	0.25
Equity beta	0.8 to 1.0	0.8 to 1.0
Cost of equity (nominal post-tax)	7.0% to 9.1%	9.6% to 11.7%
Cost of debt (nominal pre-tax)	6.1% to 7.0%	7.4%
WACC range (real post-tax)	3.8% to 5.5%	5.7% to 7.3%
WACC midpoint (real post-tax)	4.7%	6.4%
WACC point estimate (real post-tax)	**5.5%**	**na**

a A higher level of gearing results in a lower WACC. Therefore, 60% gearing has been used to calculate the lower bound and 40% has been used to calculate the upper bound.

D.1 Risk free rate

The risk free rate is used as a point of reference in determining both the return on equity and the cost of debt within the WACC. In both the Capital Asset Pricing Model (CAPM) and the cost of debt calculation, the risk free rate is the base to which a premium or margin is added to reflect the riskiness of the specific business for which the rate of return is being derived.

We have estimated the risk free rate from the 20-day average of the yield on nominal Commonwealth Government bonds with a 5-year term. As at 1 June 2012, this 20-day average is 2.6%. This approach results in decisions that best reflect prevailing market rates and predict future rates. It also ensures the regulatory environment created by our WACC decisions is as predictable and transparent as possible.

D.2 Inflation adjustment

The inflation adjustment is used to convert nominal parameters into real parameters. We estimate forward inflation using data from the zero-coupon inflation-linked swap market. We consider that relying on swap market data has several advantages over other approaches.[97] Our primary reason for using swap market data is that it is based on market observations and is therefore objective, repeatable and transparent.

As at 1 June 2012, the value of the 5-year inflation adjustment implied by swap market data is 2.6%.[98]

D.3 Debt margin

The debt margin is a premium that is added to the risk free rate of return to calculate the cost of debt. For a regulated business, the debt margin is influenced by the credit worthiness of the business, the gearing level, the maturity of the debt being issued, the supply and demand of the relevant debt markets at the time the debt is being raised and debt raising costs.

We estimate the debt margin by reference to a sample of securities from the Australian and US bond market with a credit rating of BBB to BBB+ with at least 2 years to maturity.[99] We also consider data from the Bloomberg BBB fair value yield curve. We calculate the debt margin from the yield on this sample of securities, averaged over the 20 days to 1 June 2012.[100]

Consistent with our recent decisions in other industries, we have estimated the debt margin using the interquartile range approach.[101] These yields are expressed as a margin over the risk free rate and include 20 basis points for debt raising costs. The range and median debt margin as at 1 June 2012 is 2.8% as set out in Table D.2.

Table D.2 Debt margin calculation (20-day average to 1 June 2012)

	Low	High	Median
Debt margin (basis points)	349	437	410

Source: Bloomberg.

97 IPART, *Adjusting for expected inflation in deriving the cost of capital – Final Decision*, May 2009, p 2.
98 Source: Bloomberg.
99 Source: Bloomberg.
100 Source: Bloomberg.
101 The interquartile range approach defines the upper bound using the top quartile, or top 25% of values in a set of data. Similarly, the lower bound of the range is defined by the lower quartile, or the bottom 25%. We then used the median as the midpoint of the range.

D.4 Equity beta

The equity beta is a business-specific parameter that measures the extent to which the return of a particular security varies in line with the overall return of the market. It represents the systematic or market-wide risk of a security that cannot be avoided by holding it as part of a diversified portfolio. It is important to note that the equity beta does not take into account business-specific or diversifiable risks.

We have estimated a range for the equity beta of 0.8 to 1.0. Combined with a lower level of gearing (40% to 60%), this draft decision implies that the level of systematic risk faced by a ferry operator is higher than the systematic risk faced by a typical network utility. We came to this judgment after considering equity and asset beta values for a range of proxies for Sydney Ferries. We also considered the differences in risk involved in providing public transport services using ferries rather than other modes of transport. Sydney Ferries' annual change in patronage is comparable to that of CityRail and STA Buses. In principle, ferry and bus operators should be able to respond faster in the short to medium term to changes in patronage than rail operators. We considered Sydney Ferries' lower level of profit variability arising from its flexibility to respond to changes in operating conditions. On the other hand, we note that Sydney Ferries has greater exposure to the tourism industry through its high proportion of tourist patronage.

