



Australian
Competition &
Consumer
Commission

Australia Post's draft price notification
Preliminary view

Public version

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1. Glossary

A-IFRS	Australian accounting standards equivalent to International Financial Reporting Standards which apply to all Australian corporations.
Acquisition mail	This is a new mail service for which Australia Post proposes to introduce prices. Acquisition mail enables customers to deliver semi addressed letters (i.e. no name) to a proportion of addresses in defined geographic areas. This service enables customers to exclude addresses from the letters sent to these geographic locations.
ANI/ePLA	The integrated Advanced Network Integration and Electronic Pre Lodgement Advice system.
APCA	<i>Australian Postal Corporation Act 1989.</i>
Australia Post	Australian Postal Corporation.
BMP	Bulk Mail Partner Program.
BPR	Basic Postage Rate.
Capital markets	The market for securities where companies and governments can raise funds.
Capital structure	The equity and debt capital used to finance a company.
CIP	Capital Investment Plan. A one-year budget of capital requirements approved by the Australia Board annually.
CSO	Community service obligation.
Cost of capital	Represents the minimum return an investment should generate for the investment to occur. It is a weighted average of the cost of equity and debt.
CPI – X	An incentive regulation under which the overall output price is capped at consumer price index minus an X factor for a target level of productivity gains.
DEA	Data envelopment analysis. DEA uses linear programming techniques to construct a non-parametric frontier.

Default risk	Also known as credit risk. The risk that a company is unable to meet its debt obligations.
DORC	Depreciated optimised replacement cost.
EBITDA	Earnings before interest, tax, depreciation and amortisation.
Effective tax rate	The actual tax rate a company pays after all tax offsets are applied.
Financial distress costs	The costs incurred by the company when it cannot meet, or has difficulty meeting its debt obligations.
Fixed assets	Physical assets (e.g. land, buildings, plant and equipment) employed by a firm in the provision of goods and/or services.
Franked dividend	A dividend that has imputation credits attached.
Frontier analysis	A method for estimating best-practice frontier under which firm-level efficiency and productivity can be measured. A commonly adopted frontier analysis method is data envelopment analysis.
FTE	Full time equivalent.
GBE	Government business enterprise.
Imputation tax credits	Also known as franking credits. A credit that represents a share of the tax paid by the company in the distribution of dividends or similar distributions.
Imputation tax system	A corporate tax system whereby profits distributed by companies to investors are not taxed twice.
Inflation risk	The risk that the value of the asset will decline due to inflation.
Interest rate risk	The risk of interest rate variation during the life of an interest bearing asset.
Interest tax shield	A reduction in income taxes as the result of an allowable deduction in taxable income.
KPI	Key performance indicator.

Liquidity risk	The risk associated with holding an asset that cannot be easily traded.
LPO	Licensed Post Office.
MAR	Maximum allowable revenue. The amount of revenue a regulated firm should receive that recovers all costs plus an efficient and reasonable return on its capital.
Market imperfections	Deviations from a perfectly competitive model. An example of a market imperfection is taxes.
MFP	Multifactor productivity. MFP It is measured as the ratio of an index of output to a combined index of two or more inputs, typically labour and capital.
Par yield	The yield of a security such that the price of the security remains at par.
PIM	Perpetual inventory method.
PTRM	Post Tax Revenue Model. This is the form of the financial model used by the ACCC to model the cash flows of the regulated firm.
Publications	Addressed periodicals and publications delivered by Australia Post throughout Australia at reduced postal rates.
RAB	Regulatory asset base.
RKR	Record Keeping Rule. The ACCC has issued one RKR, which established a regulatory accounting framework for Australia Post.
Standard errors	A method to measure the standard deviation of measurement error.
Statutory tax rate	The corporate tax rate that is applied to companies in Australia. It is currently 30 per cent.
TPA	<i>Trade Practices Act 1974.</i>
TFP	Total factor productivity. TFP is measured as proportional change in total outputs relative to proportional change in total inputs.
Time value of money	The value of money at difference periods of time. The general concept is that money today is of a greater value than money in the future.

Unaddressed letter	Unaddressed advertising items, including envelopes, postcards, catalogues, brochures and so on, to be delivered to delivery points and letter boxes within a specified geographic area at low prices.
WACC	Weighted average cost of capital

Executive summary

In February 2008 Australia Post submitted a draft price notification to the Australian Competition and Consumer Commission (ACCC), which proposed increases in the prices of Australia Post's reserved letters services (i.e. those services for which Australia Post has a statutory monopoly).

In addition to proposing to raise the basic postage rate (BPR) from 50 cents to 55 cents, Australia Post has also proposed to increase the price of other letters (including Large letters, Seasonal greeting cards, etc) and small and large PreSort letters. Australia Post also propose to introduce reduced rates for items that are paid for by postage meters or contain a postage paid imprint, and to introduce a new mail service, Acquisition Mail.

The ACCC has established a process for the assessment of price notifications under Part VIIA of the *Trade Practices Act 1974* (TPA) whereby declared firms submit complex proposals for ACCC consideration prior to providing the ACCC with a formal notice under s. 95Z of the TPA. This process provides the ACCC with additional time beyond the period of 21 days provided under Part VIIA to consider the proposal, and enables the ACCC to conduct a consultation process with stakeholders. In the context of this preliminary view, the ACCC expects that Australia Post will lodge a formal notification under these provisions, on which the ACCC will form a final view.

On 29 February 2008 the ACCC released an issues paper seeking submissions from interested parties on the proposed price increases by Australia Post. The ACCC received a total of 9 submissions from mail users, other businesses and members of the public. The ACCC has considered the submissions provided by interested parties in its assessment of Australia Post's draft price notification.

Australia Post submits that the proposed increases in the prices of reserved services are reasonable on the basis of its financial modelling that indicates that the revenue from the proposed price increases is marginally less than the required revenue as calculated in its financial model for the 2008-09 financial year. Australia Post notes that the proposed price increases reflect an environment where:

- volume growth for domestic reserved letter services has been low, in contrast to the high volumes experienced in the 1990s;
- there is reduced potential for ongoing productivity improvement within Australia Post; and
- Australia Post is required to continue to fund its community service obligations and meet its regulated performance standards.

The ACCC's assessment of the proposed price increases was focused on analysing these claims. In particular, the ACCC separately considered the components of the financial modelling conducted by Australia Post, including asset valuation, capital expenditure, scope of the asset base, and return on capital.

The ACCC also notes that a large proportion of Australia Post's costs are shared between its reserved and non-reserved services. Therefore, a key issue for the ACCC is how Australia Post allocates its costs between its reserved and non-reserved services. The ACCC commissioned consultants WIK Consult GmbH to assess Australia Post's cost allocation methodology. While WIK raised some concerns were raised about Australia Post's cost allocation methodology, the ACCC is prepared to accept the current cost separation between Australia Post's reserved and non-reserved services.

The ACCC has assessed Australia Post's demand forecasts. While there are some small differences between the ACCC's and Australia Post's forecasts for some letter categories, the ACCC accepts the demand forecasts provided by Australia Post.

The ACCC also assessed Australia Post's claim that sustained productivity gains are becoming increasingly difficult to achieve. The ACCC's analysis suggests that Australia Post exceeded its forecasts of productivity gains made in the ACCC's assessment of Australia Post's 2002 price notification. The ACCC considers that there is scope for future productivity gains to be made from several sources available to Australia Post, particularly in the area of the automated sequencing of mail to delivery points.

In light of this assessment, the ACCC revised the financial model provided by Australia Post. This revised modelling also considered the extent to which the proposed price increases would recover costs (including a return on capital) for the three financial years 2008—09, 2009—10 and 2010—11. Further, based on information sought from Australia Post, the ACCC disaggregated this financial model into four categories of mail services — small ordinary, small pre-sort, large ordinary, and large pre-sort.

The financial modelling conducted by the ACCC at an aggregate level confirms the results of Australia Post's financial model. In particular, the proposed price increases are expected to recover marginally less than Australia Post's costs (including a return on assets) in the 2008—09 financial year. While disaggregated modelling conducted by the ACCC indicates that some categories of mail services will under recover allocated costs, and other categories of mail services will over recover allocated costs, the ACCC's preliminary view is to not object to Australia Post's proposed price increase in reserved services.

However, the ACCC has concerns about lack of the certainty in Australia Post's approach of providing the ACCC with a one year draft price notification. The ACCC considers that any future price notifications submitted by Australia Post should provide guidance on how Australia Post expects the prices of reserved services to change over a period of three years into the future. Further price notifications should be supported by:

- a disaggregated financial model over at least a three year period;
- information on how prices for Australia Post's reserved services will change over this period; and

- information on the revenues and costs of those non-reserved services that share the same costs as reserved services over this period.

The ACCC is now seeking submissions in response to its preliminary view. Submissions should be provided by the close of business Friday 4 July 2008. The ACCC aims to release a final decision in late July 2008.

1 Introduction

1.1 Australia Post's draft price notification

On 5 February 2008, Australia Post provided the Australian Competition and Consumer Commission (ACCC) with a draft price notification, which outlined its intention to increase the prices of a number of its postal services. Australia Post also provided the ACCC with a supporting submission – *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*.¹

The draft notification process provides the opportunity for the ACCC to consider Australia Post's proposal in detail prior to forming a view under the formal price notification provisions under s. 95ZK of the *Trade Practices Act 1974* (TPA). A detailed outline of the ACCC's process of assessing draft price notifications is outlined in section 1.3.

Australia Post's supporting submission includes a number of reports commissioned by Australia Post in support of its draft price notification. These include:

- RR Officer and SR Bishop, Current and Non-Current Assets as Part of the Regulatory Asset Base. (The Return to Working Capital: Australia Post)
- Diversified Specifics, Domestic Small Letter Segment Volume Demand 1995/96 to 2006—07
- Meyrick and Associates, Australia Post's Aggregate and Reserved Service Productivity Performance
- Capital Partners, Australia Post: Consolidated Weighted Average Cost of Capital

Australia Post's supporting submission, and public versions of the reports it commissioned in support of its draft price notification are available on the ACCC's website, <http://www.accc.gov.au>.

Australia Post has proposed the following changes to prices for its reserved services (reserved services are those services over which Australia Post has a statutory monopoly – a detailed description of reserved services is contained in Chapter 2) services:

- an increase of 5 cents to the basic postal rate (BPR)
- an increase to other Ordinary Letter prices (eg. Large letters, Seasonal greeting cards, etc)
- an increase to PreSort letters by an average of 2.5 cents (GST exclusive)
 - Small PreSort by an average of 2.4 cents (GST exclusive)

¹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008.

- Large PreSort by an average of 3.2 cents (GST exclusive).

A complete list Australia Post's proposed price changes is shown in **Appendix A**.

Australia Post have cited a number of factors as grounds for the proposed price increases to ensure that the domestic reserved letter service generates a reasonable rate of return. In particular:

- letter volume growth is declining with a compound average growth of 0.3 per cent since 2002;
- the reduced potential for ongoing productivity improvement; and
- the requirement that Australia Post continue to fund Community Service Obligations (CSO).

Letter volumes

Australia Post does not expect any new mail growth events in the future. It also expects that there will be an increase in electronic substitution and in the consolidation and rationalisation initiatives used by businesses. According to Australia Post, the combination of these factors will mean volume growth in future years will continue to be flat with an actual volume decline anticipated by 2010.

Volume growth for domestic reserved letters has been around 0.3 per cent per annum since 2001–02. This is in contrast to the 1990s where volume growth averaged around 4.5 per cent per annum.

Productivity growth

Australia Post maintains there is reduced potential for ongoing productivity improvement within the organisation. In particular, this is because the scope for productivity growth in the letters network is governed by letter volume growth, service requirements and the opportunities for process improvement or labour substitution.

While productivity growth continues to be a priority for Australia Post, it states that the large labour gains that were previously achieved through investment in projects, such as Future Post (2000-01), have now been completed. Productivity growth is also more difficult due to lower letter volume growth.

Community service obligations

Australia Post is required to provide a letter service, at a uniform rate, to almost anywhere in Australia. Australia Post could potentially earn higher profits if it was able to charge more than the uniform rate to deliver some letters.

Compared with a fully commercial operation, Australia Post claim CSOs impose a cost structure that is higher than would otherwise be the case. Australia Post estimated its CSO net cost in 2006-07 at \$97.3 million.

1.2 ACCC's role in the regulation of postal services

The ACCC has three specific responsibilities in the regulation of postal services. These are:

- assessing proposed price increases for Australia Post's reserved services;
- inquiring into certain disputes regarding the terms and conditions under which Australia Post supplies bulk-mail services; and
- monitoring for the presence of cross subsidies between Australia Post's reserved and non-reserved services.

To assist the ACCC in undertaking these roles, the ACCC can issue record-keeping rules (RKR) to Australia Post that require Australia Post to keep specified records and provide them to the ACCC.

The ACCC issued one RKR in March 2005 which established a regulatory accounting framework for Australia Post. The regulatory accounting framework supports the ACCC's role in monitoring for the presence of cross subsidies between Australia Post's reserved and non-reserved services.

The ACCC has released three cross-subsidy reports to date for the 2004—05, 2005—06 and 2006—07 financial years.² The key findings of each report were similar in that there was no evidence that Australia Post was subsidising its non-reserved services with revenue from its reserved services.

1.3 The ACCC's assessment process

As outlined in the ACCC's *Statement of regulatory approach to assessing price notifications*³, the formal price notification process described in s. 95ZB(1) of the TPA does not provide sufficient time for the ACCC to give proper consideration to the complex issues presented in the assessment of a proposal to increase the prices of a firm with a high degree of market power.

In particular, assessment of Australia Post's proposed price increases will involve careful consideration of econometric analysis of past and estimated future productivity improvements, theoretical financial analysis of the components of the balance sheet on which a return should be provided, the approach used to allocate costs between reserved and non-reserved services (and to particular letter services), and each of the components of financial model applied to support the proposed price increases.

To adequately consider the issues raised in complex matters the ACCC usually adopts an approach whereby Australia Post lodges a draft notification with a supporting

² ACCC, *Assessing cross-subsidy in Australia Post*, November 2006, *Assessing cross-subsidy in Australia Post 2005-06*, March 2007 and ACCC, *Assessing cross-subsidy in Australia Post 2006-07*, April 2008.

³ ACCC, *Statement of regulatory approach to assessing price notifications*, July 2005. This report is available on the ACCC's website, <http://www.accc.gov.au>.

submission. After undertaking a preliminary review of the draft notification, the ACCC will then release an issues paper seeking comments from interested parties on key issues. Although the timeframe for assessment will vary depending upon the price notification, more complex proposals usually require a period of around six months.

In reaching its preliminary view on the draft price notification from Australia Post, the ACCC has carried out a public consultation process. On 29 February 2008 the ACCC released an issues paper seeking submissions from interested parties on the proposed price increases by Australia Post. The ACCC received a total of 9 submissions from mail users, other businesses and members of the public. The ACCC has taken submissions provided by interested parties into account in its assessment of Australia Post's draft price notification.

1.4 Confidentiality

During the course of its assessment of Australia Post's draft price notification, Australia Post has provided the ACCC with information in support of its proposal that it considers to be commercial-in-confidence. The ACCC has had regard to this information in conducting its assessment, and there are elements of this preliminary view which refer to this analysis to support some of views that the ACCC's has reached on elements of Australia Post's proposal.

Information considered to be commercial-in-confidence is denoted by “~~✕~~” in this preliminary view.

Unlike the monitoring provisions of the APCA which include specific provisions for the ACCC to disclose information claimed to be commercial-in-confidence under specific circumstances, there is no legislative framework for the ACCC's assessment of Australia Post's draft price notification.

Australia Post retains the discretion to release information that it considers to be commercial-in-confidence. Interested parties should approach Australia Post to seek access to this information.

1.5 Next steps

The ACCC aims to release its final decision in July 2008 and is now seeking submissions in response to its preliminary view.

Submissions should be provided to the ACCC no later than close of business Friday 4 July 2008.

To facilitate an informed, transparent and robust consultation process, the ACCC prefers that all submissions are publicly available. Accordingly, submissions will be treated as public documents and posted on the ACCC's website, unless prior arrangements are made with the ACCC to treat the submission, or portions of it, as confidential. Claims of confidentiality must be supported by reasons.

The ACCC will accept submissions by email or by post. However, it is preferred that submissions be made by email. If submissions are provided in PDF format, parties are asked, for accessibility reasons, to also provide a copy in Microsoft Word format.

Submissions should be addressed to:

Mr Anthony Wing
General Manager—Prices Oversight
Australian Competition and Consumer Commission
GPO Box 520
MELBOURNE VIC 3001

By email: anthony.wing@acc.gov.au

If you have any questions about the process, or about making a submission to the ACCC, please contact Anthony Wing on 9290 1804.

Table 1.1 provides a summary of the ACCC’s assessment timetable. Difficulty in obtaining information from Australia Post relevant to the ACCC’s assessment of Australia Post’s draft price notification has delayed the ACCC’s release of the preliminary view.

Table 1.1 ACCC’s assessment timetable

<i>Date</i>	<i>Process</i>
5 February 2008	Australia Post lodged draft price notification with the ACCC
29 February 2008	ACCC releases issues paper
April 2008	Submissions in response to issues paper received
20 June 2008	Release of the ACCC’s preliminary view, and calls for comment on view.
4 July 2008	Closing date for submissions in response to issues paper
Late July 2008	Release of ACCC’s final view

2 Background

Australia Post is the government-owned provider of postal services in Australia. In 1989 Australia Post was one of the first government businesses to be corporatised. The most significant aspect of this reform was the provision of an independent board and a commercial charter, albeit with ongoing obligations to meet community service obligations.

Australia Post's board is accountable to the parliament, through the Minister for Broadband, Communications and the Digital Economy. The Minister has the ability to:

- disapprove of changes to the postage rates for standard postal articles;
- direct Australia Post to pay dividends, including interim dividends; and
- give directions to Australia Post's board relating to general policies of the federal government as well as any other directions as the Minister considers in the public interest.

Obligations on Australia Post

The *Australian Postal Corporation Act 1989* (APCA) imposes various obligations on Australia Post relating to commercial, community service and governmental responsibilities. The three general obligations are:

- Under section 26, Australia Post must, as far as is practicable, perform its functions in a manner consistent with sound commercial practice.
- Under section 27, Australia Post is required to meet certain community service obligations (outlined below).
- Under section 28, Australia Post must perform its functions in a way consistent with general government policy and any directions given by the minister.

Community service obligations

Australia Post has an obligation to supply a letter service under section 27 of the APCA. The purpose of the letter service is to carry, by physical means, letters within Australia and between Australia and places outside Australia.

Australia Post must, for letters that are standard postal articles, make the letter service available at a single uniform rate of postage for carriage within Australia.

In recognition of the social importance of the letter service, Australia Post must ensure that:

- the letter service is reasonably accessible to all people on an equitable basis, wherever they reside or carry on business; and
- the performance standards of the letter service reasonably meet the social, industrial and commercial needs of the Australian community.

2.1 Services ‘reserved’ to Australia Post

In recognition of its community service obligations, Australia Post has been granted a general monopoly—although this is limited by a number of exceptions—in the carriage and delivery of letters within Australia, whether the letters originated within or outside Australia.⁴ The term ‘letters’ has a meaning that is wider than its general usage; the APCA defines the term ‘letter’ as meaning any form of written communication that is directed to a particular person or a particular address.⁵ The services captured by this monopoly are generally referred to as ‘reserved services’.

Section 29 of the APCA provides Australia Post with the exclusive right to deliver letters within Australia and the exclusive right to issue postage stamps, and determines the scope of services reserved to Australia Post. The reserved services extend to:

- (1) Subject to section 30, Australia Post has the exclusive right to carry letters within Australia, whether the letters originated within or outside Australia.
- (2) The reservation of services to Australia Post under subsection (1) extends to:
 - (a) the collection, within Australia, of letters for delivery within Australia; and
 - (b) the delivery of letters within Australia.
- (3) Australia Post also has the exclusive right to issue postage stamps within Australia.

Exceptions to the reserved services

As noted above, the reserved services are subject to a number of exceptions, which are detailed in section 30 of the APCA. Section 30 states:

- (1) The reserved services do not include any of the following:
 - (a) the carriage of a letter weighing more than 250 grams unless the letter consists of an envelope, packet, parcel, container or wrapper containing 2 or more separate letters;
 - (b) the carriage of a letter relating to goods that is sent and delivered with the goods;
 - (c) the carriage of a newspaper, magazine, book, catalogue or leaflet, whether or not directed to a particular person or address and whether or not enclosed in any sort of cover;
 - (d) the carriage of a letter otherwise than for reward;
 - (e) the carriage of a letter within Australia for a charge or fee that is at least 4 times the then rate of postage for the carriage within Australia of a standard postal article by ordinary post;
 - (g) the carriage of a letter by the sender or an officer or employee of the sender;
 - (ga) the carriage of a letter from an office of the individual or organisation sending the letter to another office of that individual or organisation;
 - (h) the carriage of a letter to or from:
 - (i) the nearest office of Australia Post;
 - (ii) another office of Australia Post authorised by it;
 - (ha) the carriage of a letter to an office of Australia Post where it is then lodged for delivery under a bulk interconnection service (within the meaning of section 32A);

⁴ Explanatory memorandum to the Australian Postal Corporation Bill 1989, p. 3.

⁵ Section 3 of the *Australian Postal Corporation Act 1989*.

- (j) the carriage of a letter on behalf of Australia Post under an agreement with it;
- (k) the carriage of a letter that, under the terms and conditions on which Australia Post supplies postal services, is not a postal article;
- (m) the carriage of writs, warrants or other documents required or permitted to be served, given or sent under the practice and procedure of any court or tribunal;
- (ma) the carriage of a letter, in the course of a document exchange centre:
 - (i) from one service centre of the service to another service centre of the service;
 - (ii) within a service centre of the service;
- (n) the carriage of a letter solely by any electromagnetic or other non-physical means;
- (p) the carriage of letters by or on behalf of a foreign country under a convention;
- (q) any service that, under the regulations, is not reserved to Australia Post.

2.2 Australia Post's recent financial performance

In 2006–07, Australia Post delivered 5.51 billion articles of mail to 10.27 million delivery points, had 34 732 employees and 4449 post offices, and served around one million customers in its retail outlets each business day. Australia Post reported a post-tax net profit of \$400.7 million (an operating profit before tax of \$561.7 million), representing a return of 19.6 per cent on average operating assets and a return of 11.9 per cent on revenue in 2006—07.⁶

In its draft price notification, Australia Post cited a number of factors as grounds for the proposed price changes. These include the decline in letter volume growth, the reduced potential for ongoing productivity improvement and the requirement that Australia Post continue to fund its CSOs.

The ACCC has undertaken its own analysis of Australia Post's financial performance. This analysis is based on information available from the financial statements reported in Australia Post's annual reports.

Mail volumes

According to Australia Post, letter volume growth has been in decline since 1994—95, with the exception of volumes in 1999—2000, when additional mailings as a result of the introduction of the GST, a large number of public share offers and a federal referendum, resulted in volume growth of 5.7 per cent. Since 2002, Australia Post state that letter volume growth has been low at an average of 0.3 per cent.

Australia Post does not expect the volume related productivity gains experienced over the last 10 years to be repeated due to increases in technology substitution and mail piece consolidation. Australia Post anticipate an actual volume decline by 2010.

The analysis of Australia Post's annual reports for the period 2000-01 to 2006—07 shows that both domestic and overall mail articles handled by Australia Post through its delivery network increased modestly over the period with an average annual growth

⁶ Australia Post, *Annual Report 2006–07*, pp. 2, 8, 31, 127.

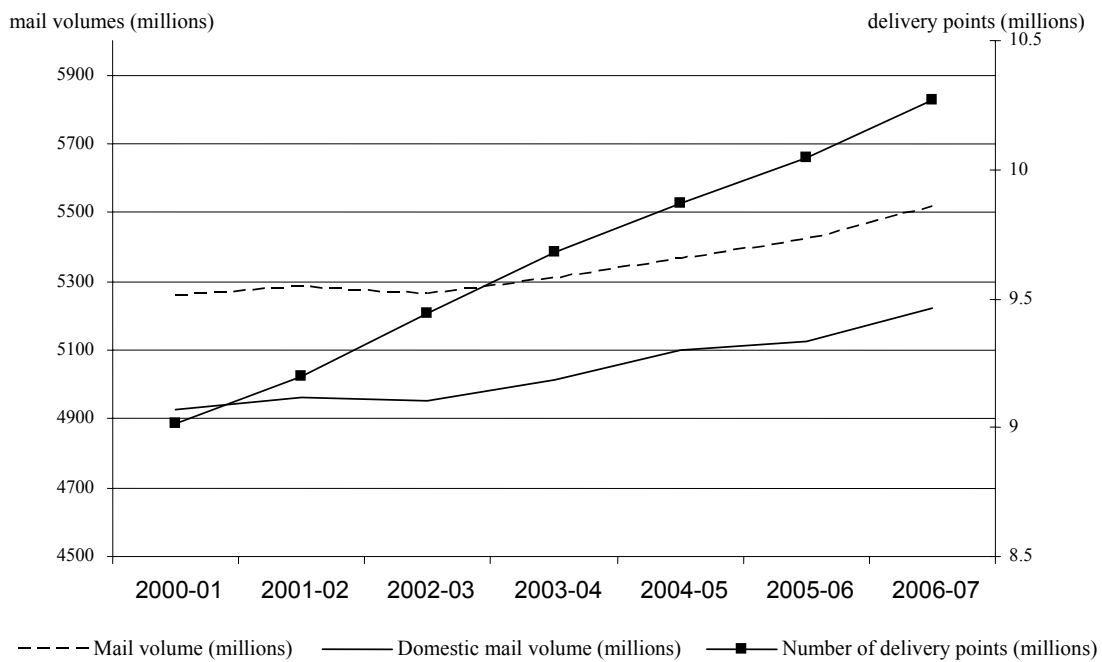
rate of less than one per cent. However, Australia Post's delivery network has expanded over the same period with the number of delivery points increasing at an average annual rate of 2.2 per cent. The results of the analysis are shown in table 2.1 and chart 2.1 below.

Table 2.1: Mail volume and delivery network-2000–01 to 2006–07

	Mail volume⁷ millions	Domestic mail volume millions	Number of delivery points
2000–01	5258.4	4928.6	9012347
2001–02	5281.2	4961.9	9197298
2002–03	5261.7	4950.4	9443227
2003–04	5307.5	5016.1	9681976
2004–05	5363.1	5102.1	9868275
2005–06	5418.1	5125.7	10048811
2006–07	5515.8	5224.1	10266637
Average annual growth	0.80 %	0.98 %	2.2 %

⁷ Mail volume statistics covers all mail items, including letters, parcels and international articles.

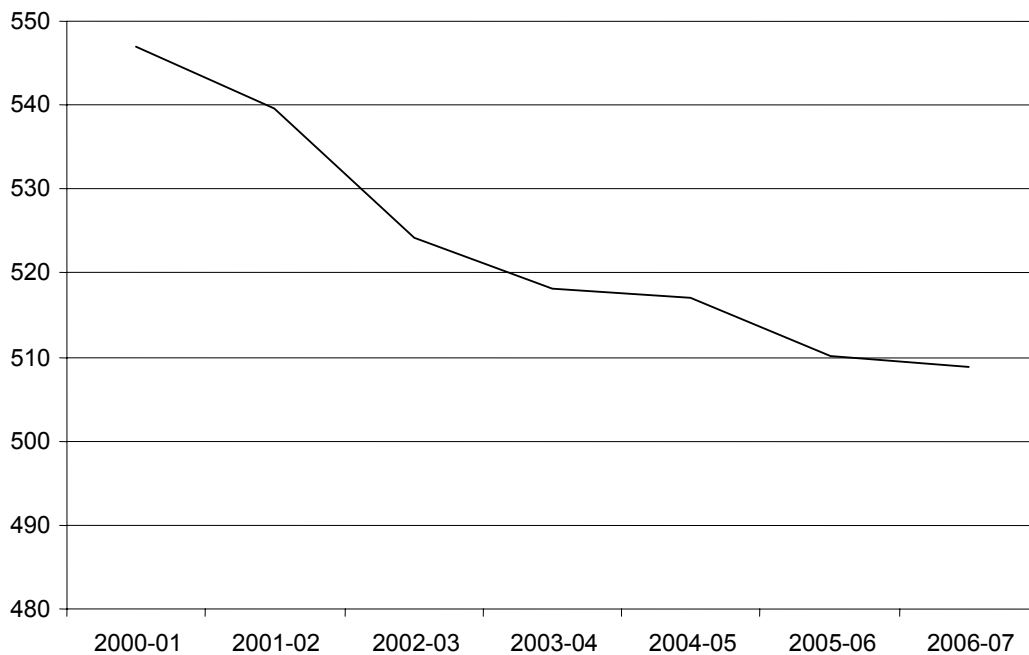
Chart 2.1: Mail Volumes and number of delivery points—2000—01 to 2006—07



Source: Australia Post Annual Reports, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06 and 2006-07.

Chart 2.2 shows the mail volume delivered per delivery point over the period. This shows that mail volumes per delivery point have been decreasing from nearly 550 million in 2000—01 to around 510 million in 2006—07. In other words, the rate at which the number of delivery points increased over the period was greater than the rate at which the volume of letters delivered increased. This supports Australia Post’s argument that its per unit costs are increasing because the number of letters delivered per delivery point are declining.

Chart 2.2: Mail volumes per delivery point—2000—01 to 2006—07



Source: Australia Post, Annual Reports, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06 and 2006-07.

Profitability

Revenue

Total revenues for Australia Post increased from \$4161.1 million in 2003—04 to \$4637.8 million in 2006—07. Due to a change to the business segments reported by Australia Post in the annual reports, consistent business segment reporting is only available from 2003—04 onwards.

Revenue for Australia Post’s three core business segments—letters; parcels and logistics; and retail and agency services—also increased. Table 2.2 shows that revenue for the parcels and logistics business increased at a faster rate than Australia Post’s total revenue over the period.

Table 2.2: Australia Post revenue by business segment—2003—04 to 2006-07

	Letters	Parcels & logistics	Retail & agency services	Other and unallocated	Total
2003-04	2528.5	846.3	639.8	146.5	4161.1
2004-05	2560.0	928.0	672.3	163.2	4323.5
2005-06	2634.8	1095.8	670.6	63.4	4464.6
2006-07	2679.0	1198.8	681.0	78.9	4637.8

Source: Australia Post Annual Reports, 2004-05, 2005-06 and 2006-07.

Expenses

Total expenses incurred by Australia Post are shown in table 2.3 below. Australia Post’s expenses increased from \$3626.5 million in 2003—04 to \$4115.5 million in

2006—07. Expenses associated with the parcels and logistics business increased more than expenses associated with the letters and retail and agency services businesses.

Table 2.3: Australia Post expenses by business segment—2003—04 to 2006—07

	Letters	Parcels & logistics	Retail & agency services	Other and unallocated	Total
2003-04	2223.3	702.9	579.8	120.5	3626.5
2004-05	2318.3	739.1	615.1	68.9	3741.4
2005-06	2460.2	906.3	584.8	31.3	3982.6
2006-07	2519.0	975.7	594.4	26.4	4115.5

Source: Australia Post Annual Reports, 2004-05, 2005-06 and 2006-07.

EBIT

Earnings before interest and taxes (EBIT) is a standard measure of profitability. Australia Post's EBIT has generally been increasing over the period apart from a substantial downward adjustment in profit reported in 2004—05 with the change in accounting systems.

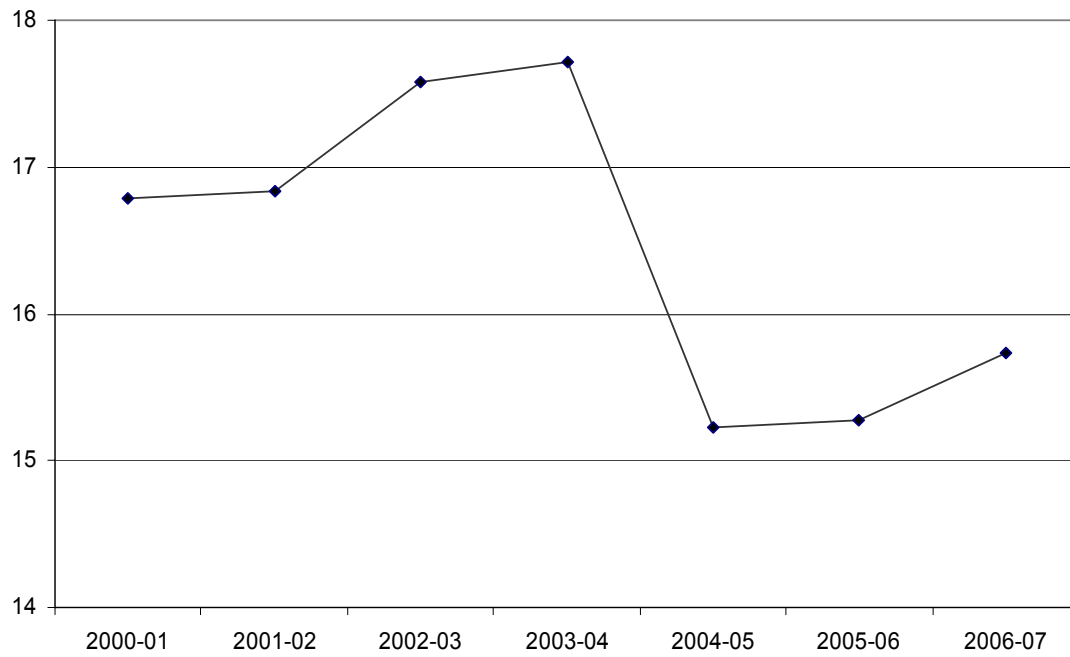
In the two years prior to 2004—05, profits measured under the AGAAP accounting standard increased at an annual rate of over 10 per cent. In the two years after 2004—05, profits measured under the A-IFRS accounting standard increased by over 8 per cent per annum.

Another way to measure the profitability of Australia Post is to look at earnings before interest, taxes, depreciation and amortisation (EBITDA). By adding back non-cash expenses on depreciation and amortisation to EBIT, EBITDA measures the underlying cash flow of a firm. The EBITDA margin is calculated as the EBITDA divided by revenue. EBITDA margins show how much of a dollar in revenue is a net cash flow.

Australia Post's EBITDA margin has remained fairly constant over the period. However, the EBITDA margin measured under the AGAAP accounting system are relatively high (around 17 per cent) compared with the margin measured under the A-IFRS (around 15 per cent).

Chart 2.3 shows that under the A-IFRS, Australia Post's EBITDA margin has risen from 15.2 per cent in 2004—05 to 15.7 per cent in 2006—07.