D.5 Imputation tax credits (gamma)

Gamma is the dividend imputation factor. Under the Australian dividend imputation system, investors receive a tax credit (franking credit) for the company tax paid before the dividend. This recognises the fact that companies already paid tax on profits from which the dividends are paid. Since July 2000, imputation credits in excess of personal tax liabilities have been available as a cash rebate. International investors cannot utilise imputation credits.

The value of imputation credits is represented in the CAPM by 'gamma' (γ). The rationale for including the value of gamma in the CAPM is that investors are receiving a lower return than if there were no tax credits attached to this investment. We have recently completed a review of the gamma and have concluded that gamma should be valued at 0.25.[102]

D.6 Market risk premium

The MRP is the additional return over the risk free rate of return that an investor requires for the risk of investing in a diversified equity portfolio. Our current approach is to estimate the MRP based on the long-term historical arithmetic average market returns over the risk free rate. For this draft decision and in other recent determinations, this approach values the MRP within the range of 5.5% to 6.5%.

[102] IPART, *Review of imputation credits (gamma) – Final Decision*, March 2012, p 1.

We note that there may be an inconsistency between using short-term data for the market-based parameters and using long-term data for the MRP and the equity beta. In particular, there may be an inversely proportional relationship between the MRP and the risk free rate. In periods of high investor risk aversion, there is a flight from risky assets to safe assets. This tends to push up the price and push down the yields on safe assets. For this reason, falling risk free rates tend to be associated with rising investor risk premiums (and vice versa).

As the size of any adjustment to the MRP is not clear at this stage, we have used our best estimates for each parameter, and have made a judgement when selecting the point estimate within the range. This helps maintain a consistent regulatory environment.

D.7 Capital structure

The gearing ratio is the ratio of debt to total assets in the business's capital structure. In determining this ratio, our current practice is to adopt a benchmark capital structure (rather than the actual financial structure of the regulated entity) to ensure that customers will not bear the costs associated with an inefficient financial structure. This is consistent with regulatory practice in Australia.

In our draft decision, we have assumed that a suitable level of gearing for an efficiently-run privately-owned ferry company is within the range of 40% to 60%. We typically adopt a gearing level of 60% for other regulated transport companies. We came to the view that a lower level of gearing was appropriate for Sydney Ferries after considering the actual level of gearing for proxies of Sydney Ferries. Gearing levels of proxy companies are lower than our assumption of 60% for other regulated transport companies. Further, as noted above, Sydney Ferries relies on tourist passengers for a large proportion of its revenue. For this reason, it is likely to be more vulnerable to downturns in the business cycle, compared to other modes of transport with greater proportions of commuter patrons. As debt must be serviced, regardless of the level of revenue, we considered that lower levels of gearing were appropriate considering Sydney Ferries' reliance on revenue from tourists.

E Applying the average increase to individual fares

This section explains the process for ensuring that the individual fares proposed by Transport for NSW comply with our determination, including:

- how we ensure that the proposed fares do not exceed our average fare increase
- which fares are included in the average price increase calculation
- the process for fares changes, including:
  - the timing for fare changes
  - the information required as part of Transport for NSW's pricing proposal.

E.1 IPART determines the maximum average fare increase

Chapter 9 explained that we have decided not to set the maximum fares for all Sydney Ferries ticket types. Instead, our draft decision is to determine the maximum average increase for fares. Transport for NSW will then set the fares for individual tickets so that the average fare increase is equal to, or below the average increase set by IPART (weighted by ticket sales).

Transport for NSW can choose to increase all fares by the average fare increase. Alternatively, it may increase some fares by more than the average, provided that these increases are offset by changes in other fares that are lower than the average increase.

Our determination allows fares to increase by an average of around 4.9% nominal per year.[103] We check that the fare increase does not exceed IPART's maximum by calculating the revenue generated in the current year with current prices and ticket sales, and making sure the increase in revenue generated in the next year from the proposed prices and current ticket sales does not exceed our average increase.

If Transport for NSW increases fares by less than 4.9% in one year, in the following year Transport for NSW can increase fares by 4.9% compared to the average fare that would have been charged **had Transport for NSW increased fares by the maximum increase.** In practice, this means that the revenue forgone in one year will be added to the revenue allowance in the next year (and increased by the average allowed increase).

[103] 2.6% real increase + inflation. The level of inflation may vary in each year of the determination period.

Box E.1 provides a worked example of how we ensure that the proposed fares do not exceed our average fare increase.

Box E.1 How we check that that the proposed fare do not exceed our average fare increase

Consider Sydney Ferries has 3 different hypothetical fares. In year 1 the revenue is calculated by multiplying the fares per boarding by the number of journeys made on each fare during that year.

Fares for year 1

Fare	Price	Number of journeys allowed per fare	Price per journey	Number of boardings (year 1)	Revenue
	a	b	a/b = c	d	c * d
Single	$7	1	$7/1 = $7	100	**$7*100 = $700**
Return	$14	2	$14/2 = $7	140	**$7*140 = $980**
Ferry10	$56	10	$56/10 = $5.60	150	**$5.60*150 = $840**
Total revenue					**$2520**

To set fares for year 2, we increase the total revenue in year 1 by the average fare increase allowed to calculate the revenue allowed for year 2. For an average increase in year 2 of 4.9%, the total revenue allowed in year 2 will be $2520*(1 + 4.9%) = $2643.

The fares for year 2 must be set so that the revenue does not exceed this amount. The table below shows that the revenue for year 2 is the product of the proposed fares, and the number of boardings on each fare from **year 1.**

Fares for year 2

Fare	Price	Number of journeys allowed per fare	Price per journey	Number of boardings (year 1)	Revenue
	a	b	a/b = c	d	c * d
Single	$7.40	1	$7.40/1 = $7.40	100	$7.40*100 = $740
Return	$14.80	2	$14.80/2 = $7.40	140	$7.40*140 = $1036
Ferry10	$56	10	$56/10 = $5.60	150	$5.60*150 = $840
Total revenue					**$2616**

The proposed fares for year 2 in the table above would comply with our average fare increase because the total revenue is less than the allowed revenue - $2616 is less than $2643. In year 3, the revenue forgone in year 2 ($27) will be increased by the average increase allowed for in year 3 and added to the revenue allowance for year 3 to ensure that the maximum price path is retained even if prices below this maximum are temporarily chosen.

E.1.1 Which fares are included in the average increase calculation?

Journeys made on all fares will contribute to the average increase except those made on:

- Pensioner excursion ticket (PET) and Family Funday Sunday. These fares are set separately by Transport for NSW.
- Trial products.[104]

We also note that IPART does not set concession fares. However, all journeys made on concession fares will be added to the journeys taken on the equivalent adult fare for the purposes of calculating the average change in fares.

MyMulti fares are set under the CityRail determination. For the purposes of reviewing compliance with our determination we will include MyMulti DayPasses in the average fare calculation at the price submitted under the CityRail determination, assuming that 2 boardings on a MyMulti Day Pass are equivalent to one MyMulti Day Pass sale. All other journeys made on MyMulti fares are included in the average fare increase calculation as journeys taken on MyFerry TravelTen fares.

E.2 Process for fare changes

E.2.1 Annual fare change

Under our draft determination, Transport for NSW can change fares at any time up to the maximum average increase allowed by IPART, however we expect normally that fares would change only once a year. Typically public transport fares (bus, rail and ferries) change each January.

Before the annual price change, Transport for NSW is required to submit a pricing proposal to IPART. When we receive the pricing proposal we will publish it on our website. Table E.1 shows the timing for the 2013 fare change for Sydney Ferries.

[104] We define a trial fare as a fare:
- that is forecast to contribute less than 1% of ticket sales and 1% of fare revenue
- for which there is already an approved product that can be used on the route.

A fare will cease to be a 'trial fare' if it exceeds the revenue or ticket sales thresholds, or is continued in the next pricing period.