Chart 2.3: Australia Post's EBITDA margin-2000-01 to 2006—07-percentage

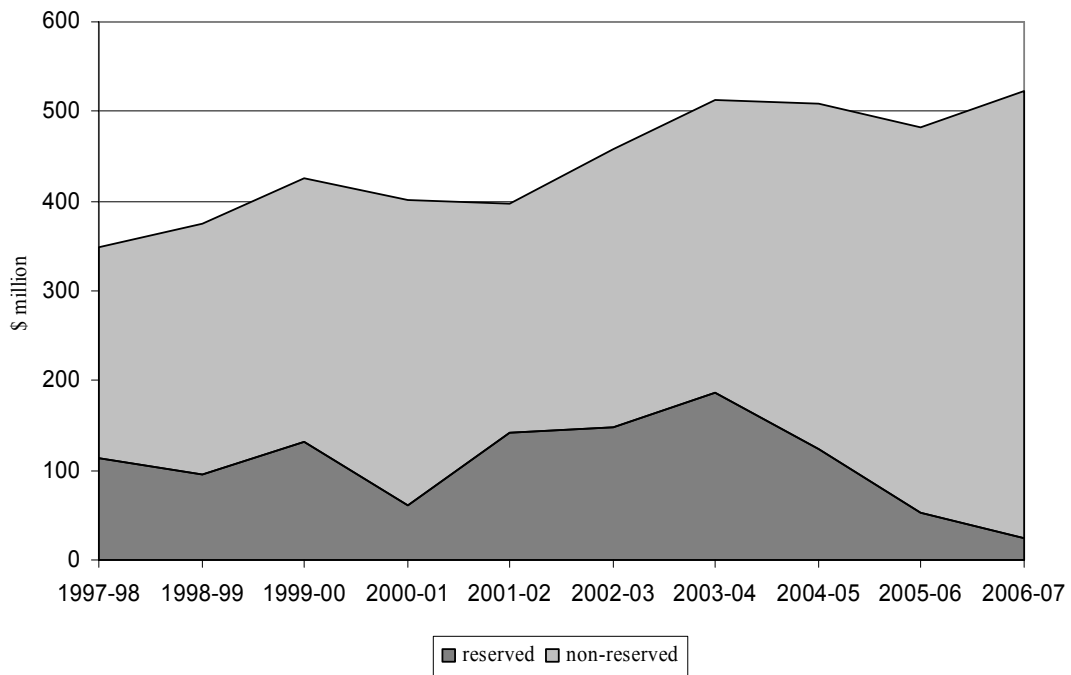


Source: Australia Post Annual Reports, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06 and 2006-07.

Reserved versus non-reserved profit

It is also useful to consider Australia Post's profits for the reserved and non-reserved services. Profits from the reserved and non-reserved services for the ten year period 1997—98 to 2006—07 are shown in chart 2.4.

Chart 2.4 Australia Post profit from reserved and non—reserved services—1997—98 to 2006-07



Source: Australia Post Annual Reports, 1997-98, 1998-99, 1999-00, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06 and 2006-07.

The chart shows that profits from the reserved services gradually improved in 2002—03 and 2003—04 before falling substantially in the following years. In contrast, non-reserved profits have improved over-time and show that an increasing proportion of Australia Post’s profit is derived from non-reserved services.

2.3 Services provided by Australia Post

The market for postal services is dominated by Australia Post which has a statutory monopoly in some of its letter services and, given its extensive mail network, is a large firm in parcel and expedited postal services. Australia Post also operates an extensive retail and agency network that complements its core mail business.

The services provided by Australia Post fall under three different service portfolios: Letters and Associated Services; Parcels and Logistics; and Retail Products. These three service portfolios can be dichotomised into reserved services and non-reserved services. The reserved letter service falls exclusively under the Letters and Associated Services portfolio. The non-reserved service area is where Australia Post does not have a statutory monopoly, but given its network infrastructure, it is profitable for Australia Post to provide an array of complementary products and services.

Letters

Ordinary letters and bulk letters

In the reserved mail service, small and large letters attract lower postage rates only when all terms and conditions and eligibility criteria for bulk mail discounts are met. Some services have a minimum lodgement volume requirement and once the minimum volume is lodged the same prices apply regardless of the volume lodged.

Ordinary small and large letters that do not fall under any bulk mailing agreement with Australia Post attract the relevant full postage rate.

Bulk mail in the reserved service category may attract discounted postage rates depending on the type of arrangements between Australia Post and its customers. Australia Post offers different bulk postage pricing schemes, such as: Clean Mail; PreSort Mail; Reply Paid; Charity Mail; Impact Mail; and Local Delivery mail.

The Clean Mail Service is a bulk mail service for customers who prepare a minimum of 300 letters of a standard required for processing by mechanised letter sorting equipment.⁸

The PreSort Mail Service is a discounted mailing service for Australia Post's bulk mail customers and partners (both small and large volume users) — Australia Post offers reduced postage rates for mailing houses and bulk mail generators who sort and barcode small, small plus, medium and large letters before lodgement at Australia Post.⁹

The Reply Paid Service is a marketing tool for business to encourage responses from its existing or potential customers. The reply paid service offers a discount on the basic

⁸ Australia Post, *CleanMail Service Guide*, March 2006.

⁹ Australia Post, *PreSort Letters Service Guide*, March 2006.

postage rate for reply paid barcoded letters. The reply paid service is also offered for larger articles outside Australia Post's reserved service area.¹⁰

Australia Post offers a discounted Charity Mail service for organisations that are endorsed by the Australia Taxation Office as a tax exempt charitable institution and trust funds for charitable purposes. A minimum of 300 pre-sorted letters must be lodged for the discount to apply. Barcoded and same-state mail receive further discounts.¹¹

Australia Post offers Impact Mail — a marketing mail service for business that delivers unique or irregular shaped articles. Businesses must lodge a minimum of 300 letters to be eligible for this service.¹²

The Local Delivery Service is a bulk mailing service for customers in country areas who lodge a minimum of 50 letters (or a minimum of 10 letters in communities with less than 1000 delivery points) at the office of delivery and there is the same sender's address on the outside of each envelope.¹³

Non-reserved services

Australia Post offers an array of different mailing and retail services that complement its reserved service operations. While these services fall in the non-reserved service category, to an extent these services use the same mail network infrastructure that delivers the reserved services.

Mail services

Registered Post

Registered Post is a mail delivery service for letters and small and large parcels that provides an identification number, proof of posting and signature on delivery. The Registered Post service is available for both domestic and international delivery.

Parcel Post

Complementing Australia Post's other mail services, and using some of the same network infrastructure (for example, mail centres and post offices), Australia Post also operates a small and large volume parcel postal service up to 20kg.¹⁴

Post eParcel

Post eParcel allows for electronic consignment management and tracking of mail collection, sorting and delivery through the use of a barcode number and proof of delivery. During 2005/06 the system was upgraded and real time tracking information

¹⁰ Australia Post, *Reply Paid Service Guide*, Effective from February 2004, p. 4.

¹¹ Australia Post, *Post Charges*, March 2008, p. 14.

¹² *ibid.*

¹³ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 11 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2058%257EMO19,00.html>>.

¹⁴ Australia Post, *Post Charges*, March 2008, p. 16.

downloads is now possible.¹⁵ The system provides reporting of parcel dispatch information, such as volumes, delivery times and costs. Delivery and receipt of payment is arranged by Australia Post and is electronically transferred to the customer's bank.¹⁶

Express Post

Express Post is an expedited mail delivery service for letters, documents and parcels. Express Post Platinum combines expedited delivery service (up to 3kg) with a signature on delivery requirement and a track and trace facility. Express Post will deliver envelopes, satchels, or parcels (up to 20kg) the next business day. Envelopes, satchels and some parcels are prepaid. Express Post operates on a network of regional and metropolitan mail centres and interstate air dispatch points that guarantees next day delivery. With the exception of Darwin, the Express Post network operates in all state capitals and in many regional cities across Australia. There are also post office outlets outside the network that offer the Express Post guaranteed next day delivery for the same state or that promise priority delivery.¹⁷

Messenger Post Couriers

Messenger Post Courier is a courier service that operates within metropolitan areas of all major capital cities. The courier service offers a range of on-demand and customised regular courier services.

Easy Mail, eLetter and PrintSoft

Australia Post offers an array of mail production solutions for businesses that wish to outsource their mailing activities.

Easy Mail provides a vertically integrated mail service for small to medium business enterprises (SMEs). Easy Mail manages the entire mail out process for these businesses, which can involve file merging, folding, printing and posting. Customers provide an electronic copy of their mailing database and a copy of the document they wish distributed and the Easy Mail service photocopies, collates, inserts, barcodes, addresses and posts the mail. Customers who use the Easy Mail service are offered the best postage discount available.¹⁸

The eLetter service is a more comprehensive vertically integrated system of mail production and distribution offered by Australia Post. The eLetter service competes with other mail houses and bulk mail generators in mail production. The eLetter service:

¹⁵ Australia Post, *Annual Report 2005/06*, p. 28.

¹⁶ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3326_products,00.pdf>.

¹⁷ Australia Post, *Post Charges March 2008*, p. 5.

¹⁸ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3326_products,00.pdf>.

- produces and mails invoices, statements, notices and brochures on behalf of its customers;
- maintains and updates the customer database;
- handles returned mail (businesses are notified electronically if any mail is returned, and they have full online access mailed documents from their desktop — known as the Full Mail Circle Solution); and
- streamlines the production and mailing of event tickets.¹⁹

The eLetter service operates a distributed print and processing network across five states.²⁰ The Easy Mail and eLetter services provided by Australia Post are subject to competition from mail houses.

PrintSoft is a subsidiary company of Australia Post that develops specialised software for letter and document production. PrintSoft collects various small personalised letter jobs created by a business and then engages in postal sorting, data cleansing and organises these electronic letters into high volume production print jobs. The print jobs can be printed centrally, or can be electronically subdivided for printing and production close to mail delivery points.²¹

PrintPost

Any approved publication that is produced and distributed at least bi-annually is eligible for Australia Post's PrintPost service.²² Printpost is a specific mailing service for publishers. Printpost mail is delivered with the regular mail across Australia. Publishers are eligible for a discount if mail is pre-sorted or if the mail is lodged locally at nominated Australia Post office outlets or mail centres. Each Printpost article must be enclosed in an article or plastic wrap that is approved by Australia Post.²³ The Printpost service also offers access to private box addresses and a redirection facility.²⁴

Joint-venture products

Australia Post and Qantas own Star Track Express and Australian Air Express. Both companies offer expedited business-to-business transport that includes delivery of secure and sensitive documents.

Express Courier International

¹⁹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 17 April 2008, <<http://www.eletter.com.au/>>.

²⁰ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 17 April 2008, <<http://www.eletter.com.au/index.php?sectionID=5491&pageID=5489>>.

²¹ Australia Post, *Annual Report 2006/07*, p. 16.

²² Australia Post, 2008, Melbourne, Victoria, Australia, viewed 17 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2039~MO19,00.html>>.

²³ Australia Post, *Printpost Service Guide*, Effective September 2007, p. 3.

²⁴ *ibid.*, p. 7.

In partnership with other national postal service operators, Australia Post offers an expedited international door-to-door courier service. Express Post International offers international expedited delivery, basic tracking (for most worldwide delivery points) and signature on delivery for letters, documents and parcels weighing up to 500 grams.²⁵ Express Post Courier International articles can be lodged at post office outlets, Express Post street post boxes or can be collected by Express Post International couriers.²⁶

Logistic services

Australia Post's offers a bundle of business-specific logistical services. These services include electronic order processing, automated reporting, credit management, warehousing, inventory management, kitting, pick-and-pack, distribution and returns management.²⁷

Non-reserved bulk mail

The bulk mail services — that is, PreSort Mail and Local Delivery services — are also offered in the non-reserved area of Australia Post's operations. Other non-reserved bulk mail services include Print Post and Unaddressed Mail service, which is a business-to-business and business-to-customer advertising medium used to build and maintain its customer base.²⁸

Non-expedited International mail

Australia Post operates international economy sea mail services, which sit at lower price point than the Express Post.²⁹ An international registered mail service is also operated by Australia Post and provides proof of posting, an identification number, and insurance cover up to \$100.³⁰

Outgoing international mail has been deregulated — Australian consumers can bypass Australia Post for all outgoing international mail. However, incoming international mail is reserved for Australia Post.³¹

²⁵ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3326_products,00.pdf>.

²⁶ Australia Post, Annual Report 2004/05, p. 31.

²⁷ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 8 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2058%257EMO19,00.html>>.

²⁸ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 8 April 2008 <<http://www.auspost.com.au/BCP/0,,CH3368%257EMO19,00.html>>.

²⁹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3326_products,00.pdf>.

³⁰ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3326_products,00.pdf>.

³¹ National Competition Council, *Review of the Australian Postal Corporation Act, Final Report*, volume 2, AGPS, pp. 60–61.

Ancillary services

Australia Post provides an array of ancillary products and services through its retail network, which include: retail products and services; agency-based banking; bill payment; money transfer services; and identification and verification services.

Retail products and services

The retail merchandise sold by Australia Post outlets includes both products complementary to Australia Post's mailing service and other merchandise items. The retail merchandise includes: philatelic products; packaging; general merchandise; stationery; greeting cards; communications; and retail services (for example, mobile phone recharge facilities).

Agency-based services

The third party agency-based services includes: bill payment; agency banking; money orders; personal identity and verification services; passport interviews; travellers' cheques; and money transfers.³²

Australia Post operates 2,900 outlets that have electronic banking facilities, representing nearly 80 financial institutions — over 60 per cent of Australia Post's outlets offer agency based banking transaction facilities — and 33 million agency banking transactions take place each year.³³ Australia Post also handles 170 million bill payment transactions per year, accepting payment on behalf of over 560 organisations and businesses.³⁴

Identification and verification services

Identification and verification services offered by Australia Post can be classified into three separate product categories: instant photos; in-person identification services; and verification and electronic services.³⁵

2.4 The mail network in Australia

Australia Post's mail network is extensive — it operates 4,449 outlets and delivers to 10.3 million addresses across Australia.³⁶ The extensive network operated by Australia Post fulfils its USO under section 27 of the APCA.

³² Australia Post, *Annual Report 2005/06*, pp. 22–23.

³³ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

³⁴ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

³⁵ Australia Post, *Annual Report 2005/06*, p. 24.

³⁶ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 15.

The mail network

The mail network resembles a hub and spoke pattern. In the mail network, central processing hubs are the mail sorting facilities located in each state. The network infrastructure that is linked to these facilities includes: post boxes; postal outlets; mail centres; streaming hubs (local network collection hubs that consolidate mail); postal agencies; and mail contractors.

The network infrastructure can be separated into four components:

- the collection network;
- the sorting and processing hubs;
- bulk mail transport (that links the collection and delivery points); and
- the delivery network.

The sorting hubs sort mail to postcode or to postal delivery route. If mail has not been sorted to delivery route, delivery centre will do so, and then mail is manually sequenced to delivery point.

The hub and spoke mail network starts with mail collection. Mail then proceeds directly, or via bulk dispatch, to sorting centres. The mail may be sorted to delivery route or postcode and then sequenced for delivery point, or consolidated for interstate or international dispatch where mail is sorted and sequenced at the delivery centres interstate or world wide.

Collection network

Street post boxes

Street post boxes are an important part of the collection infrastructure that ensures Australians have ample access to postal lodgement points. To ensure availability and access, section 95 of the APCA states that Australia Post has the right to erect, maintain and use street boxes.³⁷ Australia Post operates 15,606 street post boxes against the required 10,000 street post boxes.³⁸ Street post boxes can collect ordinary postal articles and postal articles that are not reserved for Australia Post, including parcels. In the metropolitan areas of capital cities and provincial cities, Australia Post has a policy of operating street post boxes that are within 2 kilometres of residents. In regional and remote areas Australia Post operates post boxes at or near its postal outlets or agencies.³⁹

³⁷ Section 95, APCA.

³⁸ Office of Legislative Drafting and Publishing, Part 5, Regulation 8, *Australian Postal Corporation (Performance Standards), Regulations 1998*, made under the Australian Postal Corporation Act, Statutory Rules 1998, No. 99 as amended, Attorney-General's Department, Canberra, p. 7.

³⁹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 14 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH3633~MO19,00.html>>.

Express Post articles can also be lodged at street post boxes and in many areas there are dedicated Express Post boxes located next to ordinary street post boxes. Express Post boxes are used specifically to collect Express Post items.⁴⁰

However, there are limitations to the post box collection points: some larger articles cannot be posted; some letters and parcels may require postage assessment; and other complementary products and services may be required (for example, packaging, stamps, bulk lodgement, etc).

Post offices and agencies

Reserved and non-reserved mail articles are also collected at Australia Post offices, particularly if larger articles need to be lodged or if postal articles require postage assessment.⁴¹

Australia Post operates an extensive network of post office outlets and agencies. These post office outlets include corporate post offices, franchised Postshops, licensed post offices and community postal agencies.

The post office outlet is the local mail lodgement hub and, in some areas, a local delivery hub for metropolitan and regional communities. Over 94 per cent of householders in metropolitan regions live within 2.5 kilometres of a postal outlet and over 87 per cent of the Australian population in non-metropolitan areas live within 7.5 kilometres of a postal outlet.⁴² Australia Post outlets and agencies service an average 1.1 million customers each day. One in three of these customers pay bills. The largest proportion of consumers that visit Australia Post outlets are from rural and remote areas (57 per cent) — this is indicative of the reliance of regional consumers on Australia Post's outlet infrastructure.⁴³

Australia Post office outlets are divided into three categories: Licensed Post Offices (LPOs) that include franchised Post Shops; Corporate Post Outlets (CPOs); and Community Postal Agencies (CPAs).

⁴⁰ Clustering ordinary street post boxes and Express Post boxes together enables the establishment of centralised collection point for different types of mail, which is mutually convenient for Australia Post and its customers. The convenience of placing collection points in one location is derived from economies of agglomeration, which lower costs for both the customer and the vendor. Economies of agglomeration refer to the lower costs of doing business by clustering different types of economic infrastructure, such as firms, closer together. The spatial proximity of the two post boxes is convenient for customers posting both ordinary postal articles and Express Post as they do not incur the search, time and travel costs of going to two locations. The spatial proximity of the two boxes also allows Australia Post to collect both ordinary and expedited postal articles from one point, hence reducing its cost of collecting mail.

⁴¹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 14 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2075~MO19,00.html>>.

⁴² Australia Post, 2008, Melbourne, Victoria, Australia, viewed 14 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3323_journey_of_a_letter,00.pdf>.

⁴³ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

Licensed Post Offices make up the majority of retail postal outlets. The LPOs offer a core range of postal services including postal article lodgement, postage assessment, stamps, packaging, stationery items and fax services.⁴⁴ Many LPOs provide a range of retail and ancillary services in addition to the core mail service. The scope and range of services offered by LPOs depend on local circumstances and the size of the local economy. Approximately half of LPOs are horizontally integrated entities — they are pharmacies, newsagencies, gift and stationery shops, milk bars or convenience stores.⁴⁵

Australia Post also operates a large number of corporate postal outlets. Corporate Post Outlets provide products and services that are specific to small to medium enterprises and the small office home office (SOHO) customer segments. Corporate Post Outlets offer customer accounts, pick up and delivery. Bulk mailing is also arranged through CPOs and includes: bulk purchasing arrangements; postage discounts for bulk discount; drive in lodgement points; and specialist sales support.⁴⁶

Community Postal Agencies offer (at least) core mail services for regional and remote areas, and a small number of metropolitan regions. Community Postal Agencies service 14 per cent of Australia Post's network of postal outlets.⁴⁷

Road mail contractors and direct collection

Collection of mail may also be through road mail contractors. Some businesses may also have arrangements with Australia Post for direct collection of their mail. For example, bulk users of Express Post may be eligible for pick-up from their premises.⁴⁸

Bulk mail lodgement at business centres, post offices and mail centres

Bulk mail customers may lodge their mail at corporate post offices, business mail centres or mail centres. The mail is then dispatched from these locations, via bulk transportation, to mail centres or to major metropolitan mail processing facilities. Bulk mail customers may also directly lodge their mail at the major metropolitan mail processing facilities. Once the bulk mail arrives at mail sorting centres, the postal articles are, if necessary, aggregated, sorted and barcoded for delivery.⁴⁹

Sorting

For businesses and households who lodge mail at street post boxes, post office outlets and for mail collected by Australia Post or its contractors, the mail then proceeds to

⁴⁴ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

⁴⁵ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

⁴⁶ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

⁴⁷ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 15 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3324_retail_outlets_operations,00.pdf>.

⁴⁸ Australia Post, *Melbourne Gateway Facility*, p. 8.

⁴⁹ ACCC, *Australian Postal Corporation: Price Notification, Decision*, October 2002, p. 29.

consolidation points for bulk dispatch, or directly to mail centres or major metropolitan mail processing facilities.

Mail centres and post offices

A mail centre is a mail hub that handles and/or sorts letters, parcels and Express Post articles for delivery in the region or for bulk transportation to major metropolitan mail processing facilities. Handling mail items involves consolidating letters into small and large, but no sorting is undertaken.

Mail centres in regional Victoria that are outside the sorting service area of a dedicated major metropolitan mail processing facility, such as Dandenong Letters Centre and the parcel sorting centre in Ardeer (which are the major metropolitan mail processing facilities for Melbourne and near regional areas), will collect and sort mail to postcode for dispatch within their service areas.

Mail centres that are in the service area of major metropolitan mail processing facilities will only handle mail for dispatch to the sorting hub. That is, the mail centre acts as a streaming hub. A streaming hub is a central collection point for letters, Express Post and parcels from surrounding post boxes and post offices. Mail is then consolidated into small and large letters for bulk dispatch to the sorting hub. A streaming hub may also receive bulk lodgements of PreSort mail.

Mail centres may also handle and/or sort Express Post items for delivery in their service area. Mail Centres also consolidate these articles for dispatch to a major metropolitan mail processing facility. For example, in Victoria, mail centres that handle and/or sort Express Post articles are located in Melbourne (which has a dedicated Express Post sorting facility at Tullamarine). In regional Victoria, the mail centres or post offices of Ballarat, Bendigo, Geelong, Moe, Morwell, Seymour, Shepparton and Traralgon handle Express items for dispatch to the major metropolitan mail processing facility in Melbourne or sort for regional delivery. Express Post items may also be lodged outside the guaranteed network (at some local post offices) and either receive intrastate guaranteed next day delivery or receive priority delivery.⁵⁰

The difference between a regional mail centre and major metropolitan mail processing facility appears to be the scale and scope of the mail sorting process, although both sort mail to postcode for bulk dispatch to delivery centres. Regional mail centres may sort ordinary letters, parcels and expedited mail to postcode for bulk mail transportation to delivery centres. A major metropolitan mail processing facility is usually dedicated to sorting one type of mail for delivery, is larger in scale and uses more technologically intensive sorting processes.

Post office outlets in remote or regional areas may do their own sorting and postmarking for final delivery of mail within their own service area. For example, bulk mail lodged under the Local Delivery Service scheme — the bulk mailing service for customers in country areas — is sorted for final delivery by local post office outlets.

⁵⁰ Australia Post, *Post Charges*, 2008, p. 5.

Major metropolitan mail processing facilities

Australia Post has centralised much of its mail operations to facilitate increasing mail demands.⁵¹ The centralisation involves the establishment of major metropolitan mail processing facilities in each state. The major metropolitan mail processing facilities act as major network hubs, which feed, and are fed by, near regional and metropolitan mail centres, post office outlets and street post boxes. Major metropolitan mail processing facility hubs are located in Melbourne, Sydney, Brisbane, Adelaide and Perth.⁵² Australia Post also operates three parcel network hubs in Melbourne, Sydney and Brisbane. For other cities and regions outside the service area of the central sorting hubs, mail centres and, in some cases, post offices, sort letters, parcels and expedited articles.

Some examples of the central mail sorting facilities are the Dandenong Letter Centre or DLC for domestic mail in Melbourne, the Melbourne Gateway Facility (Tullamarine) for international mail, interstate Express Post and intrastate Express Post lodged in Melbourne, and the parcel sorting facility at Ardeer in Melbourne. The examples of the major metropolitan mail processing facilities are explored further below.

The Dandenong Letters Centre

The Dandenong Letters Centre processes over six million postal articles each day for intrastate and interstate delivery. The DLC is a mail collection and sorting hub for the state, collecting mail directly from street posting boxes, post offices, mail centres and streaming hubs. The DLC also directly receives customer bulk mail.⁵³

The Dandenong Letter Centre mainly sorts small and large letters. The DLC may also undertake handling and/or sorting of:

- some Express Post articles (from its service area) for transport to the Melbourne Gateway Facility;
- Printpost items with a maximum weight of 1kg;

Some of Australia Post's eLetter services may also be based at the DLC site or at other sorting facilities sites in other states.

Between 60 and 75 per cent of small letters are sorted to delivery round.⁵⁴ Unlike the United States Postal Service, Deutsche Post (Germany) and the Royal Mail (United Kingdom), Australia Post does not have automated letter sequencing equipment at its

⁵¹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 2 May 2008, <http://www.auspost.com.au/GAC_File_Metofile/0,,3327_technology,00.pdf>.

⁵² Australia Post, *Annual Report 2001/02*, p. 15.

⁵³ Australia Post, *Dandenong Letter Centre*, pp. 4–5.

⁵⁴ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 22 April 2008, <http://www.auspost.com.au/GAC_File_Metofile/0,,3323_journey_of_a_letter,00.pdf> and Preston Mail Centre visit, 24 April 2008.

mail centres.⁵⁵ However, Australia Post is trialling new sequencing at various mail centres across Australia.

The Melbourne Gateway Facility

The facilities that are dedicated to inbound and outbound international and interstate postal articles are: the Sydney facility at Clyde; the Melbourne Gateway Facility and facilities at Perth and Brisbane airports.⁵⁶ The facilities handle ordinary and Express Post articles.

The Melbourne Gateway Facility processes inbound and outbound international mail and Australia Post's Express Post services. The Gateway facility processes 80,000 Express Post items per day and 230,000 inbound and outbound international articles per day.⁵⁷

The Gateway's inbound overseas airmail process facility is where mail from overseas is received from the cargo terminal operators, who bulk handle mail on behalf of international airmail carriers. There are currently three cargo terminal operators: Qantas; Australian Air Express (US flights); and Menzies (Thai Airways and Cathay Pacific Flights).⁵⁸ Once the mail arrives, it is acquitted, processed and screened by the Australian Customs Service and the Australian Quarantine Inspection Service.⁵⁹ The inbound processing facility includes mail processing and transport conveyors, bag opening and lifting equipment, item and receptacle scanning, in addition to canine and x-ray screening.⁶⁰

The Gateway's outbound overseas airmail processing facility is where overseas mail is received from the domestic network. Mail is streamed by product, sorted manually on processing frames and into bags. Parcels that are part of large volume destinations are sorted directly into aircraft containers. The international outbound mail is transported by Qantas Air and Express Mail Service carriers.⁶¹

There is an area in the Gateway Facility that is devoted to processing Express Post articles lodged in Melbourne and is received from other states by air. Express Post items are streamed and sorted into bags and sorting frames, then lodged for delivery in Victoria or lodged with airlines for interstate delivery.⁶²

Dedicated parcel sorting facilities

⁵⁵ LECG, *Future Efficient Costs of Royal Mail's Regulated Mail Activities*, February 2006; Deutsche Post, Annual Report 2003, p. 37; United States Postal Service, 2008, Washington DC, United States of America, viewed 28 April, <<http://www.usps.com/history/cs02/2e3.htm>>.

⁵⁶ Australia Post, *Annual Report 2004/05*, p. 30.

⁵⁷ Australia Post, *Melbourne Gateway Facility*, p. 2.

⁵⁸ *ibid.*, p. 4.

⁵⁹ *ibid.*, p. 7.

⁶⁰ *ibid.*, p. 7.

⁶¹ *ibid.*, p. 7.

⁶² *ibid.*, p. 7.

Australia Post's parcel sorting facilities are located at Ardeer in Melbourne, Chullora in Sydney and Underwood in Brisbane.⁶³ Each parcel hub operates automated handling and sorting machinery to process parcels for delivery.⁶⁴ The largest sorting and handling machine (installed at each parcel processing hub) can sort up to 15,000 parcels an hour.⁶⁵ The parcels are not sorted to delivery route — they are sorted to postcode for dispatch to delivery centres where final delivery route sorting and delivery point sequencing takes place.

In addition to parcels, the parcel processing facilities may also handle Express Post articles and other mail. The parcel processing facility at Ardeer in Melbourne also receives bulk mail lodgement from the mail house HPA (now Salmat).

Bulk mail transport

Once mail and parcels are sorted, most of it is dispatched for bulk transportation to mail centre hubs and delivery centres. Mail and parcels that terminates at the processing centre is dispatched to its service area. For example, the Gateway Facility, outgoing interstate and international mail is bulk transported by air. Intrastate Express Post articles are bulk transported to mail and delivery centres in Victoria.

For ground haulage of interstate mail, Australia Post has interstate transport depots, shipping terminals and makes use of transport contractors.⁶⁶ The mode of bulk transportation depends on the location of the mail streaming point, haulage costs, product type (for example, Off Peak), haulage capacity, time of the day and the capability within the network to meet service levels.⁶⁷

Australia Post operates one of Australia's largest ground transportation fleets with over 10,500 vehicles that travel at least 206 million kilometres a year. Much of the fleet is used to collect and deliver different types of postal articles. However, Australia Post also operates 112 prime movers and 366 large trucks that can bulk transport mail within and between states. Australia Post is also a large customer for contract road transport used for the transportation of bulk mail.⁶⁸

Australia Post predominantly uses road, rail and air to bulk transport mail across its network in Australia. While interstate Express Post is transported by air to meet its guaranteed next day deadline, air haulage may also be used (some transport legs) for interstate delivery of ordinary letters and parcels so that Australia Post can meet its performance standards.

For mail that is bulk transported by air within Australia, Australia Post uses Qantas and Australia Air Express. Australian Air Express (AaE) is a joint partnership between

⁶³ Australia Post, *Annual Report 2003/04*, p. 20.

⁶⁴ Australia Post, *Annual Report 2004/05*, p. 21.

⁶⁵ Australia Post, *Annual Report 2003/04*, p. 20.

⁶⁶ Australia Post, *High Level Overview of Major Activities — Letters Network (Metro Scenario)*.

⁶⁷ *ibid.*

⁶⁸ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 22 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH3971~MO19,00.html>>.

Australia Post and Qantas. Australian Air Express operates a national linehaul and regional network that feeds into, and is fed by, the mail network operated by Australia Post. Australian Air Express has sole access to the locker space on some 500 daily Qantas passenger flights for interstate and inter-region transport of mail.⁶⁹

For mail that is bulk transported by road in Australia, Australia Post uses its own haulage fleet, mail contractors and Star Track Express. Star Track Express (STE) is an express road freight company that is jointly owned by Australia Post and Qantas. Star Track Express specialises in the business to business delivery of cartons, parcels, pallets, document satchels across Australia.⁷⁰ Star Track Express also offers an international expedited mail service and warehousing and logistics service.

Non-expedited parcels may also be transported by rail so that Australia Post can meet its quality targets of timeliness. For example, non-expedited parcels that are lodged in Sydney and dispatched for Perth and Adelaide may first be transported by truck from Sydney to the Dubbo rail point. However, ordinary letters destined for Perth would move directly from Sydney to Perth by air.

Mail Delivery

The number of points that Australia Post needs to deliver to is extensive — Australia Post services just under 10.3 million delivery points across Australia.⁷¹ Around 25 per cent of these delivery points are in rural or remote regions or on off-shore islands.⁷²

Delivery between Australia Post's network nodes

There are five types of mail sorting and sequencing nodes that prepare mail for delivery: a letter sorting centre in each state capital; a parcel sorting centre (Melbourne, Sydney and Brisbane), an inter-state and international mail sorting facility (Melbourne and Sydney), a regional mail centre and a regional or remote post office/agency.

At the central letter sorting hubs, mail is barcoded, postmarked and electronically sorted to postcode and delivery route for delivery in the city and near regional areas. The Dandenong Letter Centre can sort approximately 75 per cent of mail to delivery round. The remaining 25 per cent of mail that cannot be read by the optical character reader (OCR) to sort to round level at the DLC is either machined sorted by postcode or manually processed for dispatch to delivery centres.⁷³

In regions beyond the reach of dedicated letter or parcel sorting hubs, such as Canberra, all types of mail are sorted at regional mail centres for delivery. Interstate expedited

⁶⁹ Australian Air Express, 2008, Sydney, NSW, Australia, viewed on 16 April 2008, <http://www.aae.com.au/desktopdefault.aspx/tabid-2//19_read-3>.

⁷⁰ Australia Post, *Annual Report 2003/04*, p. 20.

⁷¹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 15.

⁷² Australia Post, 2008, Melbourne, Victoria, Australia, viewed 22 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3323_journey_of_a_letter,00.pdf>.

⁷³ Preston mail centre visit, 24 April 2008.

mail is handled for air or ground shipment to interstate delivery centres where it is sorted.

Dedicated parcel sorting centres in Melbourne, Sydney and Brisbane sort parcels to postcode. The parcels are then bulk dispatched to delivery centres in city or near regional areas. Parcels meant for dispatch interstate are handled, not sorted, by the parcel centres — parcel centres will only sort incoming interstate parcels and intrastate parcels for delivery.

At the gateway facilities, inbound international mail is sorted to delivery round for ground dispatch to delivery centres and outbound international mail is handled for air dispatch to delivery centres overseas. Expedited mail is also handled for air dispatch to delivery centres interstate (where sorting takes place) or sorted for ground dispatch to intrastate delivery centres.

For mail that does not terminate at the regional mail centres, sorted mail is transported from the mail centre to the delivery centres in the region. A regional or remote post office or agency may act as a sorting centre and a delivery centre — manually sorting and post marking mail that is lodged for local delivery.

A delivery centre is a facility where mail terminates and is sorted and sequenced for final delivery. Even a letter sorting hub such as the Dandenong Letters Centre, is a delivery centre. Letters, some parcels and Express Post articles that are designated for the DLC's service area, terminates at the DLC. The postal articles are sorted to delivery route (if they cannot be read by the optical character reader equipment) and then sequenced to delivery point — that is, by street name and number.

However, most of the mail sorted at dedicated letter and parcel sorting facilities and all the mail at the gateway facilities is bulk transported to the delivery centres that are either mail centres or post offices (the post offices and mail centres may include corporate post offices and business centres).

Like the dedicated letter and parcel sorting facilities, regional mail centres are also delivery centres. That is, bulk mail received and mail terminating at these regional mail centres is sorted and sequenced for final delivery. Many of the delivery centres are local post offices. Therefore, some local post offices act as collection, sorting and delivery centres for mail that is lodged and terminates in their service area.

Once delivery centres receive the bulk delivery of sorted mail (to postcode or delivery route) they engage in final sorting and sequencing for the delivery rounds. However, 60 to 75 per cent of mail sorted is already sorted to delivery routes, so that the majority of final sorting by the delivery centres is by street and street number.⁷⁴ Sequencing mail by delivery point involves manually lodging letters on special frames that sequences mail

⁷⁴ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 22 April 2008, <http://www.auspost.com.au/GAC_File_Metatile/0,,3323_journey_of_a_letter,00.pdf>, and Preston Mail Centre visit, 24 April 2008.

by street and street number.⁷⁵ The sequencing is time consuming and labour intensive process.

Final Delivery

One postal delivery round usually consists of 1,200 delivery points. The hub for these delivery points, where mail is sequenced for final delivery, is normally the local post office outlet, although letters or mail centres also act as local hubs, especially in the metropolitan areas of capital cities.⁷⁶

Australia Post has five modes of mail delivery that depend on the customer's location, cost effectiveness and the available transport infrastructure. The five modes of delivery are: street mail delivery; roadside delivery; private boxes; community bags; and counter delivery. Australia Post uses both its own employees and contractors for transport and delivery of mail services.⁷⁷

The most common mode of delivery is street delivery in built up areas. Delivery is usually by motorcycle or by larger vehicle for large volume customers. In these areas, there are at least 150 delivery points within 1.2 kilometres of a post office. Street deliveries are done in all weather and are provided by Australia Post employees and contractors.

In remote and regional areas roadside deliveries are provided when there are at least five households located further than 1.2 kilometres from a post office, depending on cost and weather considerations.⁷⁸

In regional areas, Australia Post employs contractors for the roadside delivery of mail. Mail is often delivered in addition to other services. For example, contractors service the area from Orbost, into the High Plains, and across the border into New South Wales. The postal route is 1,500 kilometres and there are 113 delivery points.⁷⁹

In some remote areas, mail delivery is by light aircraft. For example, the Airlines of South Australia is contracted by Australia Post to deliver mail from Port Augusta in South Australia to Boulia in outback Queensland. The delivery route is 2,500 kilometres and there are 25 delivery points (all are cattle stations).⁸⁰

⁷⁵ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 22 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3323_journey_of_a_letter,00.pdf>.

⁷⁶ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 14 April 2008, <http://www.auspost.com.au/GAC_File_Metafile/0,,3328_facts,00.pdf>.

⁷⁷ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 27.

⁷⁸ National Competition Council, *Review of the Australian Postal Corporation Act, Final Report*, volume 2, AGPS, p. 70.

⁷⁹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 23 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2972%257EMO19,00.html>>.

⁸⁰ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 23 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2972%257EMO19,00.html>>.

Private post boxes or locked bags are another delivery point. For a fee, private post boxes and locked bags offer security and earlier availability of mail at post office outlets and agencies.⁸¹

Mail may also be delivered by community and private bags by private contractors. If delivery methods, including roadside delivery, are unavailable, community and private bags provide inwards and outwards mail services to a local community.

Counter delivery is also offered by Australia Post. Counter delivery (Poste Restante or care of post office mail) is a service for customers who request mail pick up at Australia Post outlets.

2.5 The mail network in markets for non-reserved services

Australia Post operates in many markets for its non-reserved services and, as a result, faces different degrees of competition from other mail vendors. Australia Post is both a horizontally and vertically integrated firm in its non-reserved services. As a horizontally integrated firm, Australia Post offers an array of non-reserved mail services and ancillary products. As a vertically integrated firm, Australia Post offers upstream mail creation and production.

Horizontally integrated non-reserved services

The horizontally integrated segment of Australia Post in non-reserved services include:

- domestic and international expedited mail services (Messenger Post Courier, Express Post, Express Post Parcel, Express Post Platinum, Express Post International, Express Post Courier International);
- registered domestic and international mail;
- parcels and logistics; and
- other products and services.

Because Australia Post's reserved and non-reserved mail services largely share the same mail network infrastructure, Australia Post may benefit from economies of scale and scope (discussed below).

For example, many non-reserved postal articles use the same street post boxes. Express Post boxes are usually located next to ordinary street post boxes so that Australia Post can minimise costs by picking up expedited and non-expedited items from one location. Both non-reserved and reserved mail is transported between the network nodes by Australia Post or its contractors.

Both non-reserved and reserved articles are collected at Australia Post outlets and mail centres. Non-reserved and reserved articles are often sorted together at central mail

⁸¹ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 23 April 2008, <<http://www.auspost.com.au/BCP/0,1467,CH2149%257EMO19,00.html>>.

sorting facilities, mail centres and post offices. Australia Post delivery centres sort and sequence both non-reserved and reserved mail. Small Express Post items and reserved mail are usually delivered together. In regional areas, Express Post articles, parcels and reserved mail are delivered together by an Australia Post contractor. If over the counter delivery or community bags are the forms of delivery, non-reserved and reserved mail is also delivered together.

Further, by operating an extensive network for its reserved services, Australia Post can improve service performance and reliability of its non-reserved mail services. Australia Post's extensive retail network mutually reinforces its mail network. Many of the retail products, such as stationery and packaging, are complementary to postage of non-reserved mail items. Moreover, Australia Post's extensive retail network provides the convenience of lodging (and receiving) reserved mail, parcels and, in many cases, Express Post items.

The extensive retail network operated by Australia Post also means that in some metropolitan, regional and remote areas it may be one of few vendors that offer services such as mail related stationery, bill payment, banking, money transfers and identification and verification. The scope of services offered in one location in Australia Post's retail outlets mean that they act as a 'one-stop shop'.

Vertically integrated non-reserved services

The vertically integrated segment of Australia Post's non-reserved service is in its upstream electronic and print mail production. These services include: Easy Mail, eLetter, PrintSoft and Printpost. In offering electronic and print mail services, Australia Post competes with other mail houses and bulk mail generators.

Australia Post's horizontally and vertically integrated operations fall into three main business portfolios: Letters and Associated Services; Parcels and Logistics; and Retail Products. Australia Post faces different levels of competition in the provision of different non-reserved services.

Letters and Associated Services

Letters and associated services mainly comprise of the carriage of letters less than 500 grams, both domestically and internationally. However, Australia Post also offers an array of upstream mail services, such as Easy Mail, eLetter and Printsoft services.

Letters

In the non-reserved segment of letters, Australia Post's main competitors are the international carriers TNT, DHL and FedEx. TNT Australia, Toll Holdings and Australia Post have 10 per cent, 5 per cent and 4.9 per cent of the courier and express post market, respectively (2006).⁸²

TNT, a subsidiary of tntpost, a Dutch postal enterprise, is an international mail and expedited mail business that operates in over 200 countries. In Australia, TNT offers

⁸² IBISWorld, *Courier Services in Australia. J7112*, IBISWorld Industry Report, 1 August 2007, p. 22.

expedited door-to-door services for documents, parcels and freight. The expedited mail service has worldwide track and trace capabilities.

DHL, an express mail division of Deutsche Post, offers courier, express and parcel services. DHL offers international express mail, ground and air freight.

The FedEx Corporation provides time definite express mail services, day definite ground delivery (United States and Canada) and less than truckload freight delivery (United States and Canada). The Kinkos division of FedEx provides upstream document solutions and a business services retail channel. FedEx competes with Australia Post for international express freight between Australia and overseas. FedEx has 2.5 per cent of the courier market in Australia (2006).⁸³

Mail preparation, database and delivery management

In mail preparation, Australia Post's eLetter solutions offers specialised services such as desktop mail to encourage businesses to use mail as a communications medium. Major competitors in this area are Salmat, PMP and other mail generators.

Australia Post also offers address database management which involves acquiring, building and maintaining address information nationwide. Database management is offered as part of Australia Post's eLetter service. Many bulk mail providers such as Salmat also provide database management services.⁸⁴

Delivery management is also offered by Australia Post and this includes Post Office Boxes, Bag Rental, Mail Redirection and Mail Holding services.⁸⁵

Parcels and Logistics

The parcels and logistics portfolio includes Parcel Post, Express Post Parcels, Messenger Post Couriers, Post eParcel and Post logistics. The portfolio also includes Express Post Courier International, Express Post International, Air Mail and Sea Mail.

Australia Post's extensive network linkages and network infrastructure are concentrated in state capitals and regional cities. The clustering of Express Post boxes, post office outlets, business and corporate centres in densely populated areas and the consequent network benefits (discussed below) allows Australia Post to offer a cost effective and reliable parcel and expedited mail service. While Australia Post's extensive network may contribute to its relatively large market share of 4.9 per cent, the couriers and express post market is diffuse — the largest four firms have only 22.4 per cent of the market.⁸⁶

⁸³ *ibid.*

⁸⁴ Salmat BusinessForce, 2008, Sydney, NSW, Australia, viewed 16 April 2008, <<http://www.businessforce.com.au/solutions/content.aspx?SolutionID=166>>

⁸⁵ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 61.

⁸⁶ *ibid.*, p. 22.

Couriers compete with Australia Post in dense markets — that is, state capitals and regional cities where there is a large market for courier services. The relatively diffuse market shares suggest low sunk (irreversible costs) and capital costs. Low sunk and capital costs mean that the courier market is easily ‘contestable’. Firms with small start up costs (for example, a few delivery vehicles and a communications system) can offer courier services in competition with Australia Post.

The logistics services offered by Australia Post include distribution which, in turn, includes inventory, warehousing and freight forwarding.⁸⁷ Supply chain solutions are also offered — Australia Post offers end-to-end supply chain solutions from the origin of the manufacturer to the end consumer.⁸⁸ Some important competitors in the logistics market are Linfox, Toll and the K&S Corporation.⁸⁹

Retail and Financial Products

Australia Post’s retail portfolio is part of its horizontally integrated services that are complementary to mail collection and delivery network. Australia Post outlets offer: merchandise; bill payment, banking and money transfers; identification and verification services. With the exception of identification and verification services, there is a wide array of competitors for the products and services offered by Australia Post’s retail outlets.

2.6 Economics characteristics postal services

For Australia Post to fulfil its community service obligations (CSOs) and universal service obligations (USOs), it must possess an extensive mail collection, sorting and delivery network. However, there are elements of natural monopoly and network externalities associated with such network. Elements of natural monopoly and network externalities may generate cost and/or service benefits for Australia Post.

Cost and service benefits and natural monopoly

Cost benefits imply that Australia Post can provide reserved and non-reserved services at lower cost than if there are two competing postal networks. Service benefits relate to reliability and timeliness of delivery of reserved and non-reserved services. The network operated by Australia Post confers natural monopoly cost benefits in delivery and across the range of mail services it provides.

What is a natural monopoly? The necessary and sufficient criterion for a natural monopoly is cost subadditivity: Cost subadditivity is where a single firm can produce one or more products more cheaply than two or more firms.

⁸⁷ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 27 May 2008, <<http://www.auspost.com.au/postlogistics/logisticsExplained/services.asp>>.

⁸⁸ Australia Post, 2008, Melbourne, Victoria, Australia, viewed 27 May 2008, <<http://www.auspost.com.au/postlogistics/logisticsExplained/supplychain.asp>>.

⁸⁹ Linfox, 2003, Clayton, Victoria, Australia, viewed 27 May 2008, <<http://www.linfox.com/linfox>>;

K&S Corporation, 2008, Mount Gambia, South Australia, viewed 27 May 2008, <<http://www.ksgroup.com.au/corp/>>;

Toll, 2003, Melbourne, Victoria, viewed 27 May 2007, <<http://www.toll.com.au/>>.

Cost subadditivity for one product is known as economies of scale where, in the long run, one firm can produce a single product more cheaply than two or more firms.

Cost subadditivity for a bundle of products is known as economies of scope where, in the long run, one firm can produce a bundle of products more cheaply than if two more firms are to produce these products separately.⁹⁰

In the provision of postal services, Australia Post benefits from cost subadditivity in providing both a single service and a bundle of services. That is, economies of scale may characterise Australia Post operations in the delivery and economies of scope may characterise its collection, sorting and delivery operations.

Economies of scale

The postal service can benefit from economies of scale in delivery, sorting and mail transportation — with a doubling of inputs, such as labour and capital, the postal service can more than double its postal service output. That is, for a given delivery network, the costs of delivery do not increase proportionately with an increase in the delivery service.

Economies of scale arise particularly in the delivery and sorting segments of postal services — compared to one postal service, it would be more costly for two:

- postal delivery officers to deliver letters for a given area;
- mail centres or post offices to sort mail for a given area.⁹¹

There may be some economies of scale associated with the transportation of mail, but the economies that do exist are likely limited to small haulage.

Postal delivery

Two examples highlight why one postal delivery officer can deliver mail for a given delivery route at lower cost than two officers — that is, there are economies of scale associated with delivery.

The first economies of scale relate to the invariable cost of one mail delivery route and the variable cost of servicing one more delivery point within that route. If a postal delivery officer is already delivering mail to a particular street, the cost of delivering mail to one more address in that street is negligible and potentially below the average cost of doing so.

The second economies of scale relate to proportional changes in mail volumes and delivery points. Because there are fewer delivery points than letters — multiple letters

⁹⁰ J Panzar, 'Is Postal Service a Natural Monopoly?' in M Crew and P Kleindorfer (eds), *Competition and Innovation in Postal Services*, Kluwer Academic Publishers, Boston, 1991, pp. 222–223.

⁹¹ *ibid.*

are often lodged at one delivery point — an increase in the volume of mail will result in a less-than-proportionate increase in each article's delivery cost.⁹²

Sorting of mail

With increasing mail volumes, Australia Post has consolidated and centralised its mail sorting processes with dedicated parcel, letter and Express Post/international facilities in many states. Consolidation and centralisation of mail sorting suggests that there are economies of scale in automated-large scale sorting of mail. Indeed, Panzar argued that economies of scale in automated-large scale sorting become feasible with computerised optical character recognition.⁹³ At the Dandenong Letters Centre, for example, the machinery and technology employed would deliver economies of scale to small letter volumes. The minimum efficient scale of operations requires a large volume of mail to pass through the sorting facilities.

Transportation of mail

The transportation of mail may be subject to limited economies of scale. Panzar (1994) argued that short-haul transportation, such as intrastate mail haulage between post offices and mail centres, may be subject to economies of scale because of scheduling constraints (to ensure timeliness of mail delivery, trucks need to transport mail on schedule) and the need to operate some less than truckload schedules. However, long distance mail transportation is generally subject to constant returns.⁹⁴

Because there are limited economies of scale associated with transport operations, in non-reserved services, many small competitors can operate profitably and without significant cost disadvantages. Couriers such as DHL, FedEx and Fastway, have equal access to the public highways and airways in transporting mail and can compete effectively with Australia Post.

Economies of scope

Baumol argued that a firm can be defined as a natural monopoly if it can produce a bundle of products more cheaply than if these products are produced separately by different firms.⁹⁵ Australia Post is a multi-product firm that benefits from economies of scope by making use of one extensive collection, sorting and delivery network to sell many products. The economies of scope are drawn from two sources: cost subadditivity for product bundles and the peak-load structure of collection, sorting and delivery.

The first source is that multiple products can make use of the economies scale associated with one delivery network. That is, once the costs of establishing the network have been incurred, using the same collection, sorting and delivery network

⁹² J Panzar, 'Economics of Mail Delivery', in J G Sidak (ed), *Governing the Postal Service*, The AEI Press, Washington, 1994, p. 3.

⁹³ *ibid.*, p. 4.

⁹⁴ J Panzar, 'The Economics of Mail Delivery', in J G Sidak (ed), *Governing the postal service*, AEI Press, Washington, 1994, p. 4.

⁹⁵ W Baumol, 'On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry', *American Economic Review*, vol. 67, no. 5, 1977, pp. 809–822.

for multiple products avoids the duplication of such costs. Australia Post can offer an array of products at lower aggregate cost than if these products used separate networks — that is, as a multi-product firm, Australia Post benefits from economies of scope.

The second source of economies of scope is the peak-load structure of the mail collection, sorting and delivery service. Incoming mail is perhaps the main determinant of the capacity of the mail delivery network. Mail tends to arrive at a high rate for a brief period when it is collected after 6pm (after 5pm in regional areas). So that Australia Post can maintain its delivery standards, it must possess the physical and human capacity to collect and sort the mail within a limited timeframe.

Because outgoing mail to delivery centres can be more evenly spread throughout the day, the extra capacity means that outgoing mail is likely to be processed at lower cost than incoming, peak-load mail. By sharing the same common facilities for meeting both peak (collection and sorting) and off-peak (delivery) demand, Australia Post can operate its mail network at lower cost than if there are separate collection, sorting and delivery networks.

Network effects or externalities

Australia Post operates a national postal network that collects sorts and delivers mail.⁹⁶ The existence of such a network generates network effects or network externalities. A network externality/effect is defined as the change in benefit from a good or service for an individual when other people use the good or service. For postal services, the more collection and delivery points serviced by the postal network, the larger the benefit for new and existing users because more people are connected and can lodge and receive mail.

Network theory predicts that if one firm operates and services the network, the firm may possess considerable market power in pricing and service decisions. The market power arises for two reasons:

1. The original network has attracted enough users so that using a competing network confers little additional benefit because there are few users on the competing network.
2. Firms do not have access to the original network so that they cannot offer the same comprehensive service. Firms do not have access to Australia Post's collection infrastructure such as street post boxes and post offices, nor do they have access to the upstream delivery infrastructure of mail centres, post offices and postal agencies. Furthermore, while any competitor can deliver non-reserved mail to any of the 10.3 million delivery points in Australia, it is not profitable to provide the service on the same scale because of the natural monopoly elements associated with mail delivery. Australia Post may cost-effectively service many more delivery points than any competitor.

⁹⁶ J Panzar, 'Is Postal Service a Natural Monopoly?' in M Crew and P Kleindorfer (eds), *Competition and Innovation in Postal Services*, Kluwer Academic Publishers, Boston, 1991, pp. 224–225.

Implications

Because of Australia Post's universal and community service obligations, it operates an extensive postal network that is also used by its non-reserved services. Australia Post's extensive network confers cost and service benefits derived from the network's natural monopoly characteristics. Moreover, the network effect from Australia Post's extensive network may also bestow some market power in non-reserved services. There are two potential problems that arise from the above observations:

1. Australia Post could potentially exercise market power in its non-reserved services — that is, pricing above cost — by using the network established for its reserved services.
2. There is difficulty discovering the costs of reserved and non-reserved services, so that prices may exceed costs in one or both areas.

In expedited services, such as courier services, competition is intense. However, in non-expedited parcel services, it appears that there is less competition. Australia Post's large market share in ordinary parcel post suggests that this is an area in which Australia Post benefits most from economies of scale and scope. Australia Post's dominance in ordinary parcel post may also be derived from the network effects that are generated by Australia Post's extensive delivery network.

The cost and service benefits that arise from economies of scale and scope and network effects may give rise to the risk that prices for reserved and non-reserved services exceed the costs of collection, sorting and delivery. However, discovering if prices exceed costs is a difficult task. Because reserved and non-reserved services share the same collection, sorting and delivery network, there is difficulty in demarcating what costs are attributable to each service. Many of Australia Post's services use one collection, sorting and delivery network. Each service — ordinary post, Parcel Post and Express Post — has a high common cost component. Common costs are costs incurred in producing a group of products that cannot be directly attributed to any one product or service. So that the common costs incurred by Express Post, parcel post and ordinary mail are the costs of operating the collection, sorting and delivery network.

3 Regulatory framework

This chapter outlines the legislation relevant to the ACCC's assessment of Australia Post's draft price notification. While the formal price notification process has not been invoked at this stage, the ACCC has regard to all of the matters in its assessment of the draft price notification in order to fully inform the ACCC's decision in the event it receives a formal price notification from Australia Post. Relevant legislative instruments are attached at **Appendix B**.

3.1 Price notifications

As identified in Chapter 1, the ACCC's role in assessing proposed increases in the prices of Australia Post's reserved services falls within the scope of Part VIIA of the TPA. In particular, under s. 95X in Part VIIA of the TPA, the Minister, or the ACCC with the approval of the Minister may:

- declare goods or services to be 'notified' goods or services;
- declare a person to be, in relation to goods or services of a specified description, a 'declared person' for the purposes of Part VII of the TPA.

Declaration 75 was made on 12 February 1992. This Declaration provides that Australia Post is a declared person, and the carriage of reserved letter services and the carriage within Australia of registered publications are notified services for the purposes of division 4 of Part VIIA of the TPA.

In particular, Declaration 75 made under s. 21(1) of the former *Prices Surveillance Act 1983*⁹⁷ provides:

- (a) the provision of letter services reserved to Australia Post under Division 2 of Part 3 of the *Australian Postal Corporation Act 1989*, and the carriage within Australia of registered publications, to be notified services for the purposes of the Act; and
- (b) the Australian Postal Corporation to be, in relation to those services, a declared person for the purposes of the Act.

This declaration means that Australia Post must notify the ACCC if it proposes to:

- increase the price of a reserved (and therefore notified) service; or
- introduce a new service that would fall within the definition of reserved (notified) services; or
- provide an existing reserved letter (notified) service under terms and conditions that are not the same or substantially similar to the existing terms and conditions of that service.

⁹⁷ Declaration No. 75 was originally made under ss. 21(1)(a) and 21(1)(b) of the *Prices Surveillance Act 1983*. On 1 March 2004, the *Prices Surveillance Act* was repealed and replaced by Part VIIA of the TPA—Part VIIA essentially replicates the provisions that were formally contained in the *Prices Surveillance Act* and transition arrangements provide that a declaration made pursuant to ss. 21(1)(a) and 21(1)(b) has effect as though it was made under s. 95(X)(1) and 95(X)(2) respectively.

The ACCC must review price notifications and take such action, in accordance with Part VIIA, as it considers appropriate.⁹⁸ In performing its functions in relation to Australia Post's draft price notification, the ACCC has 'particular regard' to matters outlined in ss. 95G(7) of the TPA.

Subsection 95G(7) of the TPA provides:

In exercising its powers and performing its functions under this Part, the Commission must, subject to any directions given under section 95ZH, have particular regard to the following:

- (a) the need to maintain investment and employment, including the influence of profitability on investment and employment
- (b) the need to discourage a person who is in a position to substantially influence a market for goods and services from taking advantage of that power in setting prices
- (c) the need to discourage cost increases arising from increases in wages and changes in the conditions of employment inconsistent with principles established by relevant industrial tribunals.

The ACCC is not prevented from taking account relevant matters that are not contained in ss. 95G(7). However, the notion of 'particular regard' indicates that the ACCC must have regard to the criteria as fundamental elements of its analysis. The ACCC's approach to interpreting these criteria is outlined in detail in its *Statement of regulatory approach to assessing price notifications*.

While specific elements of the criteria under ss. 95G(7) relate to the declared person (for example, paragraph 95G(7)(b) relates to the prices levied by the declared person), the criteria relate to the broader implications of the proposed price increases on the Australian economy.

Thus, in relation to paragraph 95G(7)(a), investment and employment in the national economy will be promoted when firms produce goods or services efficiently and charge prices that correspond as close as possible to competitive levels. Ensuring that prices do not reflect the exercise of power by a service provider who is in a position to substantially influence a market for goods and service as per criteria 95G(7)(b) is consistent with criteria 95G(7)(b).

Economic efficient prices encompass the following elements:

- *productive efficiency*, which occurs when firms produce goods or services at least cost;
- *allocative efficiency*, which occurs when resources are used in areas where they provide the greatest value to society; and
- *dynamic efficiency*, which occurs when firms have incentives to invest, innovate and improve quality of service and reduce costs over time.

While a competitive benchmark may be lacking in firms subject to prices surveillance, economically efficient prices would, as in competitive areas, reflect least cost

⁹⁸ Subsection 95G(5) of the TPA.

production and include profit margins reflecting a return on capital commensurate with the risks faced by the firm.

Australian industrial relations legislation has undergone substantial change since the criteria in subsection 95G(7) were introduced. In particular, since the establishment of these criteria, wage determination has become decentralised. As a result, paragraph 95G(7)(c) has become less relevant. Nonetheless, the ACCC treats the level of wages and conditions as part of its consideration of the efficiency of the cost base under which the level of profitability implied by the proposed prices is assessed.

The approach to ss. 95G(7) of the TPA

In practice, the ACCC assessment of price increases proposed under the price notification provisions of the TPA is a cost based approach, unless has been directed by the Government otherwise. To inform its view of the consistency of the proposed price increases with the criteria under ss. 95G(7) of the TPA, the ACCC directs its attention to:

- the efficiency of the declared company's cost base; and
- the reasonableness of the rate of return that the declared company is seeking.

3.2 Direction 11

Consideration of the criteria under ss. 95G(7) of the TPA is subject to any direction issued by the Minister under s. 95ZH of the TPA. Relevant to the assessment of Australia Post's proposed increase in the price of reserved (notified) services is Direction 11, made on 14 September 1990.

In addition to providing advice to Government on the appropriateness of the pricing targets to be included in Australia Post's future corporate plans, Direction 11 specifies that where a price notification concerns a standard postal article⁹⁹ and registered publications, the ACCC, in having regard to the criteria under ss. 95ZG(7), must give special consideration to the following matters:

- Australia Post's obligation to pursue a financial policy in accordance with its corporate plans as set out in sections 31–41 of the Australian Postal Corporation Act and in particular the pricing targets contained in Australia Post's corporate plan
- the functions and obligations of Australia Post as set out in s. 14–16 and 25–28 of the Australian Postal Corporation Act as to such directions or notifications given to Australia Post by the Minister under the Act.¹⁰⁰

⁹⁹ A standard postal article is defined under s. 3 of the *Australian Postal Corporation Act 1989* as an article of a kind that, under the terms and conditions on which Australia Post supplies postal services, may be carried by post and weighs less than 250 grams, is less than 5 mm thick and is rectangular.

¹⁰⁰ Direction 11, made under ss. 95ZH(1) of the TPA.

Financial policy and targets

While Direction 11 specifies that the ACCC must give special consideration to Australia Post's obligation to pursue a financial policy in accordance with its corporate plans, most of those provisions have been revoked. Only sections 38 and 40 of the provisions referred to in Direction 11 remain operative.

Section 38 specifies the matters that Australia Post must have regard to in preparing or revising a financial target in its corporate plan. In particular, s. 38 of the APCA provides:

In preparing or revising a financial target for inclusion in a corporate plan under section 17 of the Commonwealth Authorities and Companies Act 1997, the Board shall have regard to:

- (a) the need to earn a reasonable rate of return on Australia Post's assets;
- (b) the need to maintain the extent of the Commonwealth's equity in Australia Post;
- (c) the expectation of the Commonwealth that Australia Post will pay a reasonable dividend;
- (d) the need to maintain Australia Post's financial viability;
- (e) the need to maintain a reasonable level of reserves, especially to make provision for:
 - (i) any estimated future demand for postal services; and
 - (ii) any need to improve the accessibility of, and performance standards for, the letter service;
- (f) any other commercial matters the Board considers appropriate;
- (g) the cost of carrying out Australia Post's community service obligations;
- (h) the cost of performing Australia Post's functions in a manner consistent with the general policies of the Commonwealth Government of which the directors are notified under section 28 of the Commonwealth Authorities and Companies Act 1997;
- (j) the cost of implementing any directions given by the Minister under section 49; and
- (k) the cost of any other obligations of Australia Post under this or any other Act that require it to act otherwise than in accordance with normal commercial practice.

Section 40 of the APCA enables the Minister to direct Australia Post to vary the financial target in Australia Post's corporate plan and the strategies and policies under which Australia Post proposes to carry out its CSOs.

Australia Post's functions and obligations

Direction 11 also requires that the ACCC must give special consideration to the functions and obligations of Australia Post.

Sections 14 to 16 of the APCA specify Australia Post's functions, while s. 26 to 28 of the APCA detail obligations placed on Australia Post in the performance of those functions.

Section 14 of the APCA states:

The principal function of Australia Post is to supply postal services within Australia and between Australia and places outside Australia.

Section 15 states:

A subsidiary function of Australia Post is to carry on, outside Australia, any business or activity relating to postal services.

Section 16 provides that Australia Post's functions also include that the carrying on of businesses or activities that are incidental to Australia Post's primary and secondary functions.

Section 25 of the APCA identifies that Australia Post faces three obligations – its commercial obligation (s. 26 of the APCA), community service obligations (s. 27 of the APCA), and its general governmental obligations (s. 28 of the APCA).

Section 26 provides:

Commercial obligation

Australia Post shall, as far as practicable, perform its functions in a manner consistent with sound commercial practice.

Section 27 provides:

Community service obligations

- (1) Australia Post shall supply a letter service.
- (2) The principal purpose of the letter service is, by physical means:
 - (a) to carry, within Australia, letters that Australia Post has the exclusive right to carry; and
 - (b) to carry letters between Australia and places outside Australia.
- (3) Australia Post shall make the letter service available at a single uniform rate of postage for the carriage within Australia, by ordinary post, of letters that are standard postal articles.
- (4) Australia Post shall ensure:
 - (a) that, in view of the social importance of the letter service, the service is reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business; and
 - (b) that the performance standards (including delivery times) for the letter service reasonably meet the social, industrial and commercial needs of the Australian community.
- (5) In this section:

"Australia" includes Christmas Island and Cocos (Keeling) Islands, but does not include any other external Territory to which this Act extends.

Section 28 provides:

General governmental obligations

Australia Post shall perform its functions in a way consistent with:

- (a) any general policies of the Commonwealth Government of which the directors are notified under section 28 of the Commonwealth Authorities and Companies Act 1997 ;
- (b) any directions given by the Minister under section 49; and
- (c) Australia's obligations under any convention.

Approach to giving special consideration to the matters identified in Direction 11 in the context of having particular regard to the criteria under ss. 95G(7) of the TPA

Besides having particular regard to the criteria under ss. 95G(7) of the TPA, the ACCC is obliged by Direction 11 to give special consideration to:

- Australia Post's obligation to pursue a financial policy and the pricing targets and Government endorsed financial targets in Australia Post's corporate plan; and
- the functions and obligations of Australia Post as set out in the relevant provisions of the APAC.

Australia Post has provided the ACCC with the corporate plan for the period 2007–08 to 2009–10 which has been submitted to the government. The corporate plan provides forecasts of financial performance, and information on Australia Post's forecast investments and financing program. The forecasts of future financial performance cover Australia Post's operations as a whole, its three business segments (letters and associated services, retail products and agency services, and parcels and logistics), and some broad categories within these business segments.

The ACCC notes that the corporate plan identifies a number of strategies designed by Australia Post to achieve the financial targets outlined in the corporate plan. While an increase in prices of reserved services is one strategy that may result in Australia Post meeting its financial targets, this is not necessarily the only strategy that enables Australia Post to achieve those targets. The ACCC considers that it should not ignore alternative strategies that Australia Post could implement to reach the financial targets in its corporate plan, such as restructuring its prices, increasing productivity and/or reducing its costs.

Given ACCC's obligation to give special consideration to the functions and obligations of Australia Post, Australia Post's obligation to act in a commercial manner is consistent with the principles identified in section 3.2 – that is, acting in a commercial manner involves behaving in a manner that promotes economic efficiency.

Australia Post's community service obligations and universal service obligations (USO) place constraints on the scope and prices of the letter services provided by Australia Post. The ACCC gives special consideration to these constraints in assessing the level and structure of Australia Post's proposed price increases. The impact of the CSO on Australia Post's operations is considered in detail in Chapter 4.

The ACCC is not aware of any general governmental obligations imposed on Australia Post under section 28 of the APCA, or any directions or notifications under the APCA that are relevant to the ACCC's assessment of Australia Post's draft price notification.

In light of ss. 95G(7) of the TPA and Direction 11, the ACCC considers that its assessment of Australia Post's draft price notification should be guided by the following:

- whether the cost base underlying the proposed price increases is efficient;

- whether proposed price increases will provide Australia Post with economically efficient investment incentives;
- whether the proposed price increases will provide consumers with economically efficient signals for the consumption of Australia Post’s services; and
- whether the proposed price increases are sufficient to enable Australia Post to meet the costs of its CSOs but do not reflect monopoly rents.

3.3 Application of the regulatory framework

Australia Post’s proposal

In support of its proposed increases in the prices of reserved services, Australia Post notes that the proposed price increases represent a real reduction of around 6 per cent, given that the consumer price index (CPI) increased by 15 per cent over the period from January 2003 to June 2008.¹⁰¹ Further, Australia Post also points out that the proposed increases in pre-sort prices in its draft price notification represent the first general increase to pre-sort letters since January 1992.¹⁰²

However, such information alone does not fully inform a decision on whether or not the price increases proposed by Australia Post are consistent with the legislative criteria. An assessment of whether or not the proposed price increases are consistent with the criteria begins with an assessment of whether or not the proposed price increases are commensurate with their forward looking costs, taking account of the expected changes in Australia Post’s productivity, and demand.

Noting the ACCC’s focus on the efficiency of the cost base and reasonableness of the rate of return in assessing price notifications, Australia Post has modelled the revenue that it expects its proposed price increases to generate in the future, using a post tax revenue model (PTRM). The PTRM was used by the ACCC in the Australia Post 2002 notification.

Australia Post contend that the proposed increases in the prices of its reserved services will generate revenue marginally less than the required revenue that is calculated by the PTRM. Australia Post also note that:

- ‘...the cost base for the domestic reserved letters business is efficient’
- ‘...volume growth for domestic reserved letters has been low at around 0.3% per annum (since 2001/02): this is in stark contrast to the 1990s where volume growth averaged almost 4.5% per annum.’
- ‘there is reduced potential for ongoing productivity improvement within Australia Post’

¹⁰¹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 5.

¹⁰² *ibid.*

- ‘Australia Post is required to continue to fund its Community Service Obligations (CSO) and meet its regulated performance standards’
- ‘Australia Post believes that the proposed prices provide for a reasonable rate of return.’¹⁰³

The ACCC’s assessment approach

As identified above, the ACCC considers that in light of the criteria outlined in ss. 95G(7) of the TPA and Direction 11, the ACCC should assess the proposed increases in the prices of reserved services on the basis of the principles of economic efficiency. However, the assessment will consider Australia Post’s financial obligations and functions, such as its CSO and performance standards regulations.

Where a firm is a monopoly provider of services, fulfilling its commercial obligations to shareholders by maximising profits may come at the expense of economic efficiency. In particular, where proposed price increases over-recover the efficient costs of providing reserved services, such prices are likely to reflect a potential abuse of the monopoly’s market power.

The ACCC applies the PTRM in informing its view on whether or not the proposed price increases are expected to recover the efficient costs of providing the declared services.

The PTRM is applied in the context of Part VIIA of the TPA. Given the PTRM’s specificity, it is not identical to that applied in other industries. In particular, while the formulation of the model is similar, the lack of a fixed regulatory period under Part VIIA of the TPA means that efficiency benefit sharing schemes are difficult to implement. The difficulty of implementation may impact on the incentives for cost efficiency for both the period of analysis and for the duration of the proposed price increases (discussed below).

By ensuring that the proposed price increases generate revenue that is sufficient to recover the firm’s efficient costs (including a reasonable rate of return) of providing the services, the ACCC is ensuring that the proposed prices are not inflated to excessive levels. This undertaking addresses ss. 95G(7)(b) — that is, ensuring that the service provider does not take advantage of the market power associated with that position in setting prices.

Further, by enabling the service provider to recover the costs of investment associated with the provision of the declared services (that is, the return of capital (Depreciation) and the return on capital (WACC)), ss. 95G(7)(a) is addressed.

Direction 11 obliges the ACCC to give special consideration to the financial targets within Australia Post’s corporate plan. Amongst other things, the financial targets include return on assets for some reserved letter services. However, the ACCC considers that the return on capital applied to assess Australia Post’s proposed price increases should be assessed from a benchmarking perspective in light of capital asset

¹⁰³ *ibid.*, p. 5 – 6.

pricing model framework separate from the internal targets established by Australia Post in its corporate plan.

The determination of the WACC in this framework better estimates the opportunity cost of investing in Australia Post's operations. Such an approach has superior consequences for economic efficiency — setting a rate of return below the opportunity cost of investing in Australia Post's operations could make continued investment unattractive for the owner. Conversely, allowing prices to reflect a rate of return above the opportunity cost of investing in Australia Post's operations would distort signals to consumers and investors, resulting in a misallocation of resources and sub-optimal economic outcomes.

While the PTRM can determine if the prices proposed by Australia Post recover the efficient costs of reserved services, this is dependent on:

1. the successful separation of the costs of reserved and non-reserved services; and
2. the level of disaggregation of the costs of providing reserved services.

Further, an important component of the PTRM, as applied in other regulated industries, is the existence of a fixed path of prices over the course of the regulatory period (discussed below).

Nature of the costs of providing Australia Post's reserved services

As discussed in Chapter 2, there is substantial overlap in Australia Post's reserved and non-reserved operations. The overlap of Australia Post's operations is particularly evident in Australia Post's distribution network. For example, Australia Post's collection network of post boxes and post offices are used to receive all of Australia Post's mail services. Similarly, a wide variety of mail services are delivered to households through Australia Post's mail centres, post offices and postal delivery officers.

From an economic perspective, Australia Post will deliver mail more efficiently using the same distribution network where possible, rather than providing separate networks for each mail service. As outlined in Chapter 2, the provision of a number of different services using one distribution network may enable Australia Post to benefit from economies of scale and scope.

While there are cost advantages associated with the joint provision of a number of different mail and other services, there is a practical difficulty disassembling the costs for each mail service. As a result, there is a difficulty using models, such as PTRM, to assess whether or not the proposed price increases will result in a reasonable level of cost recovery.

Because the costs of providing reserved and non-reserved services are jointly incurred, it is difficult to accurately assess the efficient costs of reserved services. Moreover, in the regulatory framework that determines the prices of reserved services, there is an incentive for the vendor to disproportionately assign costs to the reserved services so that price increases will be granted.