Table E.1 Compliance and fare change process 2013

	Date
IPART publishes our final determination on the average fare change	Mid November 2012
Government submits its pricing proposal to IPART	10 December 2012
IPART approves the new fares where they comply with the determination and publishes the new fares on its website	19 December 2012
New fares apply	6 January 2012

If the fares submitted by Transport for NSW do not comply with our determination we will notify Transport for NSW and publish a report on our website. It is Transport for NSW's role to ensure compliance and enforcement of our determination.

E.2.2 Information that will be required in the pricing proposal

For each proposed fare change we will require Transport for NSW to submit a pricing proposal that proposes fares that comply with our average price cap.

As part of each pricing proposal Transport for NSW will be required to provide sufficient information to explain its fares and how they:

- pursue economic efficiency, for example, how the prices
  - reflect fixed and marginal costs
  - send signals about services that are close to capacity and locational congestion and related capex requirements across the network
  - reflect the level of service, including data on performance measured against key service standard indicators
- target the revenue requirement, for example:
  - if the average fare increase is lower than the maximum average fare increase determined by IPART, an explanation as to why it has chosen to forgo revenue, and the impact on the level of subsidy per household in NSW
  - if Transport for NSW continues to allow for Ferry journeys to be taken using the MyMulti1 product, it should report on the associated subsidy.
- address affordability issues.

The pricing proposal should explain the reasons for any large relative movements in individual fares and the impact it is expected to have on customers. It should also clearly set out the medium term directions for prices and standards of service in order to allow current and potential users to take account of prices and service standards in their usage and locational decisions. It should indicate whether the medium term pricing strategies are likely to create material adjustment costs for some users.

E.2.3 Other fare changes

As previously mentioned, under our determination fares can be changed at any time up to the maximum average increase allowed by IPART. We expect normally that fares would change only once a year. However if Transport for NSW proposes to change fares more than once a year (for example by adding a new fare or removing a fare) we will review compliance in order to ensure that fare levels do not exceed the increases allowed under our determination.

Transport for NSW must submit a pricing proposal to IPART whenever:

- any new fares are introduced[105]
- any fares are removed
- the prices for existing fares change.

Pricing proposals must be received by IPART 20 business days before a proposed change, and approved by IPART before the changes apply.

When Transport for NSW proposes to introduce or removes fares, Transport for NSW should explain the changes (in accordance with E.2.1), and include:

- details of any proposed new fare, including the routes on which it is valid, the number of journeys included on the fare, the period for which it is valid, and any other conditions of use
- details of any removed fare
- information on how the addition or removal of fares will affect the number of journeys made on other fares
- forecast revenue impacts.

E.3 Weightings for proposed fares when there are substantial changes to fares

E.3.1 Adding and removing fares

For the introduction of any new fares, we will require Transport for NSW to make a reasonable estimate of the number of journeys that would have be taken in the previous financial year had the fare existed. Transport for NSW should reasonably reallocate existing journeys taken in the previous year, so that the total number of journeys taken on Sydney Ferries is held constant across all products. This will involve downward adjustments in the number of journeys made on other fares.

[105] Pricing proposals will be not required for the introduction of a "trial product." Where a trial fare is introduced, the Government should notify IPART of the trial fare, its conditions of use, and the forecast revenue impacts.

Similarly, if a fare is removed, Transport for NSW should reallocate those journeys that were taken on that fare to fares that would have been used, had the ticket not existed.

The reallocations of journeys must be approved by the Tribunal.

E.3.2 Substantial changes in the relativities between fares

As explained in section E.1.1, if the fare offerings do not change between price changes, fares should be weighted by the number of journeys in the most recent financial year. However, if the relativities between fares after the price change are significantly altered, some passengers may switch between ticket types. For example, if the MyMulti Day Pass reduced below the price of a return fare, many passengers may switch from buying the return fare to the MyMulti Day Pass. In this hypothetical situation it would be appropriate to reallocate journeys made on return tickets to journeys made on the MyMulti Day Pass.

An explanation of the substitution between fares must be provided, and the new weighting must be approved by the Tribunal. The reallocations of journeys must be approved by the Tribunal.