There are two alternative approaches to assessing the proposed price increases in this context — one in which the profitability of all services that use the distribution network is considered when assessing the proposed price increases for reserved services, and one in which a separation is made between the costs of providing reserved and non-reserved services.

Australia Post has submitted a financial model that separates the costs of providing reserved and non-reserved services in support of its proposed price increases. Further, Australia Post submits that it has allocated its costs, revenues and assets between reserved and non-reserved services in the same way it allocates costs for purposes of its record keeping obligations under the record keeping rules.

While the record keeping rules were established by the ACCC, these rules do not prescribe the the approach that should be taken to allocating costs between Australia Post's services. While this allocation has been made by Australia Post for the purposes of the ACCC's cross subsidy test, the ACCC has not, up to this point, conducted a detailed assessment of Australia Post's approach to allocating costs and assets between reserved and non-reserved services for the purposes of its cross subsidy test.

The decision to adopt a single or dual till assessment of profitability associated with the proposed increases in the prices of reserved services depends on the delineation of reserved and non-reserved services. Where a firm provides regulated and unregulated services using the same infrastructure and that firm has some market power in the provision of both services, the firm is able to recover more than its costs (including the costs shared between the regulated and unregulated services). If the profitability of all services is considered together in the financial model, while the prices of the unregulated services would remain unconstrained, the decision of whether or not the prices of the regulated services should increase could depend on the extent to which the regulated firm can recover the shared costs from unregulated services.

However, there are implications of binding the assessment of proposed price increases for regulated services to unregulated services. Specifically, such a regulatory regime could impact on incentives for cost efficiency for a firm's unregulated services.

Thus, the assessment of Australia Post's proposed price increases turns on the reasonableness of the cost allocation methodology used in separating the costs of reserved and non-reserved services.

The ACCC has previously applied a dual till approach to assessing the proposed increases in the prices of reserved services in its assessment of Australia Post's 2002 draft price notification. However, in this decision the ACCC noted that while '...the basic principles of activity based-costing and the nature of Australia Post's typical cost drivers provide a theoretical reasonable basis for cost allocation and price setting under regulation'¹⁰⁴, because of the 'complexity and voluminous nature of Australia Post's costing system, it has not been possible for the Commission to assess the detailed application and data used in the time available for this assessment.'¹⁰⁵

¹⁰⁴ ACCC, *Australian Postal Corporation – Price Notification Decision*, October 2002, p. 49.

¹⁰⁵ *ibid.*

Therefore, before the ACCC can inform its view whether the proposed price increases recover the efficient costs of providing reserved services, the reasonableness of Australia Post's cost allocation methodology needs to be assessed.

Level of disaggregation

Australia Post has proposed in excess of 100 changes in the prices of reserved services. However, the PTRM provided by Australia Post does not link costs to each of the proposed price changes – a number of proposed price changes apply to 'pools' of costs.

Thus, the PTRM only provides broad guidance on the extent to which the proposed price increases for reserved services are expected to recover their efficient costs. The broad guidance may be a practical constraint given the many prices for reserved postage services (this is a particular issue for pre-sort prices which depend on size/weight, destination and time sensitivity).

As a result, there is a degree of arbitrariness in how prices are set so that costs of providing non-reserved services can be recovered. Further, Australia Post also notes that the prices of some letter services will necessarily not recover the costs of those services – in particular, the BPR. Australia Post submit that:

‘Carriage of the Ordinary Small Letter at a uniform rate is central to the CSOs. Pricing of the BPR reflects the need to maintain an affordable rate. Consequently, the BPR will not always fully recover the costs of providing these services and as such, prices for other letter services will contain a cross subsidy to the BPR.’¹⁰⁶

Further Australia Post also submit:

‘Subject to this need to cross subsidise letter products, letter prices have been set to achieve an appropriate aggregate rate of return for the letters business as a whole.’¹⁰⁷

Where the level of disaggregation in the financial model is problematic — that is, prices cannot be linked to changes in costs and cost constraints have not been adhered to by Australia Post — it can provide broad guidance for assessing price increases and efficient cost recovery.

Duration of the proposed price increases

A key element of Australia Post's proposed price increases is its desire for the prices of reserved services to be reviewed annually. Australia Post submits that any period longer than this would:

- require price rises that may be too large in view of the maturity of the letter market; or
- result in an inadequate profit for the domestic reserved letter service.¹⁰⁸

¹⁰⁶ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008 p. 58.

¹⁰⁷ *ibid.*

Further, Australia Post indicates that it would be looking to increase the prices of reserved services progressively over time, without the need for full reviews of the prices of reserved services.

A key concern with such an approach is the implications for cost efficiency— where a regulated firm faces a constant price over a period of time it has an incentive to increase its profits by reducing its costs. However, in the absence of such a constraint, the regulated firm can simply seek to recover increased costs through higher prices. Such a regime may have implications for the incentives of the regulated firm to operate efficiently over time.

Structure of the ACCC's preliminary view

The ACCC's consideration of Australia Post's proposed price increases involves analysis of components of the financial model determined by Australia Post on which its proposed increases in the prices of reserved services are based. The application of the regulatory framework by the ACCC in the assessment of Australia Post's proposal will proceed as follows:

- consideration of the costs Australia Post faces in complying with its CSO and other regulated performance standards, and how those costs are incorporated into the model used to inform the ACCC's assessment of the proposed price increases – Chapter 4, Community service obligations;
- assessment of the approach applied by Australia Post to make a separation of the costs of the elements of its mail distribution network between reserved and non-reserved services – Chapter 5, Cost allocation;
- assessment of the demand forecasts provided for incorporation into its financial model and TFP analysis, and consideration of the price elasticity of demand for different mail services – Chapter 6, Demand for letter services;
- analysis of the costs that Australia Post is proposing to recover through prices, including consideration of the scope of the asset base, and Australia Post's forecast capital expenditure – Chapter 7, Costs;
- assessment of the total factor productivity analysis prepared by Meyrick and Associates on Australia Post's forecast productivity – Chapter 8, Australia Post's productivity;
- assessment of Australia Post's proposed WACC estimated by Capital Partners and Australia Post – Chapter 9, Return on assets;
- merging of the assessment components of the financial model into the PTRM framework, and consideration of the extent to which the proposed price increases are expected to recover efficient costs – Chapter 10, Financial model;

¹⁰⁸ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008 p. 7.

- Chapter 11, The ACCC's preliminary view.

4 Community service obligations

This chapter examines Australia Post's universal service obligations and its community service obligations and how these obligations might influence the ACCC's assessment of Australia Post's price notification.

Australia Post is required to collect and deliver letters to all but the most remote parts of Australia, even if the costs exceed the revenues. This obligation to collect and deliver letters around the country is known as Australia Post's USO.

Australia Post could potentially earn higher profits if it can charge more than the uniform rate to deliver some letters. When other private companies would charge a higher rate or not provide the service at all, Australia Post is performing a CSO.

4.1 Legislative framework of USOs and CSOs

Australia Post's community objectives are set out under section 27 of the APCA and state that:

- (1) Australia Post shall supply a letter service.
- (2) The principal purpose of the letter service is, by physical means:
 - (a) to carry within Australia, letters that Australia Post has the exclusive right to carry; and
 - (b) to carry letters between Australia and places outside Australia.
- (3) Australia Post shall make the letter service available at a single uniform rate of postage for the carriage within Australia, by ordinary post, of letters that are standard postal articles.
- (4) Australia Post shall ensure:
 - (a) That, in view of the social importance of the letter service, the service is reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business; and
 - (b) That the performance standards (including delivery times) for the letter service reasonable meet the social, industrial and commercial needs of the Australian community¹⁰⁹

Universal service obligations

Section 27 of the APCA requires Australia Post to deliver standard sized letters to all but the most remote parts of Australia. This obligation to deliver letters almost universally within Australia is known as Australia Post's USO.

As outlined in section 27 of the APCA, the USO imposes the following conditions on Australia Post's letter delivery service:

- Australia Post must provide a letter service to almost all parts of Australia at a single uniform price;

¹⁰⁹ *Australian Postal Corporation Act 1989*, section 27.

- the letter service must be reasonably accessible to all Australians; and
- reasonable performance standards must be met in the delivery of letters.

The USO only relates to the delivery of standard postal articles. A standard postal article is one that weighs less than 250 grams, is less than 5mm thick and is rectangular. The USO does not relate to letters larger than the standard size or to the delivery of other services such as parcels, express post articles, courier services or the availability of financial service or maintenance of post offices.

Compliance with service standards

Australia Post's letter performance can be assessed against the conditions imposed by the USO relating to price, access and delivery standards.

Under section 27(4)(b) of the APCA, Australia Post must meet the performance standards, including delivery times, for the letter service to meet the social, industrial and commercial needs of the Australian community. This section of the APCA is satisfied if Australia Post meets performance standards specified in regulations made under section 28C of the APCA. The prescribed performance standards must relate to:

- (1) the frequency, speed or accuracy of mail delivery; or
- (2) the availability or accessibility of :
 - (a) post-boxes or other mail lodgement points
 - (b) offices of Australia Post or other places from which Australia Post products or services may be purchased.

According to Australia Post's draft notification, it has continued to meet its required performance standards in 2006–07. Australia Post's performance against the standards is subject to independent audit by the Australian National Audit Office.

The actual and required performance standards as specified in the Australian Postal Corporation (Performance Standards) Regulations are shown in Table 4.1. for the five years period 2002–03 to 2006–07.

Table 4.1 Australia Post's required versus actual performance standards 2002–03 to 2006–07

<i>Standard</i>	<i>Required performance</i>	<i>Australia Post's actual performance</i>				
		2002-03	2003-04	2004-05	2005-06	2006-07
Number of street post boxes	10 000	15 139	15 238	15 425	15 436	15 606
Delivery timetable	Maintained	Maintained	Maintained	Maintained	Maintained	Maintained
On time delivery of non bulk letters	94%	96.50%	95.50%	94.90%	95.60%	96.30%
Points to receive delivery 5 days per week	98%	98.80%	98.80%	98.70%	98.70%	98.70%
Points to receive delivery no less than twice	99.70%	99.90%	99.90%	99.90%	99.90%	99.90%
Retail outlets	4 000	4 493	4 477	4 474	4 462	4 449

Source: Australia Post annual reports.

Australia Post has consistently met the performance standards over the last five years. The number of street post boxes has increased steadily over the five year period while the number of retail outlets has declined.

Community service obligations

As mentioned, under section 27 of the APCA, Australia Post is required to deliver letters at a uniform rate to almost anywhere in Australia. In the absence of this USO, Australia Post would probably charge more than the uniform or basic postage rate to deliver some letters, such as letters to remote parts of Australia.

However, by delivering all letters at a uniform rate, Australia Post is performing a community service obligation. The uniform rate fulfils the CSO because Australia Post is providing a service that a private company would either choose not to provide or would provide at more than the current uniform rate of 50 cents.

Cost of community obligations

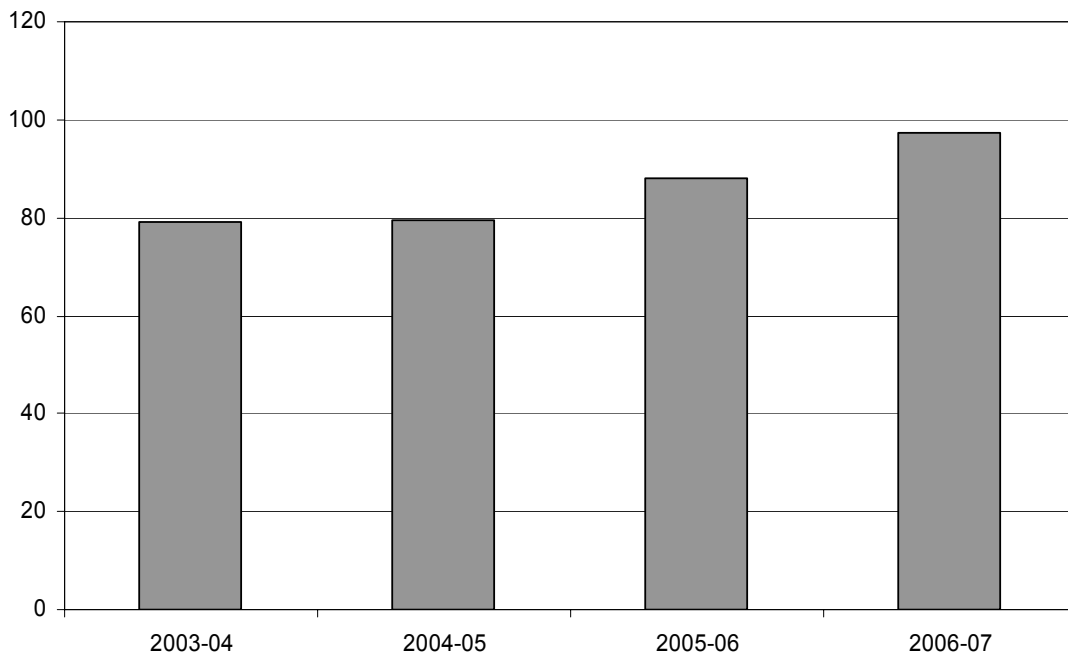
The financial cost to Australia Post associated with meeting its USOs arises when the charge made for a particular service does not recover the cost of its delivery.

Australia Post calculates the size of its letter delivery CSO using an avoidable cost methodology. Under this methodology, the cost of a CSO is the net cost that could be

avoided over the long term if the service was not supplied. The net cost is the cost avoided less the revenue earned on the service. The revenue must be less than the cost avoided if the service is to be a CSO. Australia Post estimated the net cost in 2006—07 of its CSO was \$97.3 million.

Figure 4.1 illustrates Australia Post’s CSO costs for the period 2003—04 to 2006—07.¹¹⁰ The estimated net cost of Australia Post’s CSO has risen by nearly \$20 million since 2004—05.

Figure 4.1: Australia Post’s annual CSO cost 2003–04 to 2006–07 \$ million



Source: Australia Post annual reports, 2003-04, 2004-05, 2005-06 and 2006-07.

Australia Post’s CSOs impose a cost structure that is higher than would be the case with a fully commercial operation. This effectively means that Australia Post’s CSOs prevents Australia Post from having complete control over its costs.

Charging a uniform rate of postage is also a constraint on Australia Post’s discretion in setting prices. In particular, this uniform or basic postage rate forms the basis of Australia Post’s letter pricing structure.

CSO funding

The requirement under section 27 of the APCA that Australia Post deliver letters at a uniform charge to almost anywhere in Australia means that the cost of delivering some letters can be significantly higher than the postage charged.

¹¹⁰ CSO costs were not used prior to 2003-04 due to a change in the method used to calculate inward terminal dues, which led to an increase in the average unit revenue per incoming small letter from overseas countries, and therefore a significant decrease in estimated CSO costs.

The reserved letter service allows Australia Post to average the costs of letter delivery across all delivery points. Australia Post uses the profits generated from delivering letters on routes where the costs are lower than the uniform rate (such as metropolitan routes) to subsidise the losses sustained in delivering letters on routes where costs exceed the uniform rates (such as rural and remote routes).

The cost information provided to the ACCC allocates Australia Post's fully distributed costs between of Australia Post's services. Thus, while there is no separate accounting of CSO costs in the financial model applied by the ACCC in assessing Australia Post's profitability, the cost information in the financial model includes the Australia Post's CSO costs (which are allocated between services) in the financial information provided by Australia Post.

4.2 Direction 11

Relevant to the ACCC's assessment of Australia Post's proposed price increases is Ministerial Direction No. 11.

Direction 11 requires the ACCC to give special consideration in its assessment of Australia Post's pricing proposal to:

- Australia Post's obligation to pursue a financial policy in accordance with its corporate plans as set out in s. 31–41 of the APCA and in particular the pricing targets contained in Australia Post's corporate plan; and
- the functions and obligations of Australia Post as set out in s. 14–16 and 25–28 of the APCA.

Therefore, while the ACCC will consider efficiency of the cost base and the reasonableness of the rate of return that Australia Post is seeking, it must also give special consideration to the functions and obligations of Australia Post.

That is, Australia Post's costs will be higher than would be the case in the absence of its CSOs, the ACCC must consider these costs in its assessment.

Nevertheless, the ACCC expects Australia Post to provide its CSO in a cost efficient manner. For instance, Australia Post does have some discretion over the way it meets its CSOs and can choose appropriate technology to meet its CSOs efficiently.

4.3 ACCC's view

Australia Post faces a statutory requirement to collect and deliver 'standard postal articles' at a uniform rate throughout Australia. Australia Post also has a requirement to provide a reasonably accessible and equitable service to all people in Australia. These requirements mean that Australia Post faces a higher cost structure than a firm would face in providing the same service in the absence of such statutory requirements. However, given these obligations Australia Post has been provided with legislated monopoly over the provision of reserved services.

The ACCC acknowledges that the imposition of these CSOs mean that Australia Post's costs will be higher than those that would be found in a purely commercial service

provider. Similarly, the ACCC accepts the policy of providing services at a uniform rate throughout Australia requires profitable mail routes cover the shortfall of those routes where efficient costs exceed the uniform postage rate.

The ACCC also accepts the uniform rate of postage as a constraint upon Australia Post's discretion in pricing. Moreover, this uniform, or basic postage rate, is the foundation of Australia Post's letter pricing structure.

In assessing Australia Post's draft notification, the ACCC has taken into consideration the impact of the CSO and USO on the efficiency of Australia Post's cost base in accordance with Part VIIA of the TPA Act. The ACCC has also given special consideration to the functions and obligations of Australia Post in its assessment of the pricing proposal in line with the requirements of Direction 11.

Australia Post appears to be adequately meeting its CSO, albeit at a significant annual cost. However, the ACCC acknowledges that the CSO imposes a cost structure which is higher than would otherwise be the case. This higher cost structure has been allocated between Australia Post services in the cost information provided by Australia Post, and is used in the modelling of whether the proposed prices for Australia Post's letter services are sufficient to recover Australia Post's costs (i.e. is inclusive of the costs of complying with its USO and CSO obligations).

5 Cost allocation

As outlined in Chapter 2, Australia Post's extensive collection and delivery network is used by Australia Post to provide all of its mail services. Because Australia Post provides all of its mail services using one collection and delivery network, it benefits from economies of scale and scope, such that it can provide this bundle of services at a lower cost than if it provided each of these services separately.

Australia Post's reserved letter services are a subset of the services Australia Post provides using its collection and delivery network. Other non-reserved services provided by Australia Post, including large letters, express post and parcels are also provided using elements of this network.

The allocation of costs is relevant to the ACCC's assessment of Australia Post's draft price notification. The assessment involves determining if an appropriate separation has been made between the costs of providing reserved and non-reserved services for the purpose of the financial model of Australia Post. An assessment of the cost separation between services is important — where a cost-based approach to price determination is applied, there is an incentive for a regulated firm to over-allocate costs to the regulated services because this would result in higher prices.

In Australia Post's approach to the allocation of these costs, it has 'modelled the proposed prices using the PRTM approach adopted by the ACCC in the 2002 decision'¹¹¹, and considers that 'Australia Post's proposed prices ... would not generate revenue in excess of the required revenue as based on efficient costs and a reasonable rate of return.'¹¹²

The ACCC has sought independent advice on the approach that Australia Post has taken to the allocation of costs from WIK Consult GmbH (WIK).

5.1 Scope of Australia Post's shared costs

Costs that are shared between reserved and non-reserved services include operating costs (such as labour, fuel, and depreciation) and assets (such as land, buildings, sorting machinery, and vehicles).

In economic terms, these shared costs are joint or common costs. Costs can be considered to be joint when they are required to produce 'joint products' that are produced in fixed proportions (such as wool and meat from sheep). Common costs are incurred when the same equipment is used to produce A or B, and when producing one, some capacity for producing the other is foregone. For this discussion, the term 'shared costs' will be used to refer to those of Australia Post's costs that are both joint or common.

¹¹¹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 54.

¹¹² *ibid.*, p. 55.

The ACCC sought clarification from Australia Post on the costs shared between reserved and non-reserved services. In response, Australia Post indicated that the values shown as attributable in schedules 2 and 5 of the 2006/07 that would generally and materially be identified as joint direct costs between reserved and non-reserved services.¹¹³ However, Australia Post indicated that there were some examples within this figure of items that may be attributed directly to non-reserved services, such as dedicated parcel centres.¹¹⁴

The 2006/07 ACCC report *Assessing cross-subsidy in Australia Post*, provides information on the proportion of Australia Post's costs that are classified as attributable in its submission to the RAF. This report provides aggregated information from schedule 2 of Australia Post's submission in response to the RAF. As outlined in the RAF, schedule 2 includes employee, motor vehicles, accommodation, depreciation, amortisation, general administration and other costs. In contrast, schedule 5 of the RAF is a schedule of capital employed and relates to assets.

Table 1 of this report indicates that of the total fully distributed cost of \$3936.2 million for 2006/07, \$3136.1 million was identified by Australia Post as attributable. Table 1 indicates that 80 per cent of Australia Post's operating costs are shared between reserved and non-reserved services.

WIK also provided the ACCC with an estimate of the proportion of Australia Post's costs that were shared between reserved and non-reserved services. Taking a conservative approach, WIK found that approximately two thirds of Australia Post's total costs are shared between reserved and non-reserved services.

Thus, assuming Australia Post's estimate is an upper bound, and assuming that WIK's estimate is a lower bound, between 66 and 80 per cent of Australia Post's total costs are shared between reserved and non-reserved services. However, the shared costs are costs other than assets, and as such does not provide information on the scope of assets shared between reserved and non-reserved services.

5.2 Shared costs and pricing

The ACCC considered the economics of cost allocation in detail in its assessment of Australia Post's previous price notification in 2002. In identifying the scope of shared costs between Australia Post's reserved and non-reserved services, the ACCC noted that economic principles provided some guidance on how these shared costs should be reflected in prices.

That is, that prices:

- should not generate revenues for any subset of services which exceed the stand-alone costs of those service; and

¹¹³ Note that 'joint direct costs' in Australia Post terminology refer to costs that are shared between its reserved and non-reserved services. Joint direct costs is not the same as 'joint costs' in economic terminology.

¹¹⁴ Australia Post, Response to the ACCC's questions of 1 April 2008.

- should not generate revenues less than the incremental costs of providing those services.

Incremental costs and stand-alone costs are economic concepts that are defined in the ACCC's cross subsidy reports. Incremental costs are the additional costs incurred by producing a good or service in addition to other goods or services the firm produces. Stand-alone costs are the costs of producing each output (good or service) in isolation.

The ACCC noted that in the context of pricing, incremental cost should be viewed over the long-run when all resources can be replaced. The ACCC noted that the consequence of this was that in contrast to the short-run, where the cessation of a service would mean that 'fixed' costs would continue to be incurred, in the long-run a greater proportion of costs would be avoidable.

However, in practice, the boundaries of incremental and stand-alone cost did not provide much guidance for the pricing of individual services, given that setting prices at incremental cost would not recover total costs (because long-run incremental costs would exclude shared costs), and pricing at stand-alone costs would over recover total costs.

Other economic principles, such as Ramsey-Boiteux, could be used to allocate shared costs between services. The ACCC also considered Australia Post's approach of allocating costs using various cost drivers in an activity-based costing methodology.

In the ACCC's assessment of Australia Post's 2002 price notification, it expressed the view that in Australia Post's cost allocation methodology, costs should be allocated according to their attributable costs plus a share of common costs. The ACCC also considered that, provided the values of specific drivers are appropriate, products should be priced above their incremental cost, and that the cost of reserved services should not exceed stand-alone costs. The ACCC also noted that if Australia Post's fully distributed costs are used as the basis for setting prices — as under the Commission's profitability analysis — then prices should be free of the problems of subsidisation or excessive cost loading. The ACCC expressed the view that the basic principles of activity based costing and the nature of Australia Post's typical cost drivers provided a theoretically reasonable basis for cost allocation and price setting under regulation.

However, due to the complexity and voluminous nature of Australia Post's costing system, the ACCC could not express a view on the detailed application of Australia Post's costing methodology and data used at the time of the assessment.

5.3 Australia Post's approach to cost allocation

Australia Post has submitted that its approach to cost allocation for the purposes of the current price notification is consistent with the approach it takes to cost allocation for the purposes of record keeping rules (RKR) used to inform the ACCC's cross subsidy testing report.

In particular, Australia Post submits:

Cost allocation to products in 2006/07 and in 2007/08 is made in accordance with sections 5-7 of the Regulatory Accounting Procedures Manual (RAPM) which has been provided to the ACCC in accordance with section 23 (6) of the Record Keeping Rules.

Allocations for the pricing year 2008/09 are extrapolations from the 2007/08 data using similar allocation principles.¹¹⁵

In relation to the allocation of assets, Australia Post submits:

Consistent with the allocation of costs, asset values are allocated to products according to procedures specified in the RAPM (chapter 8), which has been provided to the ACCC in accordance with section 23 of the RKR.

However, while Australia Post's approach to complying with the RKR has been audited on an annual basis, it has not undergone detailed review by the ACCC prior to Australia Post's submission of the current draft price notification.

5.4 Interested parties views

The ACCC sought views on the key drivers of costs collection, sorting and delivery services provided by Australia Post, and how these drivers could be used to inform an assessment of the allocation of costs between the different letter services.

The MMUA submitted a number of points in response to the ACCC's invitation to comment on the allocation of costs:

- There should be transparency of the costing methodologies and all stakeholders should have the opportunity to comment on Australia Post's costing methodology.
- Reserved services should not be used to cross-subsidise non-reserved services.
 - The MMUA is satisfied that the ACCC has the power to set record keeping rules for Australia Post and has the power to annually monitor cross-subsidisation.
- The reserved letter categories of PreSort and ordinary should be distinct because PreSort does not utilise:
 - most of Australia Post's collection infrastructure,
 - a large part of its sorting infrastructure.
- The costs for PreSort and ordinary should be clearly defined, subject to the record keeping rules and monitored annually. The costs saved through bulk mail generation and lodgement are not recognised as cost factors. Thus the MMUA has difficulty commenting on the costs of bulk mail operations other than to indicate that there is a deficiency in the system.
- The MMUA contend that there is no transparency regarding the actual cost of, and margins from, different reserved letter services.¹¹⁶

¹¹⁵ *ibid.*, p. 30.

¹¹⁶ Major Mail Users of Australia, *Submission in Response to the ACCC's Issues Paper*, February 2008, pp. 17–19.

5.5 Record keeping rules

Record keeping rule powers

As outlined in the ACCC's reports *Assessing cross-subsidy in Australia Post*, the APCA was amended by the *Postal Services Legislation Amendment Act 2004* to provide the ACCC with record keeping rule powers. Currently, the ACCC has one RKR which is used for the purposes of assessing whether revenue from reserved services is being used to cross subsidise non-reserved services. However, section 50H of the APCA enables the ACCC to require Australia Post to keep records to inform any of its regulatory roles, including its role in assessing price notifications under Part VIIA of the TPA.

Sections 50I and 50J of the APCA provides that the ACCC may prepare and publish reports – or may be directed by the minister to prepare and publish reports – analysing information provided to it under the RKR. Further, section 50K of the APCA provides that such reports may disclose information that Australia Post claims is commercial-in-confidence if the ACCC is not satisfied that the claim is justified, or the ACCC considers that it is in the public interest to publish the information.

The ACCC has provided guidance on the approach that it would take to disclosing such information in its report *Principles for the disclosure of record keeping rule information provided by Australia Post*.

The regulatory accounting framework

In March 2005, the ACCC issued an RKR that established a regulatory accounting framework (RAF) for Australia Post. The primary purpose of this RAF is to allow the ACCC to monitor for the presence of cross subsidy.

The RAF obliges Australia Post to provide regulatory accounts disaggregated by 19 service groups. Where applicable, these accounts are reconciled to Australia Post's published annual report, including:

- statement of financial performance;
- statement of capital employed;
- statement of movement of non-current asset values;
- statement of weighted average cost of capital (WACC); and
- service group usage statement.

The RAF also stipulates that the costs identified in the statement of financial performance and the statement of capital employed must be separated into those costs that are direct, attributable, or unattributable. Direct, attributable and unattributable costs are defined in section 13(2) of the RKRs for the RAF:

(2) Each Account Item to be reported in relation to a particular Service Group must be reported as either:

- (a) a direct Account Item – that is, one solely associated with the particular service;
- (b) an attributable Account Item – that is, part of a pool of common Account Items that are identifiable to a particular service by a separable cause and effect relationship; or

(c) an unattributable Account Item – that is, part of a pool of common Account Items but are not identifiably related in whole or in part to any particular service by a separable cause and effect relationship.

Further, section 13(4), (5) and (6) of the RKR for the RAF provide guidance on how account items that cannot be assigned as a direct account item should be assigned as an attributable or unattributable account item.

(4) Where it is not possible to report an Account Item as a direct Account Item, it must be reported if possible as an attributable Account Item, assigned on a causation basis as far as possible by identifying relationships such as the following:

(a) a directly traceable cause and effect relationship with the provision of the product or service; or

(b) a verifiable relationship between the item and the output of the individual product or service; or

(c) a relevant, reliable and verifiable factor such as relative use.

(5) The remaining unattributable items should be allocated using allocating factors which are the closest available to ones with a causal relationship.

(6) If the total allocation of unattributable items (across all Service Groups) made under sub rule 13(5) is greater than 10 per cent of Australia Post's aggregate Account Items (across all Service Groups), Australia Post must provide explanations for this to the ACCC.

The RAF also obliges Australia Post to provide the ACCC with a RAPM, which outlines the approach that Australia Post has taken to complying with the RAF. Section 23(2) of the RAF states that the purpose of the RAF is to provide:

(a) detailed instruction to Australia Post staff involved in preparing the Regulatory Accounts;

(b) the independent auditor of the Regulatory Accounts with a documented reference framework against which to test both Australia Post's adherence to its stated procedures and the fitness of the procedures for the purpose of producing the Regulatory Accounts; and

(c) the ACCC with an understanding of how Australia Post produced its Regulatory Accounts.

5.6 Australia Post's cost allocation methodology

Australia Post generally applies activity based costing (ABC) principles in its cost and asset allocation processes. ABC is an alternative approach to the allocation of direct and indirect costs to products compared with traditional costing systems.

In Australia Post's terminology, direct costs are those costs that are operational in nature and directly relate to a product or group of products. In contrast, indirect costs are those costs that include all non-operational and some operational labour costs. They relate to the support of a product or operations, such as operational, non-labour, operational management, product management, sales and marketing.

Compared to a traditional costing system (which use arbitrary rules for the allocation of indirect costs, such as the allocation of indirect costs to products in proportion to the total direct costs used), ABC more closely examines the activities being conducted by the organisation's resources, and then allocates costs to products based on the relative usage of those resources.

Because traditional costing systems generally involve allocating indirect cost to products in proportion to direct costs, a low proportion of indirect costs can be allocated to products that have a low proportion of direct costs. Where products that have a low proportion of direct costs cause a greater proportion of indirect costs than other products (which may be due to their specialised nature), such a methodology that uses simple attribution rules will under allocate costs to those products that have a low proportion of direct costs. ABC seeks to overcome this problem with traditional costing methodologies.

During the ACCC's consideration of Australia Post's draft price notification, Australia Post provided the ACCC with a detailed presentation of the operation of its cost allocation methodologies.

Costs

Australia Post uses two separate costing systems to allocate costs: one for direct costs, and another for indirect costs. Australia Post uses a product profitability system to allocate most of its direct costs (traceable direct costs are allocated directly to product) to products, and uses an ABC methodology to allocate its indirect costs to products. While Australia Post uses separate systems to conduct allocation, both of these approaches are applications of ABC. Australia Post reviews its allocation procedures on an annual basis, and conducts ongoing analysis and monitoring throughout the year to ensure model relevance with the underlying costs.

Direct costs

The allocation of direct costs to product involves the allocation of direct costs from the general ledger to resource cost pools. These resources are then allocated to activity cost pools based on the extent to which these resources are consumed by activities. Finally, activity cost pools are allocated to products using a number of 'factors'. In Australia Post's approach to direct cost allocation, factors include volumes, the probability that a factor will undergo the activity, and a factor reflecting the relative extent to which products will consume activities. At the final stage of allocation, each of these factors for each product are multiplied, and fully distributed allocation of the activity cost pool is based on the proportion of these values of the total.

Indirect costs

Australia Post separates its indirect costs into ABC direct, indirect, and allocated. ABC direct costs are depreciation and operational non-labour costs are shown as direct, but are allocated annually during indirect ABC reviews. Indirect costs relate to items such as operations and product management and support, advertising, sales and marketing. Allocated costs relate to the highest level management and corporate support including public affairs, legal, finance and strategy.

Similar to direct costs, these costs are allocated using an ABC methodology. Indirect costs include, among other things, depreciation, support, and administration. These costs are then allocated to activity pools based on function. For example, administration costs at the Dandenong Letters Centre are allocated to activities based on a survey / review of resourcing requirements. The allocation of activity cost pools to products is based on appropriate drivers derived from the allocation of associated direct costs. For

example, administration and support activities at the Ardeer parcel centre are based on the allocation of Ardeer direct costs.

Fixed assets

Similar to costs, Australia Post separates assets into a number of different categories — traceable, joint and indirect. Traceable assets are directly assigned to products, joint assets are allocated mostly based on a related direct cost allocation, and indirect assets are allocated based on a related direct cost allocation.

Assets are also allocated to products using an ABC methodology, in which assets are allocated from a primary pool, to an allocation pool, then to products. For example, in the case of owned property, these costs are allocated to ‘tenants’ (such as letters processing, retail, delivery) on the basis of rent share. A separate causal driver would be assigned to each tenant’s share in the allocation of these assets to products.

5.7 WIK’s review of Australia Post’s cost allocation methodology

As outlined above, the ACCC engaged WIK to provide advice on Australia Post’s cost allocation methodology – specifically the approach taken by Australia Post to allocate costs between its reserved and non-reserved services.

Given the extensive scope of Australia Post’s cost allocation methodology, the ACCC asked WIK to consider Australia Post’s approach to the allocation of direct costs in detail, given that direct costs are the largest proportion of the costs allocated between reserved and non-reserved services. Furthermore, the focus of WIK’s analysis was the final stage of the ABC process, rather than the construction of resources and the allocation of those resources to activity. As such, the WIK analysis in the WIK report is focused on the final stage of allocation in the ABC process from activity cost pools to products.

In addition to estimating the scope of the costs shared between reserved and non-reserved services, WIK conducted analysis of the following issues:

- terminology and information contained in the RAPM;
- Australia Post’s approach to cost allocation; and
- the allocation of direct costs between services.

Terminology and information contained in the RAPM

As detailed in the above section outlining the RAF, the RAPM is designed to describe the procedures applied by Australia Post to comply with the RAF.

As an independent consultant, WIK used the RAPM to inform its assessment of Australia Post’s approach to allocating costs between reserved and non-reserved services.

WIK expresses the concern that Australia Post’s RAPM uses terminology for cost categories which is quite different from the categories of costs defined in the RKR.

WIK notes that this confusing use of terminology impedes transparency, and recommends that a standard terminology be established between the ACCC and Australia Post.

WIK also expresses the concern that the information provided in the RAPM is not sufficient to explain how the regulatory accounts have been drawn up. WIK also notes that it does not explain, on the level of activities, how activity costs are allocated to products. WIK considers that such information is crucial for the ACCC to understand the approach taken by Australia Post to the allocation of costs between services and should be included in the RAPM.

Australia Post's approach to cost allocation

WIK contrasts the approach taken by Australia Post to cost allocation approaches used by other postal operators overseas. WIK considers that, in general, the ABC approach adopted by Australia Post is in line with cost allocation practices of other postal operators.

However, WIK formed the view that a shortcoming of Australia Post's approach to cost allocation is that activity costs are fully distributed to products without distinguishing between fixed and variable cost (with respect to variations in mail volume).

WIK notes that Australia Post's approach to cost allocation seems less appropriate – and less transparent than would be useful – for those activities that involve a high degree of fixed costs (for example, parts of outdoor delivery).

The allocation of direct costs between services

Given the number of activities allocated to products, WIK selected five activities and considered Australia Post's approach to allocation to products in detail. WIK formed the view that Australia Post's approach of combining volumes with factors that measure the relative difficulty of processing different postal articles as generally appropriate.

However, WIK identified a number of concerns about the specifics of Australia Post's approach:

- The description of the exact scope of activities, including the underlying considerations of the factors used for cost allocation, is not sufficiently informative in the RAPM.
- While WIK stated that the approach to the allocation of set-up and sequencing costs seemed generally appropriate, there is a minor concern about values for a factor that measured the relative difficulty of sorting different products to walk or drive sequence. In particular, WIK noted that the sorting factor values for express products did not reflect the removal of barcodes from express items.
- WIK noted that a general weighting factor has been used by Australia Post to allocate a number of different types of costs, including delivery and sorting costs. WIK indicated that the use of the same weighting factor for very different processes cannot be cost reflective.

- WIK expressed concern about the allocation of costs for the activity of contracted roadside delivery. In particular, WIK raised concerns about the apparent arbitrariness of the allocation of costs for this activity.
- WIK considered that the approach taken by Australia Post to the allocation of interstate transport costs based on the weight of each product adequately reflected cost causation. However, WIK considered that this process could be improved if the activity cost pool was separated between different modes of transport.

5.8 ACCC's view

The allocation of shared costs

As identified above, a substantial proportion of Australia Post's costs are shared between reserved and non-reserved services. Where a firm experiences both economies of scale and scope in the provision of a wide variety of services, economic principles do not provide much guidance on how costs should be allocated between services. However, economic approaches such as the cross subsidy test based on incremental and stand-alone cost concepts developed by G. Faulhaber,¹¹⁷ or the inverse elasticity mark-ups outlined in Ramsey-Boiteux¹¹⁸ pricing principles can inform analysis of cost allocation.

However, in this context, the ACCC considers that Ramsey-Boiteux pricing principles cannot be practically applied given the lack of information on own-price elasticity of demand for all Australia Post's mail services and the relevant cross-price elasticities of demand. Further, the ACCC does not have oversight over the prices of all mail services, and all close substitutes for those services, that is necessary for successful application of the principle. As such, in this instance the ACCC does not consider the application of Ramsey-Boiteux is appropriate.

Given these practical constraints, the ACCC considers that, where possible, the separation of Australia Post's shared costs should be conducted using a methodology that seeks to attribute costs between services having regard to the principles of cost causality. While there may be practical differences in the application, postal operators in other jurisdictions use activity based costing methodologies to allocate shared costs between mail services. Therefore, the ACCC considers that the general approach taken by Australia Post to the allocation of costs between services (particularly reserved and non-reserved services) is appropriate in this context.

¹¹⁷ G Faulhaber, 'Cross-subsidization: Pricing in Public Enterprises', *American Economic Review*, Vol. 65, No 5, December 1977, pp. 966-977.

¹¹⁸ The Ramsey-Boiteux approach involves the allocation of common costs across services in inverse proportion to the price elasticities of demand for those service, such that more price-insensitive services bear greater proportionate mark-ups on incremental costs. While this rule is usually called 'Ramsey pricing' it should be more properly called the 'Ramsey-Boiteux rule' when used in reference to utility pricing, given that Ramsey (in 1927) devised the rule for purposes of commodity taxation, while Boiteux set out a more generalised rule for utility pricing in 1956. See ACCC, *Optus's Undertaking on the Supply of its Domestic GSM Terminating Access Service (DGTAS) – Final Decision*, February 2006, Appendix 3 ('Ramsey-Boiteux Pricing').

Australia Post's approach to the allocation of shared costs

The ACCC acknowledges WIK's concern regarding the extent to which the RAPM adequately provides the ACCC with sufficient information on Australia Post's cost allocation methodology. Further, WIK identifies that separation of activity cost pools between fixed and volume variable costs could result in allocations consistent with the principle of cost causality. WIK also has identified a number of issues with the approach that Australia Post has taken to the allocation of costs between reserved and non-reserved services.

In light of these concerns, the ACCC considers that Australia Post's approach to allocating costs between reserved and non-reserved services should be revised before the ACCC receives a further price notification from Australia Post in the future. Given the scope of the shared costs between reserved and non-reserved services, such a review would provide the ACCC additional comfort on apportionment of costs between reserved and non-reserved services, and also on the costs of categories of reserved mail services. While this review could consider the issue of separating activity cost pools into fixed and volume variable components, the ACCC's preference for a review arises from some of the concerns about specific factor values and transparency of allocation processes — in particular, how Australia Post's corporate knowledge informs the determination of relative factor values.

In light of the concerns expressed by WIK regarding the level of detail in the RAPM, before any review of Australia Post's cost allocation methodology, the ACCC considers that the first step is a review of the RAPM. Specifically, this manual should be improved to provide a better reconciliation between the cost categories used by Australia Post's internal accounting systems and the cost definitions in the RAF. Moreover, the RAPM should include more detailed descriptions of activities, factor values used in allocation procedures, and for key cost pools, a description of allocation using specific factor values that reflect the principle of cost causality. In addition, supporting studies and corporate knowledge that has been used to determine factor values used in the allocation of key cost pools should also be provided.

However, for the purposes of the assessment of Australia Post's draft price notification, the ACCC is prepared to rely on the allocation of costs between reserved and non-reserved services, and on the allocation of costs to categories of mail services provided by Australia Post.

6 Demand for Letter Services

Australia Post notes that that demand for mail has been slowing down since 1994–95, with its forecast of underlying growth trending downward at an average annual rate of –0.4 per cent for the next ten years from 2007–08 until 2016–17.¹¹⁹ Australia Post claims that letter volume growth has been low at an average of 0.3 per cent per annum since 2001–02.

The assessment of Australia Post’s demand forecasts and a consideration of the price elasticity of demand for mail services are important components of the ACCC’s assessment of Australia Post’s proposal to increase the prices of reserved services. In particular, demand forecasts are an input to the ACCC’s assessment of Australia Post’s productivity (Chapter 8), and the financial model used to measure the extent to which the proposed prices are in line with maximum allowable revenues (Chapter 10).

6.1 Australia Post’s views

Australia Post’s domestic letter market

Australia Post considers that the domestic letter market can be divided into three segments:

- transactional mail – typically mass produced bills, invoices, accounts and statements from business – that accounts for about 78 per cent of mail articles processed by Australia Post;
- promotional mail – typically advertising mailings originated by businesses for businesses and consumers – that accounts for about 18 per cent of mail articles processed by Australia Post; and
- social mail – typically private letters, postcards, greeting cards and other correspondence between individuals – that accounts for about 5 per cent of mail articles processed by Australia Post.¹²⁰

Australia Post’s forecast letter volume

Australia Post notes that letter growth since 2002 has been low, at an average of 0.3 per cent per annum. Despite its on-going effort to promote paper-based communications, forecasts of future letter volumes remain pessimistic. Australia Post expects letter volumes to slowly trend downwards in the medium term as substitutions to alternative means of communication, such as the internet, accelerate. Australia Post notes that similar to the Australian letter market, international letter volumes are projected to decline rather than grow in most highly developed postal markets.

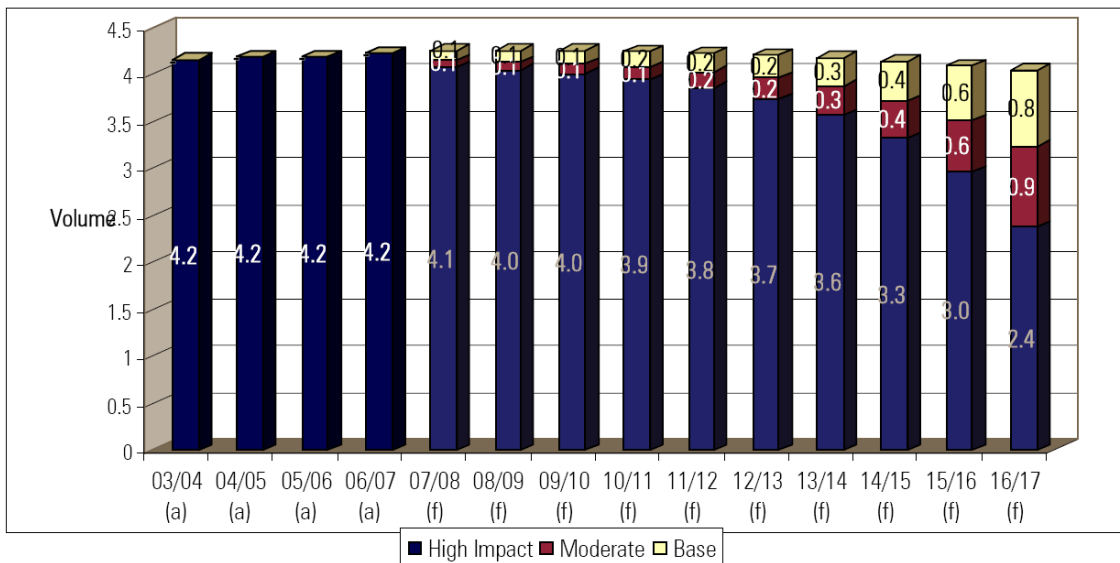
Figure 6.1 below presents Australia Post’s letter volume forecasts under three alternative assumptions about the rates of substitution (e.g. electronic bill presentment

¹¹⁹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p. 19.

¹²⁰ *ibid.*, p. 18.

and/or payment), consolidation (e.g. combining multiple items into a single mail piece) and rationalisation (e.g. reduction in billing cycles) over the coming 10 years.

Figure 6.1: Australia Post’s letter volume forecasts¹²¹



Note: (a) = actual (f) = forecast

As shown in the figure, the three letter volume forecasts are:

- a base scenario — under which no significant increase in the rates of substitution, consolidation or rationalisation occurs. Under this scenario letters volume growth is forecast to be at –0.4 per cent average growth per annum;
- a moderate take-up scenario — under which an additional (to the base scenario) 25 per cent of transactional, 5 per cent of promotional and 25 per cent of social mail will be lost in the next 10 years; and
- a high take-up scenario — under which an additional (to the base scenario) 50 per cent of transactional, 15 per cent of promotional and 50 per cent of social mail will be lost in the next 10 years.

While Australia Post has modelled three scenarios for forecast letter demand, Australia Post has adopted the volume forecasts under the base scenario for the purposes of its productivity analysis and financial modelling. Under this scenario, letter volume is projected to remain at or above the 2006–07 level up to 2011–12 before falling gradually, reaching an overall annual growth rate of –0.4 per cent over the next ten years.

Diversified Specifics’ study on domestic small letter demand

In addition to its own forecasts, Australia Post commissioned Diversified Specifics to undertake a study on Domestic Small Letter Segment Volume Demand.¹²² Amongst

¹²¹ *ibid.*, p.19.

other findings regarding letter demand, the study finds that, while non-farm GDP has traditionally been linked to mail volumes, this is no longer the case.

The study involves an econometric analysis of Australian domestic small letter volumes at a product level (i.e., pre-sort bar-coded and other small letters) over the periods 1995–96 to 2006–07 for pre-sort small letters and 1998–99 to 2006–07 for other small letters volume, using quarterly data supplied by Australia Post and/or sourced externally. Tables 6.1 and 6.2 present the regression results on other small letters and pre-sort small letters respectively.

Table 6.1: Determinants of other small letter volumes

Variable	Coefficient	Standard error	p-value
Constant	12.803	0.555	.000
Credit card volumes ^a	–0.791	0.067	.000
Real price of other small letters ^b	–0.657	0.097	.000
Closure of unbarcoded pre-sort service ^c	0.105	0.014	.000
Adjusted R ²	0.838		
Durbin-Watson test	2.020		
N	31		

Notes:

- a. The volume is measured as the natural logarithm of seasonally adjusted other small letter volume.
- b. Is measured as the natural logarithm of seasonally adjusted credit card volumes.
- c. Is measured as the natural logarithm of real price of other small letters.

The regression results show that other small letter volumes are affected by the following variables:

- Credit card volume. For a one per cent increase in credit card volume, other small letter volume is estimated to decrease by 0.791 per cent.
- Real price of other small letters. Price elasticity of other small letter volumes, that is, the percentage change in volume in response to one per cent change in (real) price, is estimated to be –0.657.
- Closure of unbarcoded pre-sort service. The closure of unbarcoded pre-sort service is estimated to boost other small letter volume by 0.105 per cent.

¹²² Diversified Specifics, *Domestic Small Letter Segment Volume Demand: 1995/96 to 2006/07*, December, 2007.

Table 6.2: Determinants of pre-sort small letter volumes^a

Variable	Coefficient	Standard error	p-value
Constant	-7.095	1.092	.000
Australian non-farm GDP ^b	0.874	0.091	.000
Advertising industry health measure ^c	0.164	0.030	.000
Barcode Introduction	0.096	0.025	.000
Adjusted R ²	0.954		
Durbin-Watson test	1.691		
N	48		

Notes:

- a. The volume is measured as the natural logarithm of seasonally-adjusted pre-sort small letter volume.
- b. It is measured as the natural logarithm of seasonally adjusted Australian non-farm GDP.
- c. It is measured as the natural logarithm of S&P ASX 200 consumer discretionary index that is representative of the health of the Australian advertising industry.

The regression results show that pre-sort small letter volumes are found to be affected by the following variables:

- Australian non-farm GDP. Income elasticity of pre-sort small letters, that is, the percentage change in volume in response to one per cent change in income (measured by GDP in this study), is estimated to be 0.874.
- The health of the advertising industry. Pre-sort small letter volumes are positively associated with the health of the advertising industry.
- Introduction of Barcoding technology. The introduction of barcoding technology is estimated to boost pre-sort small letter volume by 0.096 per cent.

Note that the real price of small pre-sort letters is not included in the preferred regression model since preliminary testing shows that it is statistically insignificant. Diversified Specifics considers that the price elasticity of demand for small pre-sort letters was close to perfectly inelastic for the sample period modelled.¹²³ Further Diversified Specifics contends that the current price elasticity of demand for small pre-sort letters may be more price elastic than what is estimated. In particular, a significant portion of small pre-sort letters is promotional mail, whose users are generally price sensitive.

Diversified Specifics summarises its major findings as follows:

- Substitutive pressures, such as electronic substitution, have affected domestic small letter volumes since the mid 1990s. The positive association of volume with the level of economic activity, which was historically strong, has weakened substantially in recent years. Instead, credit card volumes that are representative of the growth of substitutive technologies are found to have a negative impact on the volume of other small letters.

¹²³ Diversified Specifics, *Response to ACCC Questions*, 4 April 2008.

- The emerging trends of rationalisation and consolidation have also negatively affected pre-sort small letter volumes as they are getting more inelastic with respect to income.

Australia Post draws the following inferences from the findings of Diversified Specifics' study:¹²⁴

- GDP is no longer the primary driver of letter volumes and the divergence between GDP and small letter volumes will accelerate.
- Letter demand in Australia has historically been price inelastic for small price changes.
- The sensitivity of letter demand to price varies by the type of mail where social and transactional mail are more price inelastic than promotional mail.

6.2 Interested parties' views

In its issues paper, the ACCC sought the views of interested parties on Australia Post's forecasts of future mail volumes and the proposed duration of the notification. In particular, the ACCC sought interested parties views on the following issues:

- forecasts of future mail volumes; and
- sensitivity of mail volumes to price changes.

Forecasts of future mail volumes

The ACCC sought interested parties' views on:

- the factors identified by Australia Post that influence letter volumes;
- the underlying assumptions in Australia Post's forecasts of future volumes regarding consolidation, rationalisation and substitution; and
- the impact of price increases on Australia Post's reserved service profitability in the context of forecast declining letter demand volumes.

The ACCC did not receive detailed comments on the forecast volume growth, but interested parties provided their observations on the underlying trend of substitution, consolidation and rationalisation.

The Major Mail Users of Australia (MMUA) considers that the general approach taken by Australia Post in its forecasts and assumptions are reasonable.¹²⁵ Having said that, it strongly believes that a price increase will cause reflection on the use of alternative electronic communications.

The Victorian Postal and Telecommunications Branch of the Communications Electrical Plumbing Union (CEPU) suggests that Australia Post needs to provide a fast

¹²⁴ Australia Post *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, pp. 19–20.

¹²⁵ Major Mail Users of Australia, *Submission in Response to the ACCC Issues Paper of February 2008: Australia Post's Draft Notification Postal Pricing Increases*, April 2008, p. 16.

and accurate service for ordinary and bulk mail in order to maintain its mail share of the messaging market.¹²⁶ It also believes that the insufficient effort made by Australia Post to market its communication channels to future generations puts the community to some disadvantage.¹²⁷

The Post Office Agents Association Limited (POAAL) acknowledges that there is a broader trend towards electronic exchange of data and information that may influence letter volumes.¹²⁸ As an initial reaction to price increases, it may increase the substitution for traditional mail. It also views price as one of the factors that will be considered by business in deciding the mail use.

The Australian Direct Marketing Association (ADMA), representing the Australian direct marketing industry, submits that strong anecdotal evidence of improved electronic communications would suggest that both business and empowered consumers are increasingly choosing their preferred communication channels to conduct relationships through.¹²⁹

Sensitivity of mail volumes to price changes

The ACCC also sought the views of interested parties on the sensitivity of mail volumes to price changes, particularly the views on:

- the impact that the proposed price changes will have on volumes for each of the products for which Australia Post is intending to increase its prices;
- the extent to which the level and the timing of price changes has an impact on mail volumes.

The POAAL believes that the proposed price increases are unlikely to have a material effect on the long-term use of the mail service, despite the trend towards electronic communication channels.¹³⁰

The MMUA believes that any increase in postal price will hasten the move of paper-base mail users to seek alternative electronic communications.¹³¹ The Printing Industries Association of Australia (PIAA) holds a similar view that any price increase will result in mail users switch to non-mail alternatives.¹³²

¹²⁶ Communications Electrical Plumbing Union, *Submission to the ACCC from CEPU Postal and Telecommunications Branch Victoria on Australia Post's Draft Price Notifications Issues Paper*, 2008, p. 2.

¹²⁷ *ibid.*, p. 3.

¹²⁸ Post Office Agents Association Limited, *Submission to the ACCC: Australia Post Draft Price Notification Issues Paper*, April 2008, p. 3.

¹²⁹ Australian Direct Marketing Association, *ACCC Mail Pricing Submission*, 4 April 2008, p. 5.

¹³⁰ Post Office Agents Association Limited, *Submission to the ACCC: Australia Post Draft Price Notification Issues Paper*, April 2008., p. 3.

¹³¹ Major Mail Users of Australia, *Submission in Response to the ACCC Issues Paper of February 2008: Australia Post's Draft Notification Postal Pricing Increases*, April 2008, p. 16.

¹³² Printing Industries Association of Australia, *Australia Post Price Increase: Printing*, 24 April 2008, p. 2.

The ADMA views that the proposed price increases are highly likely to result in a corresponding reduction in future letter volumes across all three letter segments.¹³³ It raises two particular concerns with the impact of higher prices:

- the reductions in letter volumes may be used as an argument for another price increase; and
- the magnification effect of any reduction in promotional letter volumes on other businesses and Australia Post itself as mail marketing is an effective tool to generate sales and output in an economy.

In its response to public submissions, Australia Post notes the comments made in relation to future volume forecasts.

Australia Post acknowledges that letter volume growth rate has been in decline since the mid 1990s with the exception of 1999–00. The decline in ordinary mail and the rise in pre-sort mail are partially attributable to the drop in minimum lodgement requirement for pre-sort mail in 1999. It believes that future volume growth is flat with anticipated decline by 2010.

6.4 The ACCC's assessment

Australia Post has, in its draft notification, justified its proposed price increases partly on the basis of a forecast decline in the demand for letter services.

A number of issues are considered in turn by the ACCC in assessing the demand for letter services:

- determinants of overall demand for postal services;
- determinants of demand for letters by major category; and
- volume forecasts for Australia Post's postal services.

Determinants of demand for postal services

The ACCC has reviewed the literature on the main determinants of postal demand, such as own price, prices of substitutes, quality of mail service, household income and gross domestic product (GDP). This review draws on a number of reports written as background papers of a Pitney Bowes research project on Future of Mail, including the Direct Communications report that summarises 45 studies on price elasticity of postal products in six countries – the United Kingdom, Portugal, France, Finland, Canada and the United States.¹³⁴

In interpreting results from other countries, it needs to be noted that there are country differences in product definitions and classifications. In particular, unlike Australia with its single class of mail, all these countries have distinctions between first class and second class mail, where the definitions for first class / second class are not

¹³³ Australian Direct Marketing Association, *ACCC Mail Pricing Submission*, 4 April 2008, p. 5.

¹³⁴ Direct Communications Group, *A Review of Price Elasticity Models for Postal Products*, 2007.

comparable.¹³⁵ For example, in the United Kingdom, first-class and second-class are differentiated by speed of delivery; while in Japan the differentiation is between enveloped (sealed) mail and postcards. Bills and statements are required to be sent as first class mail in most countries, but they are sent as second class mail in Finland. To draw valid inferences from international comparison, an understanding of the composition of users of each mail product, rather than the product name, is required.¹³⁶

The ACCC considers that there are a number of different factors that influence the demand for postal services. These include:

- Prices of postal services;
- Prices of substitutable services;
- Product changes;
- Level of economic activity;
- Demographic conditions; and
- Market conditions.

Prices of postal services

Prices of postal services are a major determinant of their demand. Most studies in the literature examine the own-price elasticity of postal service, that is, how responsive the demand for postal products is to changes in their own price.

Postal services are generally found to be price inelastic. For 44 of the 45 studies examined by Direct Communications, price elasticity estimates are less than unitary, with the exception being a unique US advertising mail product. This suggests that the percentage decrease in quantity will be less than the percentage increase in price. As a result, revenue will rise as prices increase.

Price elasticities differ across postal products depending on the letter segments, classified into transactional, promotional and social letters in the preceding section. Price elasticity for transactional mail is found to be lower than other mail products. A contributing factor to the price elasticity differentials across mail products is the unique needs of their users, making them react differently to price changes. For example, bulk bills and statement generators cannot easily adjust their quantity and they are used to accommodating of postal prices increases in line with CPI over time. Users of social and promotional mail are relatively more price sensitive. They are also more sensitive to changes in input prices.

Nevertheless, users of postal service generally adjust slowly to price increases if they are accustomed to infrequent price changes.¹³⁷ In the case of the United States, the

¹³⁵ In general, first-class mail is charged at a higher rate than second-class mail due to its favourable service standards.

¹³⁶ Direct Communications Group, *A Review of Price Elasticity Models for Postal Products*, 2007, p. 7.

¹³⁷ *ibid.* p. 2.

lengths of the adjustment process range between one quarter and four quarters, depending on the mail product.¹³⁸

The level of product aggregation can affect the estimated price elasticities. For first class and second class mail, the demand response to a change in one price – holding the other price constant – would reveal a more elastic response than if both prices were increased together. Albon estimated the British first and second-class mail each to be more elastic than the elasticity estimated using aggregated volume and average price.¹³⁹

Further, the estimated price elasticity of postal service can be sensitive to the specification of the econometric model used. For example, by controlling for macro-economic variables in a time-series model, the estimated price elasticities are lower relative to those estimated in cross-sectional models.¹⁴⁰

Price of substitutable products

Prices of substitutes for postal services may influence demand, and cross-price elasticities can be estimated to show how responsive the demand for a postal service is to changes in the prices of substituting products.

Postal services that are sensitive to their own price are also found to be more sensitive to changes in prices of substitutive mail products or competing communication channels, and their inputs. This may be due to types of postal users – those that are sensitive to own price changes of the product may respond actively to the changes in the price of substitutive products. What really affects decisions to use one or another product is the relative price of the products.

Product changes

Product changes from time to time, such as the introduction of new products, the termination of existing products and the improvement in product and service quality, may also affect demand for certain postal services offered.

An overall improvement in quality of all mail services may induce customers to use the lower priced product instead of higher priced product. For example, if delivery quality for both first-class and second-class mail is improved, consumers using first-class mail in the past may switch to second-class mail when their delivery is satisfactorily fast and reliable.

The Diversified Specifics study tests whether the introduction of barcoding technology or the closure of the unbarcoded pre-sort service has an impact on the demand for small letter volumes.¹⁴¹ It finds that pre-sort small letter volume was boosted by the

¹³⁸ *ibid.* p. 2.

¹³⁹ R Albon, 'Some Observations on the Efficiency of British Postal Pricing', *Applied Economics*, 21, 1989, pp. 461–473.

¹⁴⁰ Direct Communications Group, *A Review of Price Elasticity Models for Postal Products*, 2007., p. 5.

¹⁴¹ Diversified Specifics, *Domestic Small Letter Segment Volume Demand: 1995/96 to 2006/07*, December, 2007, . p. 43.

introduction of barcoding technology while the closure of unbarcoded pre-sort service stimulated other small letter volume.

Demand can also be influenced by other non-price exogenous factors, capturing the economic, demographic, market and other conditions that the postal services are provided under. The choice of these variables used in an econometric model is often subject to the availability of data.

Level of economic activity

The level of economic activity (output or income) has historically been a primary driver of the demand for postal services. Gross domestic product (GDP), rather than household disposable income, has often been preferred as the primary macro-economic variable, since household disposable income has only a limited influence on transactional and promotional mail that together form the majority of mail.¹⁴²

A World Bank study has found a strong relationship between the volume of letters posted and per capita GDP in developing and transition countries.¹⁴³ Historical statistical evidence also suggests that mail volumes are closely related to GDP in developed countries.¹⁴⁴ For example, real GDP growth rate explains 95 per cent of variations in mail volume in the United States during the period 1972 to 2001. However, in recent times the close linkage between GDP and mail volume appears to have lessened in developed countries, such as the United States and some European countries.¹⁴⁵

Possible explanations for the changes in the relationship include that GDP, as a single macro-economic variable, may be imperfect in measuring the impact of macro-economic conditions on postal demand. GDP includes many components that have little to do with mail volume and excludes some factors that could have a significant influence on mail volume.¹⁴⁶

One driver of the recent divergence between GDP growth and postal demand, as identified in the Diversified Specifics study, is the emergence of trends towards mail substitution, consolidation and rationalisation.¹⁴⁷ The increasing use of electronic communications channels, such as email and internet, has seen the substitution of

¹⁴² GDP is defined as the total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. (See Australia Bureau of Statistics, Australian System of National Accounts 2006–07. cat. 5204.0, 2007, p. 112.

¹⁴³ World Bank, *The Postal Sector in Developing and Transition Countries*, 2004.

¹⁴⁴ E Diakova, *Economic Activity as a Driver of Mail*, Background Paper No. 12 prepared for the Pitney Bowes research project titled ‘Electronic Substitution for Mail: Models and Results; Myth and Reality.’, August 8 2005, available at <https://www.upu.int/news_centre/2005/en/paper_2005-08-12_pitney-bowes12_en.pdf>.

¹⁴⁵ *ibid.*, pp. 6–10.

¹⁴⁶ *ibid.*, p. 2.

¹⁴⁷ Diversified Specifics, *Domestic Small Letter Segment Volume Demand: 1995/96 to 2006/07*, December, 2007, p. v.

electronic media for traditional mail. The move by mail users to consolidate and rationalise mail also reduces their reliance on paper-based communications to run their business. As a result, the relationship between mail demand and macro-economic condition is likely to be altered.

Nevertheless, mail volume drivers can be different for various mail segments. Diakova found that various components of GDP affected, to different degrees, the various mail products.¹⁴⁸

The model specifications proposed in the Diversified Specifics study indicate that in Australia, pre-sort small letters are perceived to be related to three macro-economic variables, namely GDP, advertising industry health and retail trade, while other small letters are only linked to GDP. This is consistent with the general belief that promotional mail may be more closely linked to retail sales and/or advertising activities rather than GDP *per se*.

Demographic conditions

Another possible factor influencing demand for postal services is country-specific demographic conditions, such as population size and composition.

Bernstein found that a key driver for first-class mail volume in the U.S. is adult population growth.¹⁴⁹ He estimated the adult population elasticity of demand at one. Some studies on the British postal service also proved the presence of a long-term relationship between household growth and mail volume growth.¹⁵⁰

Jimenez, Diakova and Szeto studied the impact of generational changes on mail demand.¹⁵¹ The paper tested a commonly held conjecture that the intensity of mail use would decline upon a younger generation entering the labour force, using mail use by 31 cohorts of U.S. households over the period 1987 to 2003. The paper found that there was no material change since 1987 in mail receipt pattern associated with age profile, regardless of their generation. The paper attributed this to that mail volume was predominantly determined by business originated mail rather than consumer-originated mail and therefore, no generation effect was found.

In its econometric analysis, Diversified Specifics tested the Australian population as a possible determinant for both pre-sort and other small letter volumes, but the variable was found statistically insignificant in each case.

¹⁴⁸ E Diakova, *Economic Activity as a Driver of Mail*, Background Paper No. 12 prepared for the Pitney Bowes research project titled 'Electronic Substitution for Mail: Models and Results; Myth and Reality.', August 8 2005, available at <https://www.upu.int/news_centre/2005/en/paper_2005-08-12_pitney-bowes12_en.pdf>, pp. 2-3.

¹⁴⁹ P Bernstein, *Direct Testimony of Peter Bernstein on Behalf of the United States Postal Service*, docket R2005-1.

¹⁵⁰ For example, Frontier Economics, *Volume Modelling for the Price Control – A Report Prepared for Postcomm*, June 2005.

¹⁵¹ L Jimenez, E Diakova and C Szeto, 'Generational Analysis of Mail Users', in *Progress toward Liberalization of the Postal and Delivery Sector*, edited by MA Crew and PR Kleindorfer, Springer, 2006.

Market conditions

Market conditions – such as the degree of competition across products and competitors – may also have an impact on demand for postal services provided by one competitor. The degree of market penetration by online technology may also affect consumer demand, depending on the mail segment and the country-specific market.

Nader and Lintell pointed out that the effect of technology had a relatively minor effect on mail volumes.¹⁵² While some mails can be substituted for by electronic alternatives on a one-for-one basis, online technology is often complementary to mail such as advertising mail. Further it may create additional demand for postal services, like packets and parcels generated from online shopping.

Overall volume trend and drivers

Postal services in many developed countries have changed substantially in recent years. Like Australia, some countries have transformed their national post administrators into more commercially-oriented enterprises. Other countries, such as New Zealand, and most recently the United Kingdom, opted to deregulate the market, introducing higher degree of competition into those mail services previously reserved for a monopoly provider. Generally competition has emerged in servicing many mail products, although the incumbents still have some dominance over entrants.

Many postal markets continue to grow in recent years, although some national postal operators may have experienced declines in their own mail volume due to loss of market share to other competing operators in providing non-reserved letter services.¹⁵³ This is the net result of a set of volume drivers having influence, to various extents, over demand for individual mail products. As discussed above, the relationship between mail volume and its many determinants is quite unique for each mail product. It is therefore better to analyse demand for letter services at a product level in order to have an accurate modelling of the aggregate demand.

What are the main determinants of demand in major categories of letters?

As noted before, Australia Post submits that price elasticity of postal services varies by the type of letters. The ACCC considers that not only price, but also other factors that may affect overall letter demand, may have an influence, to various degrees, on individual letter products. Therefore, the ACCC has reviewed demand for each major category of letters and its key drivers.

The ACCC has attempted to determine the main drivers of letter demand as a basis for assessing Australia Post's forecasts.

Small ordinary letters

With regard to small ordinary letters, Australia Post states in its draft notification that:

¹⁵² F Nader and M Lintell, *Mail Trends Update*, Background Paper no. 2008–1, Pitney Bowes's *Future of Mail* research project, February 2008, p. 16.

¹⁵³ *Ibid.*, p. 2.

- Volumes have been in decline over recent years due to a migration of full-rate letters to pre-sort letters and the increased take-up of substitutes, including alternative bill presentment and payment channels.
- The proposed BPR and associated price increases are not expected to have any significant impact on current volume trends.
- The proposed BPR and associated price increases are expected to have little financial impact on users with estimated annual impact of \$2.72 for private household and \$48.60 for small business.

These imply that users of small ordinary letters, typically households and small business, are unlikely to change their mailing behaviour in response to the proposed price increases. The current trend of declining volumes will continue as many determinants that have driven small ordinary letter volumes in the past will continue to have a similar influence.

The Diversified Specifics study has specifically examined the relationship between small ordinary letter volumes and some key determinants. Using quarterly data covering the period 1998–99 to 2006–07, the econometric analysis finds that small ordinary letter volumes are driven by changes in credit card volumes, moves in real own price, and the closure of unbarcoded pre-sort service (see table 6.1 for details). The study does not find Australian non-farm GDP as a statistically significant explanatory factor for small ordinary letter volume for the period studied.

With respect to social mail, the Diversified Specifics findings on Australian experience are broadly consistent with the general conclusion drawn from the literature on trend for social mail in the overseas markets in the following two aspects:

- The users of small ordinary letters have been more adaptable to the use of alternative electronic communications than users of other letter products. Payments made in the form of credit card or electronic bill payment system instead of cheque or money order payments are now commonly used by individual consumers. As a result, the moves in small ordinary letter volumes in recent years are more closely related to fluctuations in credit card and electronic bill payment volumes than to the growth in GDP.
- The users of small ordinary letters are not very responsive to real price changes. The Diversified Specifics data are dominated by gradual real price decreases as a result of periodic constant nominal prices combined with steady inflation. A one per cent of decrease in real price is found to be associated with a 0.657 per cent increase in volume, resulting in an overall fall in revenue. Note that consumers may be less likely to react to price falls than to price rises, and therefore the true price elasticity associated with a real price increase can be large.

The ACCC notes that a driving force for the decline in small ordinary letter volumes is Australia Post's recent move to encourage cost-efficient bulk services, such as pre-sort and clean mail. This implies that pre-sort letters are a close substitute for ordinary letters, and the degree of substitutability has been deliberately enhanced by Australia Post. The ACCC therefore considers that, in the past, a portion of small ordinary letter

volume has been lost to other Australia Post letter products, and that this is intended by Australia Post.

The ACCC also notes that, although letters are subject to intensive substitutive pressure, those alternative communication media are not close substitutes for paper-based communications. Moreover, those substitutes are not immune to cost increases over time and therefore may not gain any extra cost advantage over letters over time. The ACCC views that the increased take-up of electronic substitution for small ordinary letters will continue, but not at an accelerating rate.

While Australia Post contends that the increase in the BPR and the associated price increases are not expected to have any impact of current volume trends,¹⁵⁴ the ACCC questions whether the proposed price increases will not have some impact on current declining usage of small ordinary letters. The change in relative prices of small ordinary letters to other substituting products will affect consumers' substitution decisions. Moreover, if the proposed periodic five-cent increase in BPR is perceived to be higher than changes in the substituting prices, then the small ordinary volumes may decrease at a rate higher than the current trend.

*Small pre-sort letters*¹⁵⁵

Australia Post has proposed an increase to the price of small pre-sort letters by an average of 2.5 cents (GST exclusive). There has not been a general increase to pre-sort prices since 1992. Note that the discounts offered to advertising mail have been reduced over time.

The Diversified Specifics study has specifically examined the relationship between small pre-sort letter volumes and some key determinants. Using data covering the period 1995–96 to 2006–07, the econometric analysis finds that small pre-sort letter volumes are driven by changes in GDP, the health of the advertising industry, and the introduction of bar-code technology (see table 6.2 for details). The study does not find own real price as a statistically significant explanatory factor for small pre-sort letter volume for the period studied. This study also suggests that the volumes have become more income inelastic as a result of the emerging trends of rationalisation and consolidation. The estimated income elasticity for the period 2001–02 to 2006–07 is 0.549, significantly lower than that for the period 1995–96 to 2001–01 at 1.887.

The ACCC notes that the small pre-sort letters are primarily transactional and promotional letters. The Diversified Specifics findings are broadly in line with the general conclusions drawn over transactional and promotional mail from the literature in the following two aspects:

- Price elasticities for transactional mail are generally lower than for other mail products.

¹⁵⁴ Australia Post *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p. 76.

¹⁵⁵ The pre-sort letter services offer reduced prices and are available for customers who lodge 300 or more bar-coded letters.

- A divergence between growth of mail demand and growth of GDP has occurred in recent times and is partially attributable to the emergence of substitution trends.

Australia Post has launched a campaign in 2006–07 to promote paper-based communications, highlighting the research findings of a study sponsored by Australia Post that confirms transactional and promotional letters are influential as well as effective.¹⁵⁶ Recipients are more likely to respond to letters, particularly personally addressed letters, than messages received from alternative communication media such as e-mail or phone. Users of transactional and promotional letters, while making efforts to reduce costs by rationalising and consolidating their mail use, know the importance of developing effective mail correspondence with their clients for their business. Consumers' preferences for letters over electronic communications are likely to remain strong and thus continuously restrain business from moving freely to non-paper communication media.

The ACCC therefore considers that, while the trend of substitution, consolidation and rationalisation has driven the divergence between GDP and small pre-sort letters, it is unlikely to intensify over the period concerned.

The ACCC also considers that the small pre-sort letters are relatively more price inelastic than small ordinary letters. The proposed increase in the price of small pre-sort letters may not lead to any significant decline in the volume. Moreover, the proposed increase in the price of pre-sort letters is of a smaller magnitude than the increase in BPR. This may lead to further migration of small ordinary letters to small pre-sort letters as users of ordinary letters are more sensitive to both the price of ordinary letters and the price of substituting letter products. At the aggregate level, small letter volume is likely to increase with respect to the proposed price increases, holding other things constant.

Large ordinary letters

Australia Post has proposed that the prices of large ordinary letters be raised to a level that maintains appropriate relativities to the BPR. This represents an average increase of approximately 10 cents per item. The ACCC considers that it is likely that the same group of users, households and small businesses, will use both small and large ordinary letters, and therefore, the same set of determinants as affect small ordinary letters will influence large ordinary letters. The ACCC also notes that the choice between small and large ordinary letters is often dependent on the size and weight of the mail items that are required to be sent, over which the senders may have little control. Nevertheless, this group of users is relatively sensitive to price and therefore may become more inclined to move to cheaper small ordinary letters were both prices increased by about 10 per cent.

¹⁵⁶ Australia Post, Annual Report 2006/07, p. 13. The study titled *A Comparison of the Effectiveness of Marketing Communication Channels: Perspectives from Both Receivers and Senders* is conducted by P Danaher and J Rossiter.

Large pre-sort letters

Australia Post has proposed an increase to the price of large pre-sort letters by an average of 3.2 cents (GST exclusive). The ACCC considers it is likely that the same group of users, medium and large businesses, use both small and large pre-sort letters, and therefore, that the same set of determinants that affect small pre-sort ordinary letters will apply to large pre-sort letters.

However, unlike households and small business, larger businesses may have more effective control over their mailing items. For example, a reduced-size company annual report or other public document could be sent out as a small letter if the price of larger pre-sort letters were considered to be too high. The ACCC notes that the proposed price increases in large pre-sort letters (in absolute value) are higher than those for small pre-sort letters. These considerations are important in forecasting large pre-sort letter volumes.

A recent legislative change in the default option for receiving annual reports from print to electronic copy may have a negative impact on large pre-sort letter volumes. The change allows the companies to make annual reports available on the internet and only send hard copies to investors who request them.

Publications

The Print Post service delivers addressed periodicals and publications throughout Australia at reduced postal rates.

The ACCC notes that Australia Post competes for delivering publications directly with other publication or marketing firms. Given the degree of competition in this market, Australia Post faces a relatively elastic demand for this service, as compared with its other reserved letter services. It is, therefore, important for Australia Post to maintain its cost and price competitiveness in the market. While the ACCC is unaware of whether Australia Post's projected future prices are sufficiently competitive, it assumes that Australia Post has incorporated relevant market conditions into its forecast for future demand.

Other than the price elasticity effect, growth of the publication market normally follows closely the growth of the general level of economic activity. Publication delivery volume may also increase as the result of events, such as elections and policy changes (such as the introduction of the GST).

Unaddressed letters

The unaddressed mail service delivers unaddressed advertising items, including envelopes, postcards, catalogues, brochures and so on, to delivery points and letter boxes within a specified geographic area.

The ACCC notes that the unaddressed mail delivery service is open to competition from other postal service providers or marketing firms. Over the years, innovations particularly in the area of direct marketing have provided Australia Post with an impetus for growth. The most recent introduction of innovative *Acquisition mail* (that delivers advertising mail items to all addresses in specific geographic areas excluding existing customers), aims at boosting promotional mail. This form of advertising is

perceived to be more effective, in that it saturates mailing service that enables a company to target a proportion of addresses in a geographic region, but also exclude existing customers.

If this innovation provides Australia Post with an edge over competitors, and if such innovation is sustainable, then Australia Post's unaddressed letters business may grow at a rate faster than the general market.

Exogenous factors that may affect the general market are also relevant for unaddressed mail volumes. These include macro-economic performance, the level of advertising activities, and consumers' preferences over alternative communications media. In particular, the effectiveness of paper-based communications will continue to attract business to use promotional mail services.

International mail

International mail is anticipated to be influenced, to various extents, by the same set of volume drivers as for domestic letters. Prices for international mail are largely determined by international agreement over which Australia Post may have limited influence.

Overall perspective on volume drivers

Australia Post has stated that, while it continuously experiences strong growth in mail volumes, mail volumes around the world are generally in decline.¹⁵⁷ This assertion is not quite true as, while volume growth may have flattened or slowed down in many countries, the predicted overall declines in volume have never materially occurred. In particular, one category of letters – pre-sort mail – has grown strongly in many developed countries over the past few years, and may offset declines in other letter products.¹⁵⁸

To some extent, Australia Post has an influence over demand for its letter services, in particular, demand changes across its mail products. In order to stimulate mail volume, Australia Post has launched a campaign to promote the effectiveness of paper-based communications for transactional, promotional and social use since 2006–07. Australia Post has also engaged in continuous innovations that provide new delivery solutions and encourage mail use.

The introduction or promotion of one mail service by Australia Post may adversely affect other mail services, despite an overall gain. The reduction in the volume threshold for pre-sort letters to 300 in 1999 may have encouraged business to use more pre-sort letters at the expense of ordinary letters. Further, Australia Post offers its own bill payment service that allows customers to pay bills in person, by phone and on the internet. This may effectively reduce ordinary mail volume as households no longer need to mail their money order. Therefore, it is important to examine the overall trend of demand for Australia Post mail, in addition to the trends of individual letter services.

¹⁵⁷ Australia Post, *Annual Report 2006–07*, 2007, p. 13.

¹⁵⁸ F Nader and M Lintell, *Mail Trends Update*, Background Paper no. 2008–1, Pitney Bowes's *Future of Mail* research project, February 2008.

Demand forecasts

As noted above, Australia Post has, in its draft notification, noted that the proposed price increases are partly required on the basis of a forecast decline in the demand for letter services. The ACCC notes that volume forecasts are important where the regulator has a role in determining the prices of regulated services — in particular the regulated firm in this circumstance may have an incentive to under forecast volumes.

Australia Post, in advising its consultant's TFP analysis in 2007, provided a complete set of data on actual and forecast price and volume for reserved letters, non-reserved letters and other services. Australia Post subsequently during its September review process revised the forecasts on reserved letters by updating both the allocation factors used for deriving revenue-based volume and the forecasts upon updated expectations for future years.

In lodging its draft price notification, Australia Post supplied the ACCC with its revised estimates for reserved letters for the purpose of the financial model. It acknowledged, on a later date, that the September review had made an upward adjustment in volume forecast in 2007–08 for small ordinary letters.¹⁵⁹ The forecast growth rates from 2008–09 remain the same for both small ordinary and pre-sort letters.

While the revised estimates forecast a more optimistic outlook for reserved letter demand than what was originally projected for the TFP analysis, the ACCC considers that the differences, in terms of average yearly growth rate, are not materially large for each category of reserved letters. Therefore, the following discussion on demand forecasts made by Australia Post will be entirely based on its forecasts for the purpose of the TFP analysis, which cover a complete spectrum of services that Australia Post offers.

As previously noted, the volume forecasts included in Australia Post's draft price notification assume that the rates of substitution, consolidation or rationalisation will not significantly accelerate in the period concerned. It also appears that Australia Post does not expect the price elasticity effect to be material with its modest proposed price increases and therefore no price elasticity effect is accounted for in its demand forecasts.¹⁶⁰

The ACCC has adopted the exponential smoothing method to re-forecast volumes for postal services. This method assumes that past values are influenced by certain factors that will continue to have an influence in the future, and thus smoothing is used to remove random fluctuations from the underlying trend. Under this method, a future value is some weighted average of past values, with weights declining exponentially as observations go out of date. The ACCC contends that this forecast method is both simple and reliable.

Table 6.3 compares the volume forecasts on letters made by Australia Post and the ACCC.

¹⁵⁹ Australia Post, *Response to further questions on sequencing and letter demand*, 20 May 2008.

¹⁶⁰ Australia Post, *Response to further questions relating to TFP data*, 4 April, 2008.

Table 6.3 Australia Post and ACCC's volume forecasts by growth rate, per cent per annum¹⁶¹

	<i>Annual average growth (%)</i>	
	<i>AP</i>	<i>ACCC</i>
Small full rate	-2.49	-1.21
Small pre-sort	2.15	1.29
<i>Small letters</i>	0.09	0.14
Large full-rate	-1.00	1.69
Large pre-sort	0.70	0.75
<i>Large letters</i>	-0.24	1.32
Publications	∞	∞
Unaddressed	∞	∞
<i>Total</i>	0.70	0.68

Small ordinary letters

Australia Post projects small ordinary letters to fall by 2.49 per cent per annum on average. The ACCC's estimates confirm the declining trend for small ordinary letters, but the magnitude of the fall is estimated to be smaller at 1.21 per cent per annum.

Australia Post's projection makes no direct reference to the findings of the Diversified Specifics study that found that drivers of volume for this category are credit card volumes and real price (elasticity of -0.66).

Australia Post's forecasts may have factored in increasing migration from ordinary letters to pre-sort letters, possibly from the rise in prices of small ordinary letters relative to pre-sort letters. The ACCC's forecasts implicitly assume the same historical trend continuing over the forecast period.

Small pre-sort letters

Australia Post projects small pre-sort letters to rise by 2.15 per cent per annum on average. The ACCC's estimates confirm the rising trend for small pre-sort letters, but the magnitude of the rise is estimated to be smaller at 1.29 per cent per annum. Australia Post's forecasts may have factored in the further migration to pre-sort letters.

Diversified Specifics finds that this category is driven by non-farm real GDP (with the relationship weakening over time) and advertising industry health. Price is found not to be a factor, and Diversified Specifics advises that this should be interpreted as perfect

¹⁶¹ The ACCC uses the Holt-Winters method (Exponential Smoothing adjusted for trend) to forecast volume trends. The values of smoothing constant for the level and trend are selected by minimising forecast errors measured by the mean squared error (MSE) over the years 2000–01 to 2006–07. The year 2000–01 is chosen for two reasons: firstly, factors affecting earlier period may be less relevant for the forecast period and secondly, post-2000–01 volume series seem to be more reliable as a result of 'better' allocation of revenue across mail products implemented by Australia Post in 2001

inelasticity with respect to real price, although Diversified Specifics considers that this estimate may underestimate the current elasticity given recent developments.

Total small letters

The differences in forecast demand for small letters by Australia Post and the ACCC are very small on the aggregate level, as both forecast negligible growth in total small letters, albeit with marked differences in the components. The ACCC does not foresee the same degree of shift to pre-sort as does Australia Post, but recognises that the extent of this shift is partly under Australia Post's control.

Large ordinary letters

Diversified Specifics has not analysed the demand for large letters. On the basis of management forecasts, Australia Post projects large ordinary letters volume to rise marginally in 2007-08 before falling in the following years up to 2010-11. The average annual growth rate is estimated to be -1 per cent. Australia Post offers no explanation over why large ordinary letters volume will fall from 2008-09. In the last five years, large ordinary letters volume rose sharply in 2002-03, perhaps as a result of relatively small increases in their prices before fluctuating in the remaining years. The ACCC forecasts see no reason for a reversal of the upward trend, and forecasts that large ordinary letters will experience annual growth of 1.69 per cent.

Large pre-sort letters

On the basis of management opinion, Australia Post projects large pre-sort letters volume to rise substantially in 2007-08 before falling in the following years up to 2010-11. The average annual growth rate is estimated to be 0.70 per cent.

Australia Post's projected falling in large pre-sort volume since 2008-09 is, in part, attributable to the negative impact of the legislative change in the requirement for annual reports to be mailed to shareholders. Although the ACCC's forecast does not explicitly account for this exogenous event, its projected growth rate for large pre-sort letters at an annual rate of 0.75 per cent is only marginally higher. However, the projected paths diverge between the two sets of forecasts.

Total large letters

The ACCC's forecast for the total of large letters is more optimistic than that of Australia Post, due to the forecast continuing upward trend in large ordinary letters.

Publications

Australia Post projects publications to grow at an average annual rate of [x] per cent. The ACCC forecasts show a decline in publication volume by [x] per cent per annum, most likely reflecting the competitive forces in this market that drove volume down in 2001-02 before recovering the next five years.

Australia Post's projection may reflect its management's optimism over the prospects of this market segment and its market share. To achieve that, Australia Post needs to maintain its cost and price competitiveness in the market.

Unaddressed letters

Both Australia Post and the ACCC forecast a strong growth in unaddressed letters above [∞] per cent per annum. The ACCC recognises that the introduction of acquisition mail, which is perceived to be a cost-effective marketing tool targeting at potential customers, may help Australia Post achieve strong growth in this market segment.

Total letters

The differences in the forecast total volume of letters by Australia Post and the ACCC are very small on the aggregate level, both predicting a modest annual growth rate of about 0.7 per cent. However, as discussed above, there are some differences in the forecasts for individual mail products. Nevertheless, Australia Post is likely to have some influence over future demand, particularly for individual postal products, through its changes in policies regarding absolute and relative price, product and quality. As a result, the ACCC is prepared to accept the demand forecasts for reserved services provided by Australia Post for the purpose of its financial modelling.

Other postal services

As already discussed in Chapter 2, Australia Post has also operated in two other core business segments – parcels and logistics, retail and agency services – in addition to the letter services. As shown in Table 2.2, revenue for the parcels and logistics business increased at a faster rate than Australia Post's total revenue over the period.

Given the increasing importance of other business segments in Australia Post's operation, the ACCC also briefly considers future demand for non-letter postal services in assessing Australia Post's overall business prospects.

Australia Post has supplied its consultant – Meyrick and Associates – the volume forecasts for non-letter postal services over the period 2007–08 to 2010–11 for the purpose of TFP analysis. The forecasts seem to be broadly in line with the recent trends in these business areas and in some cases adjustments may have been made to reflect operational managers' judgements over future changes. While they are made on a different basis and over one more year, these forecasts appear to be broadly consistent with those in Australia Post's Corporate Plan.

6.5 ACCC's view

The ACCC considers that understanding the determinants of demand for postal services is crucial for making reasonable demand forecasts. While it engaged Diversified Specifics to advise it on small letters demand, Australia Post has not systematically used scientific methods in its demand forecasting. Australia Post has based its forecasts primarily on management opinion, and has broadly been pessimistic in its outlook, especially for the growing product, large letters.

From its assessment, the ACCC concludes that there is no foreseeable material change in those factors affecting postal demand, and notes that Australia Post is likely to have some influence over future demand, particularly for individual postal products, through its changes in policies regarding absolute and relative price, product and quality.

The ACCC has assessed the demand forecasts provided to the ACCC used for the purposes of TFP and the financial model. While there are some small differences in forecasts for some letter categories, the ACCC accepts the demand forecasts provided by Australia Post.

7 Costs

As outlined in Chapter 3, the ACCC uses a financial model in its assessment of whether the level of the prices for reserved services proposed by Australia Post are commensurate with the efficient costs of providing reserved services. The PTRM determines the required revenue through a building block approach. The three building blocks are:

- Non-capital costs, representing operating costs;
- Return of capital, representing depreciation costs; and
- Return on capital, representing the required rate of return on the capital base.

The ACCC's assessment of these three building blocks involves consideration of the following issues:

- Operating costs;
- Scope of the asset base;
- Asset valuation; and
- Capital expenditure .

7.1 Operating costs

Operating costs refer to the recurring expenses related to the operation of a business such as Australia Post's mailing business. This is in contrast to capital expenditure, which are costs incurred to purchase fixed assets or to upgrade existing assets. For example, operating costs include labour, maintenance and insurance costs.

The majority of the costs on which Australia Post's prices are assessed are operating costs. This is in contrast to businesses ordinarily subject to price regulation which are generally capital intensive.

Labour costs account for the greatest proportion of Australia Post's operating costs. For the domestic reserved letter service, labour and labour related costs represent 70 per cent of total costs. Other than labour and labour related costs, Australia Post's operating costs include:

- contractor and licensees;
- accommodation;
- depreciation (this is considered in more detail in the asset section of this chapter);
- mail settlements; and
- other expenses.

Labour and labour related costs

As mentioned above, labour and labour related costs account for 70 per cent of Australia Post's total operating costs. This is due to the large number of staff required for the operation of Australia Post's business. Currently, Australia Post maintains 32,831 full time equivalent (FTE)¹⁶² staff for the business as a whole. FTE has been reduced from 36,877 in 2001–2002 to 35,476 in 2006–07, representing a decrease of 3.8 per cent. Australia Post's workforce in 2006–07 is approximately 12 per cent less than its level a decade earlier in FTE values. Australia Post estimates that labour FTEs employed in the domestic reserved letter service fell from 21,250 in 2001–02 to 20,163 in 2006–07.

Australia Post's labour force mix has been changing over time. The increase in both part-time and casual staff has increased the flexibility of Australia Post's workforce. Australia Post stated that this shows how Australia Post has better managed its labour cost through changes to its labour mix.

At the corporate level, in 2001–02 the FTE proportions of full-time, overtime and part-time & casual was 78:5:17. In 2006–07 the proportions were 75:5:20. Retail faced a larger change compared to corporate, moving from a proportion of 63:2:35 in 2001–02 to 54:1:45 in 2006–07. In mail processing, transport and delivery, Australia Post has reported an increased share of the more flexible labour categories.

Wages and salaries for non-contract staff are set within enterprise bargain agreements (EBA). These began in 1992 and have contained both salary increases and one-off cash bonuses. The most recent EBA (EBA 6) expired on 31 December 2006. A summary of Australia Post's EBA's since September 2002 is provided at Appendix 9 of Australia Post's draft price notification.¹⁶³ While EBA 7 is yet to be ratified, for the required staff vote, however the payment of the first EBA 7 payment was made effective from August 2007. If EBA 7 is ratified, additional payments will be made over the agreement with the final payment scheduled for December 2010. Australia Post contends that Australia Post's EBAs have been broadly in line with workforce expectations, business requirements and external market trends.

Contractor and licensees costs

Contractor and licensees costs are costs incurred for contract mail services, franchising/licensees and other contract services. Australia Post stated that they reflect the degree to which Australia Post has reduced both the risk and size of its cost structure over time.

Contract mail services

Australia Post contends that it uses contractors for transport and delivery services where contracting provides a more efficient, flexible or more appropriate remuneration model.

¹⁶² Full time equivalent staff is a weighted average of part time and full time staff such that you have the equivalent amount of full time staff members.

¹⁶³ Australia Post, *Draft notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p. 68

Contract mail services include:

- Roadside mail delivery;
- Street mail delivery;
- Parcel service delivery;
- Intrastate and interstate road transport;
- Air and sea transport; and
- Mail collections.

Franchising/Licensees

Australia Post, as a regulated requirement, maintains a retail network of at least 4,000 outlets, of which at least 2,500 must be in rural and remote areas. This network comprises of corporately staffed outlets, licensed outlets, franchised outlets and community postal agents.

Other contract services

Australia Post has outsourced staff needs across a number of areas. Australia Post notes that these include:

- operational staff in Logistics and in Courier and Mailroom Services, whose business models rely more on contractors (e.g. owner drivers) than on using Australia Post;
- operational staff in mail centres and delivery centres (although contract staff form the minority); and
- IT specialists.

Accommodation

Australia Post states that it has been reducing its property portfolio throughout the current decade and in the 1990's. As seen in Australia Post's annual report, the total number of owned properties fell from 577 in 2001–02 to 519 in 2006–07. At the same time, the number of leased properties rose from 715 in 2001–02 to 760 in 2006–07. Overall, the number of owned and leased properties fell from 1,292 at 30 June 2002 to 1,279 at 30 June 2007.

In April 2006, Australia Post has outsourced all property management responsibility to a specialist property management firm in order to achieve property management cost savings.

Mail settlements

Mail settlements are the payments that Australia Post makes to other postal authorities around the world for delivery in those countries of letters and parcels mailed in Australia. Payment rates are set either by the Universal Postal Union (UPU) or by direct negotiation between countries.

Other expenses

These include vehicle operating costs, statutory and legal payments, communications, promotional spending, bank fees, security costs, equipment (repairs and maintenance, software license fees and equipment that is not or cannot be capitalised), general materials and staff associated items such as travel and training. From 2001–02 to 2006–07, other expenses grew at an annual rate of 3.0 per cent.

Views of interested parties

The ACCC released an issues paper on the 29 February 2008 which sought interested parties views on Australia Post's operating expenditure. The Post Office Agents Association Limited had specific comments regarding Australia Post's operating expenditure. In particular, the Post Office Agents Associated Limited (POAAL) submitted that:

- Innovation and world class technology in mail centres has enabled additional mail volumes to be managed with the same or slightly reduced labour costs as well as extending the quality and reliability of the services.
- In its retail network significant cost savings were made by both reducing staff and converting many corporate outlets to Licensed (franchised) operations.
- Australia Post has transferred several costs to contractors.
- Australia Post has introduced a franchise format into its retail network, however very few have eventuated and they do not perform as efficiently as licensed postal offices.

ACCC's assessment

It is difficult to form a view on the efficiency by which a regulated firm incurs operating costs absent a benchmarking exercise in which the costs of providing services are compared with other firms that provide similar services. This is primarily due to a lack of consistent data on postal operators costs and differences in the scope of those postal operators operations. While the ACCC was unable to benchmark Australia Post's costs with other postal operators, it has considered the extent to which Australia Post has made productivity improvements over time. Analysis of the extent to which Australia Post has made productivity improvements over time is outlined in detail in Chapter 8.

Having said that, the ACCC has a preference for a regulatory framework that provides incentives to reduce costs over time. This approach has been achieved in previous notifications through the establishment of a fixed path of prices. This issue is discussed in further detail in Chapter 11.

7.2 Scope of Australia Post's Asset Base

The asset base is used to establish the return on (and of) capital that needs to be recovered in revenues to provide a commercial return for the provider of the regulated services. This capital return accounts for a significant proportion of the maximum allowable revenues in the financial model.

In its 2002 draft price notification, Australia Post proposed that the return on assets in the financial model should include an allocation of all assets, not just fixed assets. For a number of reasons, the ACCC did not incorporate current assets into the financial model used to assess Australia Post's prices in 2002.¹⁶⁴

In the current draft price notification, Australia Post continues to contend that the asset base should contain current assets and some non-current assets which are additional to fixed assets. In particular, Australia Post contends that the cash requirement for the operation of its retail network and 'other working capital' should be included in the asset base.

Australia Post commissioned consultants Officer and Bishop to consider whether working capital¹⁶⁵ is adequately remunerated in regulatory decisions. Officer and Bishop noted in response to this initial task set by Australia Post 'that it is very difficult to treat working capital as an independent source or piece of capital requiring separate funding.'¹⁶⁶

Officer and Bishop expanded its task to the context of servicing financial obligations, and an examination of what is the capital at risk to providers of equity capital. In particular, Officer and Bishop identify the financial obligations (current and non-current liabilities) that would fall on an organisation and determine whether these obligations are funded by the operations of the organisation or whether these financial obligations fell on equity holders — and as such should be incorporated into equity capital.

Australia Post's proposal on the scope of the asset base

Officer and Bishop

Officer and Bishop seek to derive the asset base by dissecting the balance sheet items from the company's accounts. In particular, they consider the firm's financial obligations, and identify that some of these obligations are not separately funded and fall on the holders of equity capital. They propose that Australia Post's asset base could be estimated by looking at the value of 'investment (debt plus equity capital) that requires servicing where no independent value of equity can be set other than as a derivative from the assets.'¹⁶⁷

Officer and Bishop note that there are liabilities identified in the balance sheet which they believe should be re-classified as equity prior to setting the asset base equal to the sum of debt and equity. They suggest considering the financial obligations of the firm (i.e. debt and other liabilities) and assess whether the liability represents an impost not funded by interest payments. In particular, Officer and Bishop note:

¹⁶⁴ ACCC, *Australian Postal Corporation Price Notification Decision*, October 2002, p. 108-109.

¹⁶⁵ 'Working capital' is the difference between current assets and current liabilities.

¹⁶⁶ R Officer and, S Bishop, *Current and Non-Current Assets as Part of the Regulatory Asset Base (The Return to Working Capital: Australia Post)*, 4 October 2007, p. 1.

¹⁶⁷ *ibid.*, p. 16.

The principle is clear. To the extent that a liability exists for which payment cannot be separately identified and paid to another party (to the entity), then it will become a liability of the equity holders. Most of the provisions in the financial statements fall into the “equity” category, insofar as the provisions resemble an equity reserve, they become a liability or responsibility of equity and represent an opportunity cost to equity.¹⁶⁸

Officer and Bishop’s paper outlines a hypothetical balance sheet (reproduced in Table 7.1) delineated into financial obligations and assets, and analyse whether the liabilities (trade payables, interest bearing loans, and provisions in their example) are separately funded or whether the opportunity cost of these financial obligations fall on equity.

Table 7.1 Example balance sheet

Balance Sheet	
<u>Financial Obligations</u>	<u>Assets</u>
<u>Current Liabilities</u>	<u>Current Assets</u>
Trade Payables 700	Cash & Equivalents 600
Interest Bearing Loans 200	Trade Receivables 300
Provisions 110	Inventory 40
Other 20	Other 60
1030	1000
-	-
<u>Non-Current Liabilities</u>	<u>Non-Current Assets</u>
Interest Bearing Loans 400	Investment in Subsidiaries 800
Provisions 600	Land & Buildings 800
Net Deferred Tax 300	Plant & Equipment 500
1300	Other 200
	2300
<u>Equity</u>	
Including Contributed Capital & Retained Profits 970	
970	
3300	3300

The two sides of this balance sheet are set equal to the total assets of the business at the balance sheet date and the equity capital determined as a residual on the left-hand side after all liabilities are accounted for. Officer and Bishop contend that some of the liabilities fall to equity holders and that the residual equity estimate in the balance sheet (\$ 970 million) represents an under-estimate of true equity contributed by investors.

Officer and Bishop note that trade payables (i.e. liabilities incurred when stock for sale is purchased on credit) are ‘a form of short-term capital provided by suppliers’¹⁶⁹. Because the terms of providing this short-term credit are likely reflected in the cost of goods sold expense they note that ‘the liability or short-term capital represented by

¹⁶⁸ *ibid.*, p. 10.

¹⁶⁹ *ibid.*, p. 9.

trade payables is assumed to be adequately covered'.¹⁷⁰ In relation to current and non-current interest bearing loans, these do not fall on equity as they are covered by their respective interest payments. As such the asset base at a maximum would be \$ 2600 million (=3300-700) from the example shown.

Officer and Bishop contend that provisions (provisions for annual leave, long service leave, superannuation, and worker's compensation are made as the business engages employees) are liabilities to the employees of the business which are not separately funded. In relation to annual leave they note 'such leave is owed but not yet taken at the time that the balance sheet was struck. The liability for the leave is ultimately the responsibility of equity'.¹⁷¹

Officer and Bishop note that 'the approach involves estimating the value of assets less identifiable financial obligations which are not interest bearing debt or equity less those 'assets' which are not required for the provision of goods/services that are the subject of the regulation.'¹⁷²

	Total Assets		\$3.30b
<i>Less</i>	Trade Payables	\$0.70b	
	Other	0.02	(\$0.72)
	Investment		\$2.58b

This corresponds with the components of investment in the 'revealed' Balance Sheet of debt (interest bearing loans) of \$0.6b and equity (adjusted for the not separately funded provisions of \$1.01b) of \$1.98, a total of \$2.58.¹⁷³

From the example ledger, Officer and Bishop identify a further \$20 million on the left-hand side of the ledger additional to the \$700 million in trade payables which fall into the category not requiring a return, leaving an implied asset base of \$2.58 billion:

Australia Post's views on the scope of the asset base

Australia Post proposes to include a number of assets not previously incorporated into the asset base used that has been used by the ACCC's in its assessment of Australia Post's proposed price increases.

In particular, Australia Post submits that it considers that 'cash in the field' should be included in the asset base for this (and future) notification/s. Australia Post describes cash in the field as:

¹⁷⁰ *ibid.*, p. 9.

¹⁷¹ *ibid.*, p. 10.

¹⁷² *ibid.*, p.16.

¹⁷³ *ibid.*, p. 12.

This is the permanent cash float held at the retail outlets. This amount is not available for investment in interest-earning bank accounts or securities, as it is necessary to provide permanent liquidity to the retail network. Products sold by cash transactions within the retail network are not viable without it and as such, this cash asset is just as fixed as the 'fixed assets' that form the asset base currently accepted for regulatory purposes by the ACCC.¹⁷⁴

Further, Australia Post seeks to incorporate working capital in the asset base. In particular, Australia Post states that it 'treats as working capital all balance sheet items other than:

- fixed assets,
- investments in subsidiaries ,
- securities,
- investment properties,
- defined benefit superannuation fund net asset,
- equity; and
- debt.¹⁷⁵

Australia Post submit that the findings in the Officer and Bishop report support a '...broader view of assets including working capital should be considered in determining the asset base from which a reasonable return is assessed.'¹⁷⁶ Australia Post outlines its understanding of the Officer and Bishop framework in detail in its draft price notification as follows:

Officer / Bishop begin by taking all assets as potentially requiring a return. They then develop their framework by examining each of the liabilities to see whether any need to be deducted to give a reduced asset base requiring a return. The test applied is whether assets have to be held against the liability to provide future payment, and with no coverage already built into the expense associated with that liability. In Australia Post's case, trade credit is already covered in terms of payment to the creditors for the float involved. Trade credit therefore does not require an additional return to Australia Post's assets to reimburse it.

Other liabilities (other than debt or equity) are determined by the Officer / Bishop framework as being, in effect, charges against equity, that will later be realised as payments. These are not deducted to give a new, lower, adjusted asset base. The largest group of such liabilities for Australia Post comprises its provisions.¹⁷⁷

Australia Post's interpretation of the Officer and Bishop paper is to suggest an asset base based on Table 7.2 below:

¹⁷⁴ *ibid.*, p. 51.

¹⁷⁵ *ibid.*, p. 51.

¹⁷⁶ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 73.

¹⁷⁷ *ibid.*, p. 52.

Table 7.2 – Adjusted Domestic Reserved Letter Service Asset Base¹⁷⁸

	30 June 2007 (\$m)	Estimated 30 June 2008 (\$m)	Estimated 30 June 2009 (\$m)
Fixed Assets	937	964	991
<i>Plus</i> Operating Cash Float			
Adjusted Permanent Investment			
<i>Plus</i> Other current assets			
<i>Plus</i> Deferred Tax Asset			
Adjusted Total Assets	1322	1356	1405
<i>Less</i> Creditors	(23)	(24)	(25)
Net Asset Base for Pricing	1,299	1,332	1,380

As identified in Table 7.2, Australia Post is seeking to increase its asset base for the 2008-09 financial year by \$389 million. Aside from cash in the field, Australia Post presented no alternative argument aside from the alternative approach taken by Officer and Bishop in measuring the asset base was made as to why the ‘other’ assets described above ought to be included in the asset base.

ACCC’s views

Officer and Bishop

The Officer and Bishop paper notes¹⁷⁹

The balance sheet represents the collection of assets required for the entity to efficiently and effectively deliver the number of units sold at the regulated price. The Financial Obligation side of the balance sheet represents the capital used to fund the assets. Of course, being a balance sheet, the value of the Assets has to be equal to the Financial Obligations.

The Officer and Bishop paper largely considers the financial obligations side of the balance sheet. It argues that the liabilities ‘trade payables’ and ‘other’ do not need to be funded in the regulated firm’s revenues but that all other financial obligations are to be funded at the rate of the cost of debt or the cost of equity. In other words, an appropriate value for the asset base will be derived if all the debt, equity and ‘equity-like’ components (for example, provisions, deferred tax, etc.) are added together.

The Officer and Bishop paper then notes that an alternative is to consider the assets side of the balance sheet¹⁸⁰

Investment can be expressed as assets less other (than equity and interest bearing debt) financial obligations but not those financial obligations for which equity is likely to be charged such as certain provisions.

¹⁷⁸ *ibid.*, p. 53.

¹⁷⁹ R. Officer and, S. Bishop, *Current and Non-Current Assets as Part of the Regulatory Asset Base (The Return to Working Capital: Australia Post)*, 4 October 2007, p. 7.

¹⁸⁰ *ibid.*, p. 12.

That is, the asset base can be derived by taking the total assets needed to deliver the regulated services and deducting the funding that does not require a return (the trade payables and other).

An important qualification to this discussion is that to derive an appropriate regulatory asset base, the values in the balance sheet being assessed have to be current values (and not the historical values that will be in the published financial accounts).¹⁸¹

The ACCC's approach

The ACCC ordinarily builds up the asset base by considering which assets would be required for the efficient provision of the services subject to price regulation. That is, it focuses on items which normally appear on the right hand side of the ledger. This is the alternative approach noted in the Officer and Bishop paper. Such an approach enables the ACCC to consider the question of whether the assets which are to be incorporated into the asset base are required for the provision of the reserved services. More significantly, it facilitates the tracking in changes of the asset base over time due to depreciation, ongoing capital expenditures and changes in valuation (due to inflation).

Officer and Bishop's first approach (considering financial obligations) could be potentially applied if assets could not be directly valued in current terms. However a current asset valuation has been established, and the starting point for Australia Post's proposed asset base in the current notification largely reflects the current value of fixed assets. Consequently, there is no need in this instance to use the financial obligation approach. The ACCC also notes that the financial obligation approach would require a current value of Australia Post's equity which would be problematic.

In its practical application of the asset side approach, the ACCC nets out current assets and current liabilities (other than any debt). The WACC (calculated from debt and equity only) is then applied to fixed assets. This means that any non-debt, non-equity (eg provisions) that are outside of current assets will receive a return of WACC, rather than the return on equity suggested by Officer and Bishop.

Assessment of Australia Post's proposals

If the ACCC were to apply Australia Post's actual WACC then it would be appropriate to consider Officer and Bishop's arguments that the non-debt, non-equity components should receive the return on equity rather than the WACC. However, the ACCC does not apply Australia Post's WACC in the revenue model – it applies a benchmark WACC that reflects the gearing that an efficient service provider would use. Therefore the consideration of whether provisions, etc., are equity is not relevant to the regulatory process.

The ACCC notes that in practice current assets and liabilities do not exactly net out. The balance is known as 'net current assets' or 'working capital'. The ACCC considers that net current assets are funded by debt and equity and it is appropriate that the service provider receive revenue to cover the cost of this funding.

¹⁸¹ R. Officer and, S. Bishop, *Current and Non-Current Assets as Part of the Regulatory Asset Base (The Return to Working Capital: Australia Post)*, 4 October 2007, p. 3 and footnote on p. 16.

However, the ACCC's practice has not been to add working capital to the asset base because the amount of revenue appropriate to working capital is generally less than the over estimation of revenue calculated in the ACCC's revenue modelling associated with simplified timing assumptions.¹⁸² This view is supported by a study by Allen Consulting Group.¹⁸³

In view of this, the claims of Australia Post with respect to its asset base proposal can be largely set aside. The proposal to add current assets to the asset base is not appropriate, as discussed above. Similarly, the proposal to deduct creditors from the asset base is also accounted for in the treatment of net current assets.

Australia Post proposes to include in the asset base a value for 'cash in the field' which it claims 'is just as fixed as the 'fixed assets' that form the asset base.'¹⁸⁴ The ACCC accepts that this asset is necessary to the provision of the regulated services.

However, the ACCC considers the classification of this cash to not be of great importance. Currently 'cash in the field' is part of 'cash and cash equivalents' which is classified by Australia Post in its balance sheet as current assets. As such, it contributes to net current assets for which adequate revenue is provided (as discussed above).

The ACCC has also sought further information on the quantum of cash in the field required for the provision of reserved services. Based on information provided on the total number of counter-terminals and start of day cash floats, the ACCC's estimation of cash in the field required for retail operations is substantially less than the estimate provided by Australia Post.

The proposal to add deferred tax liabilities to the asset base misunderstands the Officer and Bishop paper. Officer and Bishop say that deferred tax liabilities is an appropriate item to include if the asset base is being estimated by adding all the equity and debt components of the financial obligations side of the balance sheet. However Australia Post has proposed an asset base based on a current value for fixed assets (which is consistent with the ACCC approach). Consequently it is inappropriate to increase this value with reference to liabilities.

Summary of ACCC response to Australia Post's asset base proposal

The ACCC has considered the merit of the Australia Post's asset base proposal. The ACCC notes the contribution of Officer and Bishop as suggesting an alternative approach to establishing the asset base using the liabilities side of the balance sheet. It does not compromise the ACCC's approach derived from fixed asset valuations. Significantly, the ACCC considers that Officer and Bishop's approach does not support Australia Post's proposals.

¹⁸² The revenue model assumes revenues are not received, and costs not paid, until the end of a regulatory year, whereas in reality, they are received and paid continuously throughout the year.

¹⁸³ The Allen Consulting Group, *Working Capital, Relevance for the Assessment of Reference Tariffs*, March 2002.

¹⁸⁴ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008 p. 51.

The ACCC does not accept the notion that the deferred tax liability should be added to the asset base. All the other adjustments Australia Post proposed to the fixed asset value are not necessary given the ACCC treatment of working capital. Consequently, the asset base accepted by the ACCC includes only fixed assets.

7.3 Asset valuation

The ACCC's assessment of Australia Post's proposal to increase prices of reserved letter services involves an examination of the value of assets employed in providing these services.

Determining the appropriate value of Australia's Post's regulated asset base is important for several reasons. Under a building block framework, the value of the regulated firm's asset base is a crucial factor in determining the level of allowable revenue and therefore the level of prices. Where the asset base is valued incorrectly, at least for regulatory purposes, the potential arises for the firm to over- or under-recover its capital investment and return on capital, with corresponding implications for investment incentives in the future.

This section considers the value of Australia Post's non-current fixed assets employed in providing reserved services and outlines the principles used by Australia Post in valuing these assets. Non-current fixed assets include land, buildings, fit-out, plant and equipment, motor vehicles, mail handling equipment, and computer software. It also includes assets under construction.

Australia Post is required to comply with all relevant Australian accounting standards (which include Australian equivalents to International Financial Reporting Standards (A-IFRS)) and additional accounting guidelines issued by the Minister for Finance and Deregulation. These guidelines were amended two years ago to allow Australia Post to apply the IFRS accounting standards rather than a particular valuation choice. As part of this change, Australia Post is required to value non-current fixed assets at the cost of acquisition, in line with other corporations.

However, Australia Post is still required to gather fair value data for property assets and publish the data in its statutory accounts (note 13). According to Australia Post's statutory accounts published in its 2006–07 annual report, the book value of total assets as at 30 June 2007 was \$5.4 billion.¹⁸⁵

In its draft price notification, Australia Post has also provided information on assets using the same valuation principles as outlined in the Record Keeping Rules (RKR) issued by the ACCC in March 2005. As outlined in Chapter 5, these rules establish a regulatory accounting framework for Australia Post. Australia Post is required to provide regulatory accounts disaggregated into 19 defined service groups and, where applicable, these accounts are reconciled to Australia Post's published annual report. The ACCC uses this information to prepare its annual cross subsidy testing report.

¹⁸⁵ Australia Post, 2006-07 Annual Report, Balance Sheet as at 30 June 2007, p.61.

Non-current fixed asset classes— reserved & non-reserved services

In its draft notification, Australia Post states that the total value of fixed assets (i.e. assets employed in the provision of both reserved and non-reserved services) was around \$2.3 billion at 30 June 2007.¹⁸⁶ The total value of Australia Post’s fixed assets by major asset type is presented in Table 7.3.

Table 7.3: Australia Post – Value of total fixed assets (\$m) as at 30 June 2007

Asset class	value as at 30 June 2007 \$m	Percentage of total fixed assets %
Land, buildings and fitout	1,582.6 ¹⁸⁷	68
Plant and equipment	539.4	23
Other (e.g. software, intangibles)	147.5	6
Assets under construction	65.0	3
Total fixed assets	\$2,334.4 million	100%

Source: ACCC, Report into assessing cross-subsidy in Australia Post 2006-07 Schedule 7, based on Australia Post’s regulatory accounts 2006-07. Table may not add due to rounding.

In general, Australia Post’s fixed assets are valued in the regulatory accounts on either a ‘fair value’ basis or a ‘historical cost’ basis. A valuation according to ‘fair value’ is the amount for which an asset could be exchanged between, knowledgeable, willing parties in an arm’s length transaction.¹⁸⁸ The valuation of an asset at ‘historical cost’ represents the amount of cash (or cash equivalents) paid or the fair value of the consideration given to acquire the asset at the time of acquisition.¹⁸⁹

Land, buildings and fitout

This category includes all land and buildings owned by Australia Post. Fit-out reflects all extensions, structural attachments, improvements and building plant and equipment such as electric light and power equipment, lifts and air-conditioning which are an integral part of the building.

Unlike other regulated industries such as gas, rail or airports, a postal network is not characterised by large sunk investments in specialised assets. The major item within Australia Post’s asset base is property which incorporates its post office network, mail

¹⁸⁶ Australia Post, Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories, 5 February 2008. p.47.

Australia Post also noted that this total replaces the balance sheet total for land and buildings, which for statutory accounting purposes are valued now at cost, by their fair value as shown in Note 13 to the statutory accounts.

¹⁸⁷ This total replaces the balance sheet total reported by Australia Post in its Annual Report. For statutory accounting purposes, land and building are valued at cost. However land and buildings are reported at fair value for regulatory accounting purposes.

¹⁸⁸ Sourced from Australian Accounting Standards Board, concepts and definitions www.aasb.com.au.

¹⁸⁹ *ibid.*

and delivery centres and corporate offices. Table 7.3 shows that property assets account for around 68 per cent of the total value of Australia Post's fixed assets.

For regulatory purposes, valuations for those assets are the market valuations provided by independent valuers. All of Australia Post's properties are re-valued annually. In its draft notification, Australia Post stated that, at 30 June 2007 it has 519 owned properties, down from 577 at 30 June 2002.¹⁹⁰ The market valuation of this portfolio was \$1,476 million as at 30 June 2007, compared with the book value of \$768 million shown in Australia Post's balance sheet.¹⁹¹

Plant and equipment

This includes motor vehicles, mail handling plant and equipment other plant and equipment (e.g. insert example), general office equipment and counter equipment at retail post offices. Plant and equipment and other assets are stated at cost, less accumulated depreciation and less any impairment losses. Motor vehicles are stated at cost less accumulated depreciation.

Other

This includes information technology assets (software and hardware) and intangible assets (such as goodwill, trademarks, copyright). Information technology assets are valued at cost less accumulated depreciation.

Intangible assets (as well as intangible assets under construction) are valued at cost (following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses).

Non-current fixed assets — reserved services

As outlined in Chapter 5, the majority of Australia Post's assets are 'common assets', meaning that they used to provide both reserved and non-reserved services. Therefore, the attribution of fixed asset values between reserved and non-reserved products and services is generally the result of an allocation process undertaken by Australia Post, according to a number of criteria.

Australia Post has stated that its allocation of fixed assets to the domestic reserved letter service was \$937 million at 30 June 2007.¹⁹² This represents around 40 per cent

¹⁹⁰ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 75.

¹⁹¹ At the time of the previous notification in 2002, Australia Post's land and buildings were valued in the statutory accounts at fair value. This continued to be the case until the 2005-06 statutory accounts. After discussion with the ACCC in 2006, Australia Post changed its accounting treatment of property assets. Instead of these assets being held at market values in the accounts, Australia Post restated land and building assets to cost in the 2006 statutory accounts. However, it was recognised that the ACCC would require those assets to be counted at market value for regulatory accounting purposes, such as price notifications. Therefore, Australia Post still has its properties assessed at market values, with the amounts recognised in a note (Note 13) to its statutory accounts which are published in the annual report.

¹⁹² Schedule 7 of Australia Post's regulatory accounts for the year ending 30 June 2007 indicates that the total value of reserved fixed assets for this period was \$987.5 million. Australia Post has identified in

of total fixed assets (totalling approximately \$2.3 billion).¹⁹³ Table 7.4 shows the value of fixed assets for reserved services, by major asset type, at 30 June 2007.

Table 7.4: Australia Post – Value of total fixed assets (\$m) as at 30 June 2007 — domestic reserved services

Asset class	Value as at 30 June 2007 \$m	Percentage of total fixed assets %
Land	303	32
Buildings and fitout	295	32
Land, buildings and fitout	598¹⁹⁴	64
Plant & Equipment, Software	339.0	36
Total fixed assets	\$937 million	100%

Source: Australia Post, Draft Price Notification, Appendix 12

Land, buildings and fit-out

At 30 June 2007, Australia Post's property assets allocated to domestic reserved services was around \$598 million, which represents around 64 per cent of its total fixed assets for domestic reserved services.

In the event that Australia Post chooses to dispose of a particular property, it could readily be converted to an alternative use. In such circumstances, market based valuations are likely to reflect the opportunity cost of holding these assets. Such valuations are also likely to be largely independent of Australia Post's own decisions to hold or dispose of the property. That is, given the dispersed nature of the property portfolio, spanning many different locations, it is also unlikely that the opportunity cost of these types of property would materially change in the event that Australia Post makes a decision to divest itself of them.

Australia Post regularly acquires and disposes of property assets, and through this process, its valuations could be expected to be tested for accuracy within the market. Were Australia Post to systematically over-value its property assets, it would be expected to regularly record losses on disposal. The ACCC is not aware of any evidence of significant losses on disposal, particularly losses that might represent a systematic undervaluation of property values. Accordingly, the ACCC considers that

its draft price notification that the value of fixed assets for domestic reserved services was \$937 million. Australia Post has indicated to the ACCC that the difference of \$50.5 million is the amount of fixed assets allocated to reserved incoming international letters (which is not the subject of this draft price notification).

¹⁹³ At 30 June 2007, the value of all reserved services (domestic plus international letters businesses) was \$987.5 million, which represents around 42 per cent of Australia Post's total value of fixed assets.

¹⁹⁴ Australia Post indicated in its draft price notification that as part of the transition to AIFRS accounting standards, it introduced a new asset classes in its 2006 balance sheet entitled Investment Property. This asset relates to properties held for rental income or capital gain rather than for use in Australia Post's operations. It can include whole properties or parts of properties. At 30 June 2007, the value of properties covered by this asset class was \$127 million. Australia Post indicated that this amount is not part of the asset base on which the notification is based because the properties are not used in Australia Post's operations.

Australia Post's market-based valuation of property assets is reasonable for regulatory purposes.

Plant and equipment, software

At 30 June 2007, Australia Post's plant and equipment and software assets allocated to domestic reserved services was around \$339 million, which represents around 36 per cent of its total fixed assets for domestic reserved services. Within this category, the value of motor vehicles and mail handling and sorting equipment accounts for the majority of the total value allocated to domestic reserved services. Most of these assets used by Australia Post are likely to have alternative uses. Australia Post's approach to the valuation of its motor vehicle fleet essentially represents the approximate opportunity cost of those assets. Much of the plant and equipment required to provide retail services, office equipment and other assorted assets could be expected to be used in a variety of industries. The ACCC is satisfied that the valuation of plant and equipment represents a reasonable approximation of the replacement cost of these assets.

Depreciation of non-current fixed assets (reserved services)

Australia Post stated in its draft notification that depreciation charges at 30 June 2007 for domestic reserved services was \$80 million. This is estimated to increase marginally in the twelve months to June 2008 (to \$81m), subsequently rising to \$90 million by 30 June 2009 as part of Australia Post's capital replacement program.

Australia Post's 2007 statutory accounts indicate that depreciable property, plant and equipment assets are written off to the estimated residual values over their estimated useful lives using the straight-line method of depreciation. Depreciation / amortisation rates (useful lives) and methods are reviewed annually.

Table 7.5 shows the asset lives of each class of depreciable asset adopted by Australia Post.

Table 7.5: Australia Post – Summary of asset lives (2007)

Asset class	2007
Buildings – GPO	70 years
Buildings – other facilities	40-50 years
Leasehold improvements	Lower of lease term and 10 years
Motor vehicles	3-7 years
Specialised plant / equipment	12-20 years
Other plant/equipment	3-10 years

Source: Australia Post draft notification, Australia Post 2006-07 Annual Report

Australia Post supplied depreciation rates for individual asset classes to the ACCC. Given most of Australia Post's assets are non-specialised and non-sunk in nature, it follows that the depreciation rates adopted should be closely related to the economic lives of the assets. Given that this is the approach adopted by Australia Post, the ACCC is satisfied that Australia Post's depreciation charges are reasonable for the purposes of this assessment.

ACCC's view

The ACCC notes that there has been no material change to the nature of Australia Post's assets, although a number of accounting changes have been introduced as a result of the adoption of new accounting standards by Australian corporations generally.

The valuation methods employed by Australia Post are consistent with accounting standards and guidelines for statutory reporting purposes. The allocation of fixed assets to reserved services is generally consistent with cost allocation procedures which are used in the RKR assessment.

The ACCC therefore considers that Australia Post's fixed asset values are likely to be reasonable for the purposes of analysing the profitability of providing domestic reserved letter services.

7.4 Capital expenditure

Australia Post indicated in its draft price notification that regrowth in the corporation's asset base is necessary. It has stated that in recent years, Australia Post has been at the low end of its investment cycle but certain infrastructure assets (e.g. information technology systems) are now scheduled for replacement.¹⁹⁵ Australia Post considers that reinvestment in certain assets is necessary to ensure continued competitiveness.

The draft notification indicates that the estimated value of Australia Post's fixed assets for domestic reserved services is \$964 million at 30 June 2008 and \$991 million at 30 June 2009. While this may only represent a small expected increase of about 2.8 per

¹⁹⁵ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 75, p. 36.

cent increase in the value of fixed assets over that time, a major increase in capital expenditure is planned. However, much of the added value associated with this capital spending is expected to be offset initially by an increase in depreciation expenses in 2007–08 and 2008–09 in line with Australia Post’s replacement/retirement of older existing assets.

In June 2007, Australia Post’s Board approved a forward capital expenditure programme, with planned total spending (i.e. for reserved and non-reserved services) of \$246 million in 2007-08 and \$399 million in 2008-09. Australia Post indicated that not all of this planned capital expenditure has undergone formal business case evaluation, and accordingly some of the expenditure may not eventuate.¹⁹⁶ Australia Post has indicated that a strategic review of likely capital expenditure requirements extending over the next 3–4 years concluded that the capital expenditure profile by investment purpose would be as follows:

- replacement (38 per cent)
- cost reduction (26 per cent)
- growth (20 per cent)
- infrastructure (7 per cent)
- other factors (9 per cent).

It states that the average annual capital expenditure spending since 1999–2000 has been around \$212 million. In contrast, the average annual capital expenditure in the five years to 1999–2000 was \$304 million.

The components of Australia Post’s capital expenditure allocated to the domestic reserved letter service are \$114 million in 2007–08 and \$122 million in 2008–09. Australia Post indicated in its draft notification that for the domestic reserved letter service, none of the capital expenditure involved land purchases, only the other asset classes i.e. buildings, fitout, vehicles, hardware, software plant and equipment. Australia Post provided a list to the ACCC of each expenditure project by asset class.

ACCC’s view

Australia Post is planning a large capital expenditure program over the next two years. Given the size and significance of the proposed capital expenditure program, it is important to ensure both that capital projects included are appropriate and that there is an efficient allocation of resources to the capital program.

The appropriateness of capital projects including in the capex programme

In order for the ACCC to form a view as to the appropriateness of Australia Post’s planned capital expenditure program, the ACCC sought details about the internal procedures used by Australia Post to develop, assess and approve capital expenditure projects.

¹⁹⁶ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories – Detailed Explanation of Price Changes*, 5 February 2008, p. 75, p. 49.

Australia Post provided the ACCC with information on its established policies and procedures relating to its Project and Capital Investment Program (PCIP). All project and capital investments go through an ‘investment lifecycle’ which is a 7-step process. These steps are summarised as follows:

1. **ideas generation / strategic planning** — capital planning commences with the formulation of strategic business plans, which consolidate into the corporate plan. Strategic plans consider the long-term asset and capability requirements necessary for the Corporation to meet its strategic objectives. Investment requirements are prioritised within the strategic plans and corporate plan. Strategic business plans and the Corporate Plan have a three-year outlook, with the first year capital requirements representing a budget, which is separately approved by the Board as the Capital Investment Plan (see step 4).
2. **feasibility assessment and evaluation** — large and complex investment proposals often require extensive assessment and evaluation before a detailed business case can be prepared. Feasibility projects are initially included in a Financial Operating Plan, rather than a Capital Investment Plan.
3. **capital planning** — project expenditure is classified (into capital / one-project; recurring operating) according to a specific set of criteria to determine how the funds will be sourced (either through Australia Post’s capital budget or its financial operating plan). The formulation of Australia Post’s capital budget is referred to as the Capital Investment Plan (CIP). Board approval of the CIP is a prerequisite for project and capital approval, but does not authorise capital commitments and expenditure. The CIP is submitted to the Australia Post Board in May each year setting the foundation for project and capital investment approvals for the coming financial year. Board approval is granted in two forms, overall program approval and expenditure approval. The capital investment plan is subsequently re-forecast and re-submitted for Board approval at the conclusion of each financial quarter.
4. **project and capital approval** — Board approval of the CIP is a prerequisite to project and capital approval by a delegate for an individual investment proposal. All project and capital investment proposals require approval from a delegate before capital commitments and expenditure is incurred. The formal approval process also requires that all projects greater than \$50,000 complete a business case and financial evaluation. All investment proposals less than \$50,000 are categorised as small works and are subject to a different approval process.
5. **implementation / spending capital** — capital expenditure funds are released in accordance with the project’s approval. Where there is a need for changes in the program funding allocation that have resulted from changes in project expectations (including time, scope and cost), the CIP is re-submitted to the Board at the end of each quarter to formally seek approval of such changes.
6. **capitalising fixed assets** — Once Australia Post takes delivery of the completed asset, it is commissioned for service and added to the Fixed Asset Register maintained within Australia Post. The project sponsor conducts a post-

implementation review within three months of the project's completion to confirm the achievement of expected business case outcomes.

7. **capital retirement** — capital disposal may occur as a result of planned capital replacement; disposal of surplus capital assets and replacement of damaged or missing capital items.

This suggests that there is an established system in place within Australia Post for the development and assessment of capital projects. Board approval of the CIP is a pre-requisite to project and capital approval. The project sponsor completes feasibility on the investment proposal to confirm the project viability. On confirmation of the viability, the project sponsor completes a formal evaluation process which requires the submission of a business case and financial evaluation to the appropriate delegation for approval.

Australia Post has indicated that it is possible that upon completion of the feasibility stage of the investment, that an investment proposal may not proceed to the business case stage. However, it also indicated that if an item is part of the capital investment programme, the expectation is that it will proceed. Australia Post also indicated to the ACCC that changes to the capital investment programme are not one way (i.e. that some potential investments fail to proceed). For 2007–08 the original capital expenditure plan for the year involved \$246 million of outlays. At the December review of the full year, that figure has been revised to \$299.2 million. Changes to an annual plan occur because projects are brought forward or deferred to a later year in terms of actual outlays, some are added or removed, and other have revised estimates of their magnitude.

On the basis of the information provided by Australia Post, the ACCC considers that there are reasonable administrative processes established by Australia Post to internally assess capital expenditure projects. Furthermore, it appears that there are sufficient controls in place for Australia Post to monitor and track deviations in project costs from original outlays estimates.

The ACCC is prepared to accept the capital expenditure estimates supplied by Australia Post for the purposes of the pricing proposal.

8 Australia Post's productivity

This chapter considers Australia Post's potential to improve its productivity (and therefore put downward pressure on costs), including Australia Post's reference to its distance from the world best-practice frontier and the forecasts made on Australia Post's behalf by Meyrick and Associates.¹⁹⁷ This Chapter assesses Australia Post's contention that its proposed price increases for reserved letter services are justified because its forecast costs are greater than forecast revenues, and it does not expect to make productivity gains over in the near future to offset this revenue shortfall.¹⁹⁸

What is total factor productivity (TFP) analysis?

Australia Post uses multiple inputs – labour, capital, material and so on – to produce multiple outputs such as letters, parcels, and financial services. Australia Post's productivity performance is best measured by total factor productivity (TFP) – a ratio of a measure of total output to an index of input use. A TFP index reflects the overall productivity changes, which cannot be captured in a partial productivity index that measures the relationship between the output and a single factor of production.

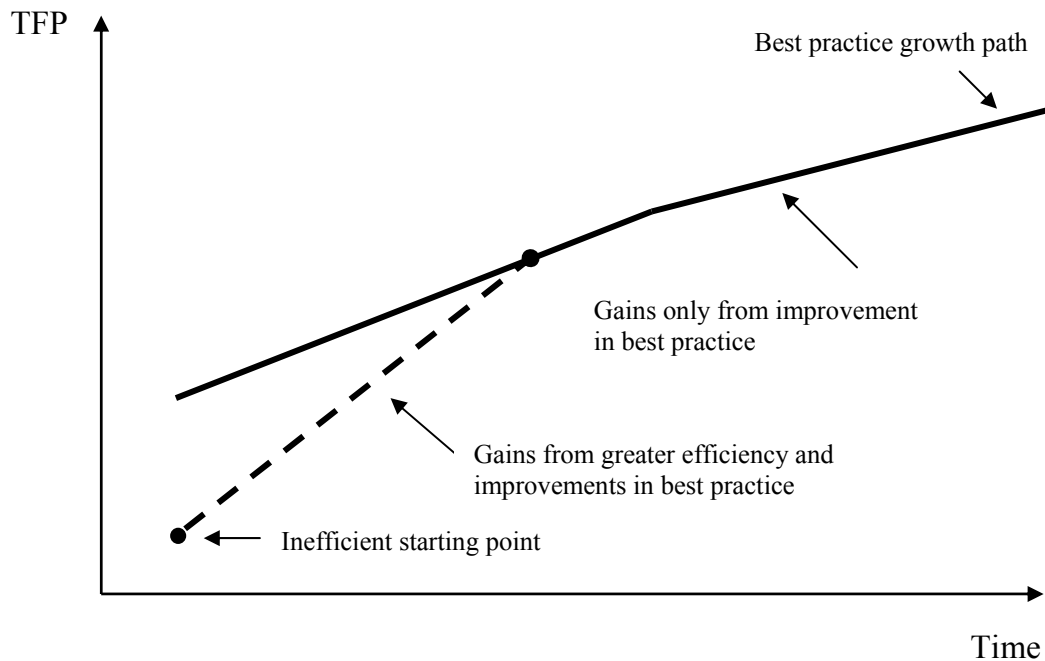
Australia Post has experienced significant productivity gains since its transmission to a Government Business Enterprise (GBE) in 1989. However, at any point of time, it may not necessarily adopt the most advanced technology in the industry, operate at the optimal size, or operate fully efficiently under existing technology.

Figure 8.1 below illustrates the changing economic drivers of productivity growth experienced by Australia Post over time.

¹⁹⁷ Meyrick and Associates, *Australia Post's Aggregate and Reserved Service Productivity Performance: Report prepared for Australia Post*, Canberra, 22 November 2007.

¹⁹⁸ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008, p. 6.

Figure 8.1: Drivers of productivity growth for Australia Post



As shown in figure 8.1, beginning at the time preceding its corporatisation, Australia Post was probably operating far behind the world best practice ('inefficient starting point'). Over time, it managed to achieve greater productivity through technical and scale efficiency improvements (that is, catching up with the best-practice growth path through better utilisation of existing technologies and business reorganisation) as well as benefiting from technical progress (that is, the growth path of the best practice through advances in new technology), tracking along the dotted line. Whether it is now on – or close to – the best practice growth path remains a key question.

Therefore, Australia Post's past productivity changes, (estimated by Meyrick and Associates and presented below) can be interpreted as the net impact of three economic drivers, that is, technical change, economies of scale change and efficiency change.

- Technical change measures the contribution to productivity change of a shift in the best-practice frontier, that is, the adoption of state of the art technology
- Economies of scale change measures the contribution to productivity change of a change in the scale of operation.
- Holding technology and the scale of operation constant, efficiency change measures the contribution to productivity change of a change in how efficiently inputs are converted to outputs. Source of efficiency changes for Australia Post may come from:
 - Better utilisation of the existing technology, for example, the extension of sequencing technology from street district to street address;
 - Rationalisation of production, for example, the merge of two mail processing facilities into one; and
 - Better managerial efficiencies.

Meyrick and Associates have adopted the index number approach to measure TFP changes of Australia Post over time. The short-coming of this approach is that it does not allow for a decomposition of productivity changes into the sources. Alternative approaches, such as data envelopment analysis (DEA) in frontier analysis, can be used to estimate best-practice frontier against which a firm's productivity performance and the impact of its drivers are measured. In a frontier analysis, the technical change is commonly interpreted as the frontier shift effect and the other two sources of productivity changes together is interpreted as the catch-up effect.

Australia Post's total factor productivity analysis

As outlined above, Australia Post commissioned Meyrick and Associates to measure Australia Post's TFP growth for the period 1989–90 to 2006–07, and to forecast Australia Post's TFP growth for the period 2006–07 to 2000–01.

In summary, the Meyrick and Associates report forecasts that Australia Post's TFP for aggregate services (i.e. both reserved and non-reserved services) and Australia Post's reserved services will grow at 1.6 and 1.3 per cent per annum, respectively over the next four years up to 2010–11.

These forecasts of TFP for aggregate and reserved services are substantially lower than the TFP growth estimated for aggregate and reserved services over the period 1989–90 to 2006–07 of 2.36 per cent and 1.86 per cent respectively. Where this estimated slow-down in TFP growth is reflected in the forecast operating, maintenance and capital costs, costs may outgrow revenue, which can support the case for the proposed price increases.

Therefore, the assessment of the proposed price increases will involve careful consideration of Australia Post's analysis of past and estimated future productivity improvements. Part of the assessment involves examining whether future productivity improvements are incorporated into the financial model for deriving an efficient cost base.

As already noted in section 3.1, the ACCC generally adopts a cost-based approach to assessing price notifications, with particular attention paid to the efficiency of the firm's cost base and the reasonableness of the rate of return. While firms seek to recover the costs that they incur in producing services through price changes, particular attention is paid to the efficiency of these costs, to avoid prices based on costs that are not efficient (or least-cost in production).

To provide regulated firms with incentives to produce efficiently, the approach of setting a pre-determined path of prices over a specified regulatory period, such as CPI – X or under a building block approach has generally been adopted by the ACCC. Under a CPI – X regime, the X factor is set at the target level of annual productivity gains, which is determined by either benchmarking against other comparable firms or after assessing historical productivity performance of the firm itself. The output prices are capped at CPI minus X so that prices will closely track the efficient cost of production. Analogously, under a building block approach, anticipated productivity changes and input price changes are directly built in the forecasts of costs while the revenue path and subsequently price changes are smoothed.

The normal regulatory period is between three and five years. A three-year regulatory period is currently applied to retail price controls in the telecommunications industry. A five-year regulatory period has been applied to the electricity transmission network, but under Chapter 6A of the National Electricity Rules (NER), a business may propose a different duration for its next regulatory period. A sufficiently long regulatory period gives the regulated firm incentives to reduce costs beyond the expected level since additional cost savings can be retained as profits, at least for the current period.

In previous decisions made by the ACCC in respect of changes in the prices of Australia Post's reserved services, prices have been permitted to have upfront increases followed by constant nominal prices in the medium term. The level of future revenues at the proposed prices over the period reviewed (e.g. five years 2003 – 2007 as in the 2002 notification) have been assessed on a year to year basis relative to the forecast efficient costs in a financial model, similar to the PTRM. The one-off price increase arrangement is different from a standard CPI – X approach where gradual yearly price increases are capped.¹⁹⁹ Nevertheless, the forecast costs in the financial model should reflect the costs of an efficient firm, which should also take into account the changes in input prices and the potential productivity gains over time.

The key task before the ACCC is to determine whether the forward-looking costs projected by Australia Post are efficient. The presence of asymmetric information between the regulator and the regulated firm may induce the regulated firm to act strategically by forecasting higher costs than those incurred by an efficient operator. If the forecasts are accepted, the firm gains by either retaining higher profits or operating less efficiently at the expense of consumers.

In recognition of this potential problem, the ACCC, in assessing Australia Post's past and potential productivity gains, considers first the Meyrick and Associates' 2002 and 2007 studies on Australia Post's productivity performance.²⁰⁰ By comparing the two studies in terms of data and findings, particularly the estimates of productivity changes over the period 2002–03 to 2006–07, some conclusions on the reasonableness of forward-looking demand and cost data provided by Australia Post can be drawn.

The ACCC also considers the scope for future productivity changes from many sources, namely technical changes, technical efficiency changes and scale efficiency changes, to verify whether the forecast costs are efficient. By analysing information from Australia Post and the international literature on postal industry efficiency and productivity, some inferences can be drawn regarding the scope for Australia Post to achieve further cost savings.

¹⁹⁹ The upfront price increase within a specified period is equivalent to set a periodic X factor for the potential productivity change over the period and cap the upfront price increase at roughly half of the difference between the cumulative CPIs and the periodic X factor.

²⁰⁰ Meyrick and Associates, *Australia Post – Past and Forecast Productivity Growth: Report Prepared for the Australian Competition and Consumer Commission*, Canberra, 27 August 2002.

8.1 Australia Post's views

Australia Post submits that there is limited potential for it to realise productivity gains in the future, noting that 'it has reached the stage in its development where material productivity gains are becoming increasingly difficult to orchestrate and obtain'.²⁰¹

With respect to reserved services, it argues that the scope for productivity growth in the letters network is governed by letter volumes and growth, service requirements and the opportunities for process improvement or labour substitution. Australia Post submits that future productivity growth in the letters network will be difficult to sustain in the future due to the following:

- lower letter volume growth;
- a continuing need to meet the CSOs and other regulations;
- limitation of process improvement over the technology in place: material savings in non-capital inputs that were previously achieved through investment in projects such as Future Post are exhausted;
- limited opportunities for network consolidation; and
- limited opportunities for technological changes in the short term.

As outlined above, the forecast TFP for aggregate and reserved services are considerably lower than the fast productivity growth that Australia Post has previously experienced in the 1990s, but similar to the slower productivity growth experienced in the last five years.

Table 8.1 compares the Meyrick and Associates estimates by specific period and service areas with the Access Economics estimates on multifactor productivity (MFP) change for the Australian economy.²⁰² MFP, commonly adopted by national statistical agencies to measure productivity at industry or nation level, is the ratio of an index of output to a combined index of two or more inputs.²⁰³ MFP is better than a partial productivity index because it incorporates more than one input, typically labour and capital. TFP is a better productivity measure than MFP because it involves all of the factors of production.

²⁰¹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008 p. 37.

²⁰² Access Economics, unpublished data, quoted by Australia Post in *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008., pp. 35–36.

²⁰³ Australia Bureau of Statistics, *Australian National Accounts: Multifactor Productivity 1995-96*, catalogue no. 5234.0, 22 July 1997. .

Table 8.1: Productivity growth – aggregate services, reserved services and national economy, per cent per annum²⁰⁴

	Aggregate services			Reserved services			The economy
	Output	Input	TFP	Output	Input	TFP	MFP
1990–91 to 2001–02	4.9	1.9	3.0				1.2
1996–97 to 2001–02				1.8	-1.1	2.9	1.2
2001–02 to 2006–07	1.3	-0.4	1.7	0.3	-0.4	0.7	-0.4
2007–08 to 2010–11	1.9	0.3	1.6	-0.2	-1.5	1.3	-0.1

Table 8.1 shows:

- Australia Post’s productivity performance, measured in terms of aggregate services or reserved services, outperformed the general economy in the past.
- There was a substantial slow-down in productivity growth for both reserved services and aggregate services over the five years since the 2002 notification. Australia Post attributes the slow-down to a shift in the drivers of productivity growth from technological progress to process improvement that would eventually deliver ‘diminishing returns’.²⁰⁵
- Australia Post’s productivity growth for the period 2007–08 to 2010–11 is forecast to be modest, but higher than the general economy.

Australia Post states that, irrespective of a number of challenges it faces, productivity growth continues to be a priority for the firm.²⁰⁶ It contends that it is committed to productivity growth and cost efficiency through day-to-day management of operations against key performance indicators (KPIs) that govern cost and service quality.²⁰⁷

In addition, Australia Post has identified that a number of future productivity and efficiency programs are currently being implemented:

- Deep sorting and sequencing automation that will machine sequence small letters to street section and street address (currently this mail is manually sequenced to street section and address at mail centres) are on trial using existing machines, but relatively minor savings are anticipated in 2008–09 and incorporated into the cost base for the year;
- South East Queensland mail network restructure: savings are largely in terms of cost and service disruption avoided (from future congestion) while additional expenses, including capital expenditure (\$100m) are included in the 2008–09 cost base;

²⁰⁴ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008, Tables 6 – 8, pp. 35–36.

²⁰⁵ *ibid.* p. 40.

²⁰⁶ *ibid.* pp. 41–42.

²⁰⁷ *ibid.* p. 42.

- Process and technology related initiatives to drive the efficiency of letter process; and
- Other initiatives to extract further network efficiencies, such as restructuring of transport schedules and delivery rounds.

8.2 Interested parties' views

A number of interested parties commented on the extent to which Australia Post would be likely to realise productivity gains in the future. In summary, interested parties generally considered that, whilst Australia Post had made substantial productivity improvement in the past, some scope for future productivity gains remains.

The MMUA provided specific comments on Australia Post's claim that future productivity gains are limited and therefore a price increase should be approved.²⁰⁸ MMUA members collaborated with Australia Post on the Barcode Project prior to the 2002 notification and on developing the Bulk Mail Partner Program (BMP) since. As far as pre-sort letters are concerned, the MMUA believes that there are potential cost savings over the next few years from two sources: unrealised productivity gains from the Barcode project and further productivity gains from improvements in the Bulk Mail Partner process.

The MMUA submits that its BMP mailing houses members put the integrated Advanced Network Integration and Electronic PreLodgement Advice (ANI/ePLA) system proposals to Australia Post on 1 March 2007. Without proper consultation discussion with the MMUA, Australia Post opted for an internal project for further process improvement (PIP II), which will bring costs to generators and mail houses.

The MMUA objects to any price increases in pre-sort letters.²⁰⁹ No price increase in the pre-sort letters or associated products such as Charity mail and Off Peak mail should be considered until both sources of cost saving are realised.

The MMUA points out that Australia Post has failed to recognise the material productivity gains achieved through the joint work with mail users on improving mail processing and delivery during the five years 2003 to 2007.²¹⁰ The MMUA also considers that Australia Post has not vigorously pursued opportunities for productivity gains in most recent years.²¹¹ By comparing pre-sort mail services across states, NSW is found to consistently outperform other states, raising the question of improving productivity in other states up to the NSW level.²¹²

²⁰⁸ Major Mail Users of Australia, *Submission in Response to the ACCC Issues Paper of February 2008*, April 2008.

²⁰⁹ *ibid.* p. 5.

²¹⁰ *ibid.* p. 6.

²¹¹ *ibid.* p. 20.

²¹² *ibid.* p. 29.

The MMUA contends that productivity of Australia Post is currently less than would be found in a competitive environment under which the quality of production will be continuously improved through the adoption of technologies and other best practices.²¹³

The PIAA holds similar views to that expressed by the MMUA relating to potential productivity gains within pre-sort mail processing and therefore believes that the proposed price increases for bulk pre-sort letters are necessary.²¹⁴

The CEPU points out that, while productivity improvements in Australia Post are among the highest in the nation, further efficiency improvement can still be achieved from the past network and automation investment.²¹⁵

The ADMA strongly encourages the ACCC to ensure monopolistic service providers, like Australia Post, are operating efficiently and effectively.²¹⁶

The CAWA comments that the Meyrick and Associates 2007 study may not adequately depict uses for personal mail by consumers, including the very young, elderly, disadvantaged, disabled, rural and isolated consumers. Their uses for personal mail may never change despite technological advancement.

The POAAL submits that Australia Post has been able to improve efficiency by various strategies including investing in new technologies that substitute labour with capital and by transferring costs to other parties.²¹⁷ For example, costs have been transferred to licensees by requiring them to undertake preparation or registration. Rising fuel costs are most borne by mail and parcel contractors. There is no extra reward to licensees and mail contractors for contributing to improved performance of Australia Post.

The POAAL adds that reform that has previously led to increase in productivity has slowed in recent times. Future reform, capital investment programs and productivity opportunities that Australia Post intends to pursue are not clear.²¹⁸

Australia Post's submission in response

Following the receipt of public submissions, Australia Post provided a response to the issues raised in interested parties' submissions.

Referring to its commissioned Meyrick and Associates report and the on-going productivity targets contained within the draft price notification, Australia Post argues

²¹³ *ibid.* p. 30.

²¹⁴ Printing Industries Association of Australia, *Australia Post Price Increase: Printing*, 24 April 2008, p. 2.

²¹⁵ Communications Electrical Plumbing Union, *Submission to the ACCC from CEPU Postal and Telecommunications Branch Victoria on Australia Post's Draft Price Notifications Issues Paper*, 2008, p. 2.

²¹⁶ Australian Direct Marketing Association, *ACCC Mail Pricing Submission*, 4 April 2008, , p. 5.

²¹⁷ Post Office Agents Association Limited, *Submission to the ACCC: Australia Post Draft Price Notification Issues Paper*, April 2008, p. 6.

²¹⁸ *ibid.* p. 7.

that there has been a shift in the driver of productivity gains from technological progress to efficiency improvement through process standardisation and benchmarking.

Australia Post notes that it has rewarded its customers and licensees for their contribution to its productivity improvement through the various pricing incentives and commissions offered.

Specifically, Australia Post clarifies its position on the comments pertaining to the ANI/ ePLA proposal and PIP II project. It rejects the claim that Australia Post has shown no interest in assessing the merits of the ANI proposal. Australia Post submits that for the adoption of any proposal, it needs to consider both the financial implications and the broader industry acceptance. It claims that it has not yet received from the MMUA information required to assess the financial implications for adopting the ANI/ePLA proposal. It also believes that the industry acceptance level is limited.

Australia Post contends that it is too early to assess the impact of the PIP II project in its early stage where options for process improvement are evaluated.

8.3 The ACCC's assessment

The Meyrick 2002 and 2007 studies

The Meyrick and Associates report analysed Australia Post's aggregate and reserved service productivity performance up to 2006–07 and forecast productivity performance through to 2010–11. This report updates its 2002 report on TFP of Australia Post prepared on behalf of the ACCC.

In assessing Australia Post's 2008 price notification, the Meyrick and Associates Reports (2002 and 2007) are reviewed in the follow aspects:

- the major findings of the 2002 report;
- the major findings of the 2007 report;
- methodology, data and results – a comparison of the 2002 and 2007 reports; and
- issues arising from the review.

Summary of the 2002 report

The 2002 report quantified Australia Post's past productivity performance in aggregate (i.e. both reserved and non-reserved services) and for reserved services. This report also forecast future performance over the next five years.

Figure 8.2 presents the estimated Australia Post's output quantity, input quantity and TFP indexes for aggregate services during the period 1989–90 to 2006–07.

Figure 8.2: Australia Post's aggregate output, input and TFP indexes, 1989–90 to 2006–07

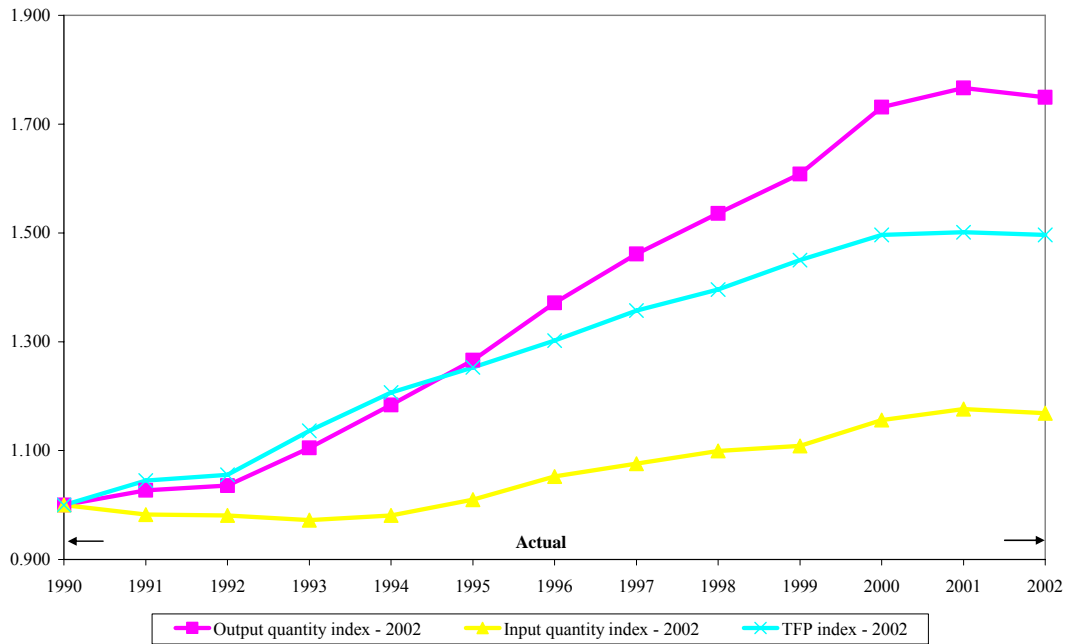
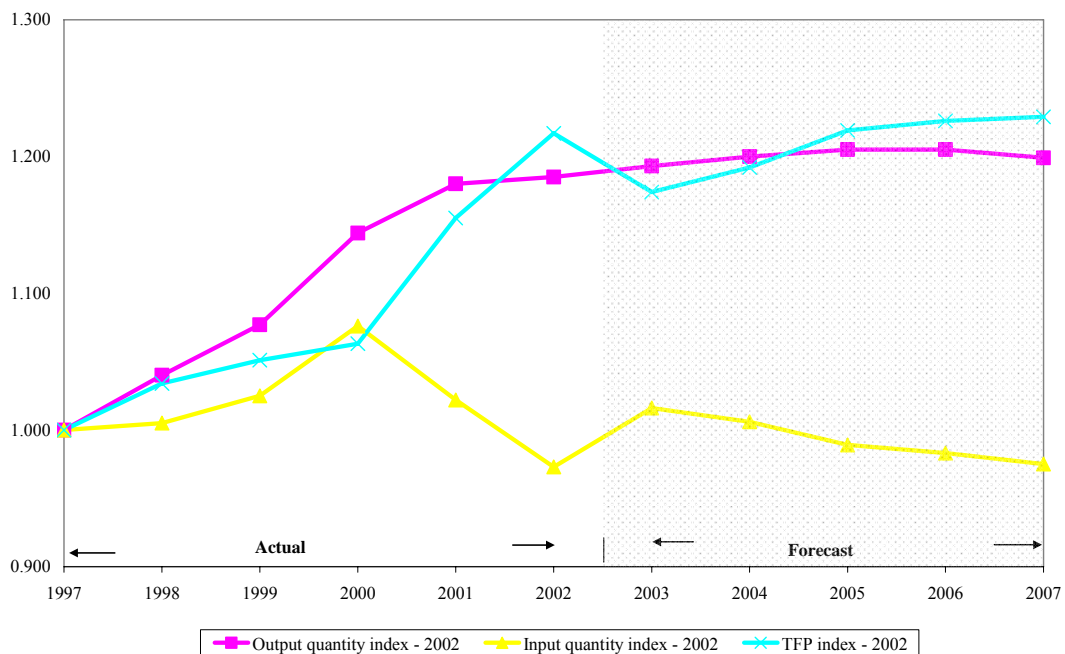


Figure 8.3 presents the estimated Australia Post's output quantity, input quantity and TFP indexes for reserved services during the period 1996–97 to 2006–07.

Figure 8.3: Australia Post's reserved service output, input and TFP indexes, 1996–97 to 2006–07



The main findings of this report are:

- Australia Post achieved strong TFP growth for aggregate services during the period 1991–92 to 2001–02.
 - aggregate services experienced an annual rate of 3.5 per cent in TFP changes, largely due to increases in letter volumes.
- Australia Post achieved strong TFP growth for reserved services for the period 1996–97 to 2001–02.
 - Reserved services experienced an annual rate of 3.79 per cent of TFP growth.
 - This was largely due to Australia Post’s ability to meet increased demand while keeping input usage relatively stable.
- It forecasted that future productivity improvements for reserved services would be negligible during the period 2002–03 to 2006–07.
 - Reserved services were projected to achieve an annual growth rate of 0.22 per cent over the five-year period.
 - The projection was largely the result of a substantial fall in output growth and a modest reduction of input usage.

Summary of the 2007 report

The 2007 report examined Australia Post’s aggregate and reserved service productivity performance for the years 1989–90 to 2006–07 using data on input, output and relevant prices. The report also forecast productivity performance through to 2010–11 based on Australia Post’s forecasts of future output and input.

Figure 8.4 presents the estimated Australia Post’s output quantity, input quantity and TFP indexes for aggregate services during the period 1989–90 to 2010–11.

Figure 8.4: Australia Post's aggregate output, input and TFP indexes, 1989–90 to 2010–11

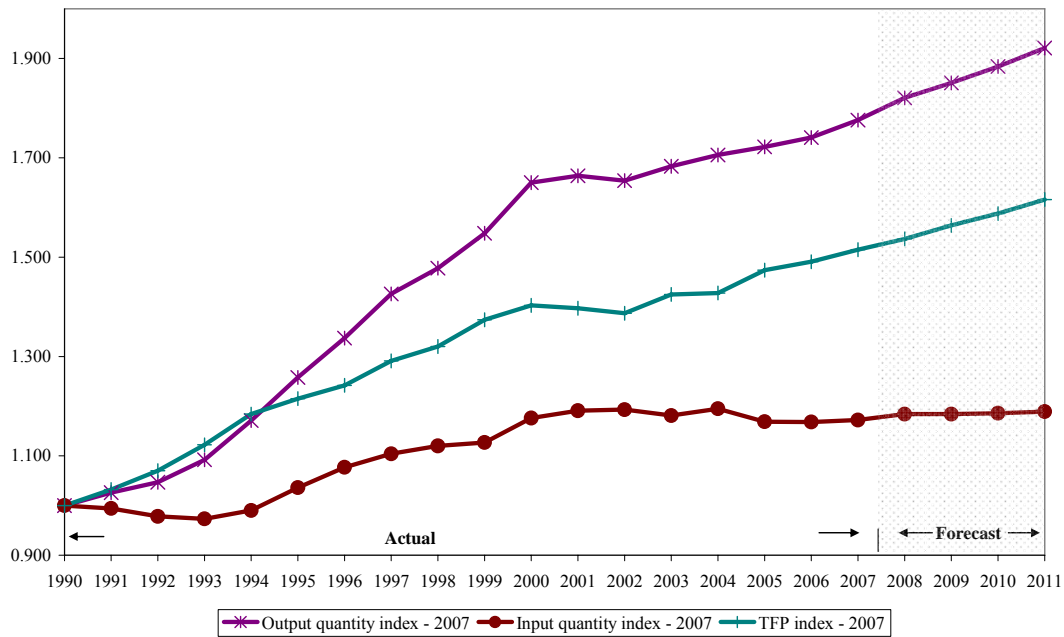
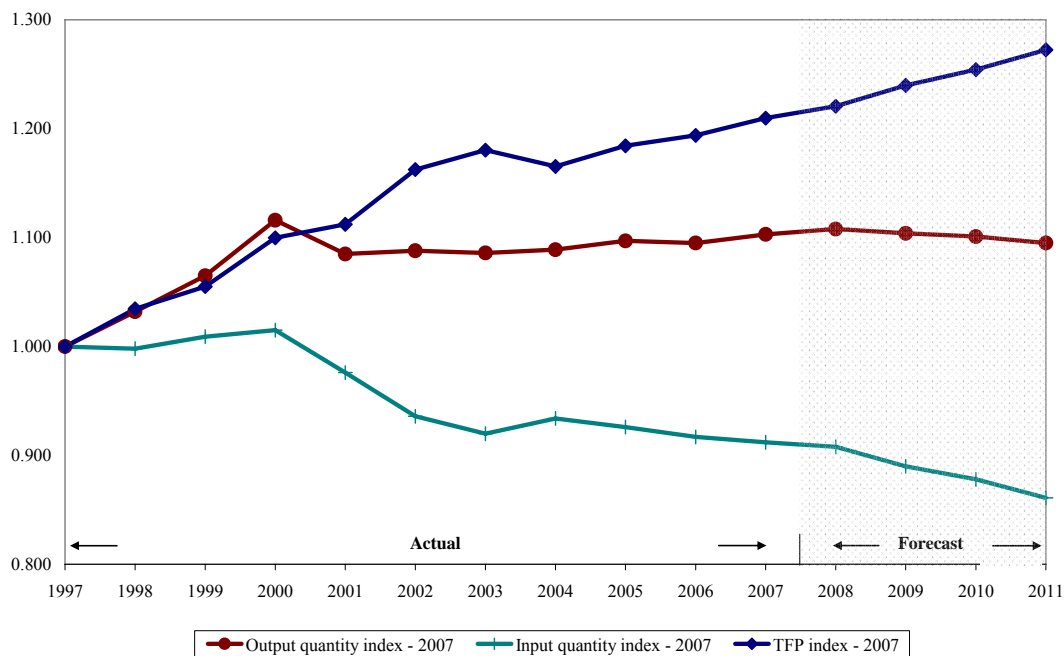


Figure 8.5 presents the estimated Australia Post's output quantity, input quantity and TFP indexes for reserved services during the period 1996–97 to 2010–11.

Figure 8.5: Australia Post's reserved service output, input and TFP indexes, 1996–97 to 2010–11



The main findings of this report are:

- Australia Post exhibited strong TFP growth for both aggregate services and reserved services between 1989–90 and 2006–07.
 - Aggregate services experienced an annual rate of 2.4 per cent in TFP growth.
 - Reserved services experienced an annual rate of 1.9 per cent in TFP growth.
 - Both aggregate services and reserved services outperformed the overall market sector over both the last 11 years and the last 5 years.
- The strong TFP growth in aggregate services is attributable to the following factors:
 - output rose significantly up to 1999–2000; and
 - output stagnated in the next two years and then increased at a smaller rate than before 1999–2000, combined with the flattening out of inputs after 1999–2000.
- The strong TFP growth in reserved services is attributable to the following factors:
 - output grew strongly before fluctuating since 1999–2000; and
 - input quantity declined during the period 1996–97 to 2006–07.
- TFP changes are predicted to increase at an annual rate of 1.61 per cent for aggregate services and 1.28 per cent for reserved services over the period of 2007–08 to 2010–11 as input reductions accelerate.

Comparison of the 2002 and 2007 reports

Methodology

Meyrick and Associates adopted the same index number based approach to measure the productivity performance of Australia Post in the 2002 and 2007 reports. The index number approach is a commonly accepted method to measure TFP. Using the chained Fisher Ideal index, individual input / output changes over two successive years are aggregated into a measure of yearly total input change / output change with weights such as cost / revenue share for inputs / outputs.²¹⁹

The drawback of this approach is that it does not allow for a decomposition of productivity changes into the impact of its economic drivers, that is, efficiency change, technical change and economies of scale change.

²¹⁹ The Fisher Ideal index is a geometric average of the product of the Laspeyres and Paasche index, Both the Laspeyres and Paasche indexes measure weighted average growth of outputs relative to inputs, where the former uses the base period weights and the latter uses the current period weights.

Data

The Meyrick and Associates 2007 report claimed that advances in Australia Post's information systems in recent years had enabled significant improvements in the data used to construct TFP estimates. The major improvements include:

- Increased number of output categories from 7 to 25 for the aggregate analysis and from 1 to 5 for the reserved services analysis. The availability of disaggregated data allows for the construction of a revenue-weighted average output growth index, replacing the previous output growth index that assigns equal weights to mail products within a category.
- Better allocation of revenue to output components that reduce the size of residual revenue. This includes the classification of international inward letters as a separate category from being previously allocated to other revenue category.
- Direct information on the number of full-time equivalent employees. Based on 2002 employment figures, the 2007 report derived a new FTE conversion factor of 0.83 for part-time and casual staff employed directed by Australia Post for the years prior to 2002. The 2002 report used a lower conversion factor of 0.50.
- Use of depreciation rates more closely linked to actual asset life experience. The depreciation rates were adjusted up from 4, 10 and 5 per cent used in the 2002 report for buildings, motor vehicles, and plant and equipment respectively to 6, 14 and 15 per cent in the 2007 study. The 2007 report acknowledged that the use of higher depreciation rates would lead to a faster decline in the estimated capital stock and hence, higher TFP growth estimates than those reported in the 2002 report.²²⁰
- More consistent investment and retirement data for the capital stock measure. This refers to the use of investment and retirement series for reserved services prior to 2000–01 in deriving capital stock under the declining balance method. However, the investment series, in fact, was derived from aggregate investment series by assuming the proportion of investment for reserved services in total investment in early years was the average ratio of the reserved service investment to the aggregate service investment for the years 2000–01 to 2006–07.
- Improved information on allocation of costs to reserved services. The 2007 study measured the contractor input separately from 'other input'. This information was not available for the 2002 report. It was therefore included in a broader category of materials and services instead.

Results – general comparison

The two reports have produced the estimated accumulative indexes for output, input and TFP changes by year, from which we derive the corresponding year-to-year

²²⁰ Meyrick and Associates, *Australia Post's Aggregate and Reserved Service Productivity Performance: Report prepared for Australia Post*, Canberra, 22 November 2007, p. 12.

changes indexes. Table 8.2 presents the correlation coefficients between pairs of 2002 and 2007 estimates on the year-to-year change basis.

Table 8.2: Correlations between 2002 estimates and 2007 estimates²²¹

Years	Aggregate service			Reserve service		
	Output quantity index	Input quantity index	TFP index	Output quantity index	Input quantity index	TFP index
1990–01 – 2001–02	0.930	0.907	0.823			
1997–98 – 2001–02	0.973	0.948	0.972	0.610	0.942	–0.448
2002–03 – 2006–07				–0.387	–0.534	–0.345
1997–98 – 2006–07				0.616	0.623	0.194

Table 8.2 shows that:

- high correlation between the 2002 estimates and the 2007 estimates on aggregate services for both periods (1990–91 to 2001–02) and (1997–98 to 2001–02)
- low (or even negative) correlation between the 2002 estimates and the 2007 estimates on reserved services
 - low correlations between estimates for the period 1997–98 to 2006–07
 - most importantly, negative correlation between estimates for the most recent regulatory review period 2002–03 to 2006–07 with correlation coefficient of –0.345 for TFP estimates derived from forecasting data in the 2002 report and actual data in the 2007 report. This implies that the forecast made in 2002 report was poor in forecasting the potential productivity growth in the next five years.

Results – comparison between 2002 forecasts and 2007 estimates on reserved services

Given the poor correlations between 2002 and 2007 estimates relating to reserved services, it is necessary to have a closer look at the magnitude of the difference between the two sets of estimates. Table 8.3 presents the accumulative indexes for reserve services reported in 2002 and 2007 reports.

Table 8.3: Accumulative index – a comparison between 2002 forecast and 2007 estimates for reserved service (2002–03 – 2006–07)²²²

Year	2002 report			2007 report		
	Output	Input	TFP	Output	Input	TFP

²²¹ The correlation coefficients are calculated by the ACCC based on estimates from Meyrick and Associates, 2002 and 2007.

²²² The indexes are calculated by the ACCC based on estimates from Meyrick and Associates, 2002 and 2007.

	<i>quantity index</i>	<i>quantity index</i>	<i>index</i>	<i>quantity index</i>	<i>quantity index</i>	<i>index</i>
Cumulative index – base year 1997						
2001–02	1.185	0.973	1.217	1.088	0.936	1.1626
Cumulative index – base year 2002						
2002–03	1.007	1.044	0.965	0.998	0.983	1.015
2003–04	1.013	1.034	0.979	1.001	0.998	1.002
2004–05	1.017	1.016	1.002	1.008	0.989	1.019
2005–06	1.017	1.010	1.007	1.006	0.980	1.027
2006–07	1.012	1.002	1.010	1.014	0.974	1.041
Geometric mean annual growth (2002-03 to 2006-07) – per cent	0.24	0.04	0.20	0.27	–0.52	0.80

Table 8.3 shows that:

- TFP in 2001–02 was estimated to increase from 1996–97 by 21.7 per cent in the 2002 report and by 16.3 per cent in the 2007 report.
 - It seems that the update of input and output data in the 2007 study produces a lower TFP estimate relative to the 2002 study. This is the net result of much lower output quantity estimates and slightly lower input estimates.
 - While both studies used actual input and output data, there were changes in data specification and computation, as outlined above.
 - Outputs in reserved service increased from one to five. The more expensive ordinary letters – a major component of reserved service revenue –experienced lower growth relative to the cheaper pre-sort and other reserved letters. Therefore, the revenue-weighted average of output growth, as measured in 2007 study will be lower than volume-weighted average of output growth measured in 2002 study.
 - Methods used to measure labour, capital and other inputs for the period prior to 2000–01 were also changed.
- The implications of this are that the application of these changes in data specification and computation to the 2002 forecast data (that is, for the period 2002–03 to 2006–07), if feasible, produced lower productivity change estimates than those in 2002 report.
- TFP in 2006–07 was estimated to increase from 2001–02 by 1.0 per cent, based on forecasting data in 2002 report. The estimate derived from actual data was 4.1 per cent for the same period. It shows that the 2002 forecasts substantially under-estimated the true potential productivity changes for the next five years.
 - The 2002 forecasts slightly under-estimated output growth, measured by output quantity indices, and significantly over-estimated the input usage, measured by input quantity indices.
 - The under-estimation of output growth is more severe if the impact of increasing output categories is accounted for.

The under-estimation of forecast TFP changes in reserved service for the years 2002–03 to 2006–07 may be attributable to pessimistic forecasts of inputs and outputs. There were three problems with the forecast data:

Firstly, the output quantity data in 2002 shows that output was projected to grow at a declining rate from 2002–03 to 2005–06 before falling marginally in 2006–07. The projected fall in reserved service business in 2006–07 effectively brings the trend growth rate down by 0.5 per cent per annum from estimated trend growth for the period ending in 2005–06.

Secondly, the input quantity data in 2002 projected that all input usages would rise in 2002–03. It turns out that Australia Post, in fact, successfully reduced all inputs other than capital in that year.

Thirdly, over the whole period 2002–03 to 2006–07, Australia Post managed to reduce its inputs to below the levels in 2001–02. This was not anticipated in the 2002 forecast data:

- Labour
 - The 2002 forecast saw labour initially increasing by 5 per cent before falling back to 23700 (FTE) in 2006–07, slightly above the level it was in 2001–02.
 - It turned out that labour usage continuously fell from 2001–02 until 2006–07 (by 4.72 per cent).
- Capital
 - The 2002 forecast showed capital initially increasing by less than 1 per cent in 2002–03 before gradually falling over time.
 - The actual capital usage only rose by 0.43 per cent in two years before gradually falling up to 2006–07.
- Other inputs, including the new variable on contractor input measured in 2007 report
 - The 2002 forecasts projected that other input usage would jump by 4 per cent before fluctuating around that higher level.
 - Actual usage of contractors fell by 13 per cent over the five year period.
 - Actual usage of materials and services dropped substantially in 2002–03 before increasing smoothly to 17 per cent above the 2001–02 level in 2006–07.

What explains the under-estimation of future TFP in reserved services?

Possible explanations for Australia Post's poor forward-looking input and output data for the next five-year regulatory period at the time of the 2002 notification include:

- Incapability of Australia Post to make robust estimation. While Australia Post may not be in a position to make reliable forecasts for the longer term (e.g. beyond three years covered in its corporate plan), its forecasts for the immediate year after the notification (that is, 2002–03) should be reasonably robust. However, this does not appear to be the case for the 2002 forecasts.

- Incentives of Australia Post to under-estimate its potential productivity gains. Australia Post justified its proposed price increases on the grounds of its pessimistic views on demand growth and cost reduction. If the proposed price increases are accepted by the ACCC, Australia Post can gain by not actively pursuing further improvements in productivity but passing on the resultant higher costs to consumers. This explanation appears to be particularly consistent with Australia Post's pessimistic demand outlook.
- Incentives of Australia Post to pursue additional productivity gains beyond what has been forecast under the regulatory regime in place. The incentive regulation implemented by the ACCC allows regulated firms to retain any cost savings beyond the expected level as profits. The motivation for Australia Post to further reduce costs beyond its forecast level can be strong, especially in the earlier years of the regulatory period. This appears to be a plausible explanation of the success that Australia Post has made in reducing input usage and therefore costs above its target set at the notification.

In summary, at the time of the 2002 notification, Australia Post formed a pessimistic view about its potential productivity gains, due to its perceived poor letter demand outlook and inability to control costs. While market circumstances turned out to be better, Australia Post has also pursued higher cost reductions than forecast. These may reflect Australia Post's incentives to under-estimate its potential productivity gains *ex ante*, but to pursue productivity gains more aggressively *ex post*. In doing so, Australia Post has managed to take away a larger share of its actual productivity gains from consumers.

Issues arising from the review

Forecasting

In the 2007 report there was no explanation on the approach taken to generate forecasts. At the request of the ACCC, Australia Post subsequently provided a brief description of how forecasts for each input and output were conducted.²²³

Australia Post states that forecasts for 2008 are compiled at State and product level for revenues. The demand forecasts reflect the individual judgement of the State and national forecasters about local, national and international market trends. Australia Post also states that cost forecasts are generally made at work centre level, following advice on the likely revenue forecasts. Australia Post noted that this reflected individual judgement and local knowledge.

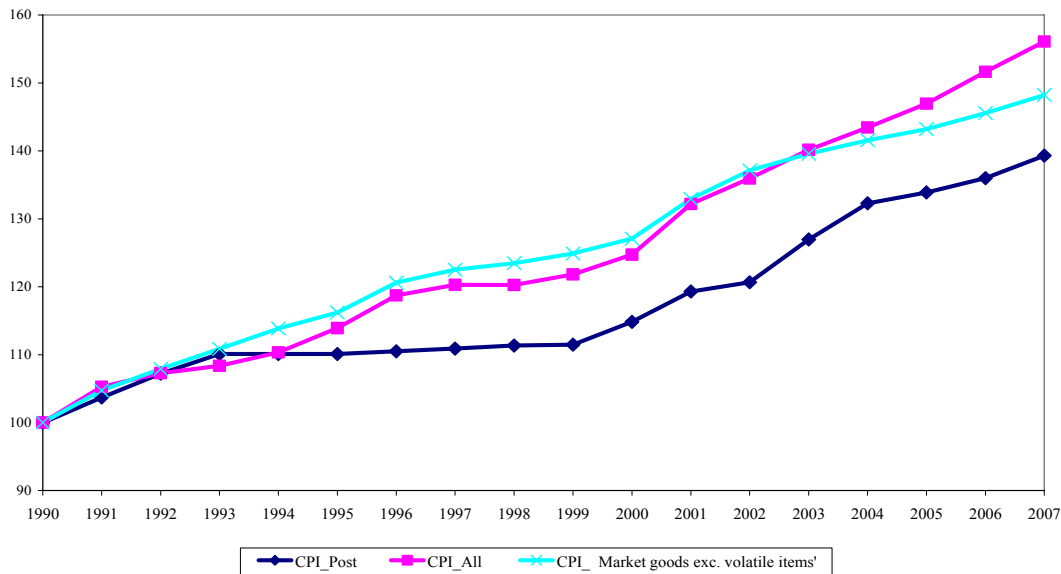
Australia Post contends that the 2008 forecast data provide a robust base for forecasting in later years, as they are compiled at individual product level using the combination of actual and re-forecast quarterly data. Forecasting for 2009 and onward are still made on a state-by-state basis but by national rather than state staff.

Output price specification

Both the quantities of accommodation and other outputs are measured indirectly by deflating the corresponding revenues by the CPI (net of GST). If these output prices are falling relative to the CPI, then the growth of output would be under-estimated. Figure 8.6 presents some price indexes published by the Australian Bureau of Statistics (ABS) that may be representative of price changes in generating accommodation and other revenues.

²²³ Australia Post, *Response to ACCC query on TFP, 27 December 2007*, February 2008.

Figure 8.6: Alternative price indexes²²⁴



As shown in Figure 8.6, postal prices, measured by a price index specific to postal services – CPI_Post, have been rising slower than the overall consumer price index over the period 1990 to 2007. However, the majority of items included in the postal price index are reserved and non-reserved mail items. As a consequence, it does not appear to be a good index for deflating accommodation and other revenues.

The CPI_market goods excluding volatile item series seems to be more suitable than the CPI_all series in deflating accommodation and other revenues as they are least affected by changes in the price of volatile goods, such as fuel or fruits. Note that the CPI_all index that includes price changes of volatile items may be suitable for deflating nominal ‘other costs’ to real value as other costs include fuel cost, which is volatile.

Capital price and quantity measures

Appendix C presents a detailed discussion on capital price and quantity measures. As identified there, it is necessary to conduct sensitivity analysis to examine the robustness of TFP estimates to alternative measures in the following variables:

- depreciation rates;
- implicit price deflators; and
- user cost of capital:
 - Using an *ex ante* approach, Swan Consultants estimated Australia Post’s real rate of return on capital stock used in 1991 at 5.78 per cent,

²²⁴ Australian Bureau of Statistics, *Consumer Price Index*, catalog no. 6401.0, 2008.

below the Industry Commission's benchmark real rate of return for Government Business Enterprises (GBEs);²²⁵

- The 2002 and 2007 Meyrick reports adopted the *ex post* approach to measure user cost of capital.

Labour productivity measure

The consistency of the data has been checked against information that the ACCC received from other sources, including annual reports and corporate plans of Australia Post.

The labour productivity improvement indexes published in Australia Post's annual reports (various issues) and the partial labour productivity indexes for both reserved services and aggregate services, estimated by Meyrick and Associates, are presented in Table 8.4 for the years covering 2002–03 to 2006–07.

²²⁵ Swan Consultants, 'Performance Measures for Australia Post: 1975–76 to 1990–91, in Steering Committee on National Performance Monitoring of Government Trading Enterprises', Measuring the Total Factor Productivity of Government Trading Enterprises, Canberra, 1992, p. 114.

Table 8.4: Labour productivity measures²²⁶

• Measure	• <i>Labour productivity improvement index (Annual reports)</i>	• <i>Partial labour productivity index – Aggregate service</i>	• <i>Partial labour productivity index – Reserved service</i>
• Source	• Australia Post annual reports	• Meyrick and Associates	• Meyrick and Associates
• 2002–03	• 1.0380	• 1.0219	• 1.0053
• 2003–04	• 1.0340	• 1.0158	• 1.0124
• 2004–05	• 1.0260	• 1.0234	• 1.0205
• 2005–06	• 1.0370	• 1.0130	• 1.0054
• 2006–07	• 1.0320	• 1.0263	• 1.0228
• Total	• 1.1785	• 1.1045	• 1.0682

The two measures are different in three aspects:

- The two measures are defined differently. The partial productivity index is measured as the ratio between changes in output quantity (measured by Fisher ideal index) and changes in labour input. The labour productivity improvement index is measured as the real trading revenue growth relative to the change in the number of full-time equivalent staff adjusted for any impacts of outsourcing and insourcing.
- Whether labour outsourcing and insourcing are adjusted. It is unclear to the ACCC how the impact of outsourcing and insourcing are adjusted for the construction of labour productivity improvement index. Given the trend of substitution of capital and contractors for own labour taken place in Australia Post over the last decade, such an adjustment would make labour productivity gains appear lower than if unadjusted, like what is measured in the partial labour productivity index. This implies that the divergence between the two labour productivity measures will be higher if both are unadjusted.

²²⁶ Sources: Australia Post *Annual Report*, various issues; Meyrick and Associates Report 2007; Australia Post *Draft Notification*, 2008.

- How output quantity indexes are computed. According to Australia Post, in estimating labour productivity improvements, the impact of price changes on revenue growth is estimated for each product and the total impact is removed from the later year (or added to the prior year) to enable comparison of real revenue growth. Such a measure of real trading revenue changes is equivalent to a revenue-share-weighted output quantity index (the weights can be base-period weights if price changes are removed from the later year or current period weight if price changes are added to the prior year). It may differ from the Fisher output quantity index, which is the geometric average of base-period and current-period indexes.

An appropriate labour productivity measures can be used to inform the ACCC's consideration of the efficiency of the labour costs incurred by Australia Post. While the labour productivity improvement index has an advantage over the partial labour productivity index by accounting for labour substitution with other factors of production, it is unclear how this, as well as the impact of output price changes, are adjusted for in Australia Post's computation. Despite of the differences in the two measures, the estimated labour productivity improvements are consistently higher than the partial labour productivity gains estimated for both aggregate services and reserved services.

Summary

All the issues discussed above are relevant to the ACCC's consideration of whether the TFP performance of Australia Post has been appropriately measured and how the estimates should be used in the assessment. While some measurement issues that may systematically affect historical and forecast TFP estimates have been identified, the largest area of concern is over the robustness of Australia Post's forward-looking data for the period 2007–08 to 2010–11.

Assessment of the forecast TFP for the period 2007–08 to 2010–11

An important element of the ACCC's assessment is an evaluation of the forecast data covering the period 2007–08 to 2010–11. This involves an examination of whether Australia Post's forecast costs associated with each input used in providing the projected output are efficient.

The assessment is also extended to see whether the underlying assumptions about macro- and micro-economic factors made by Australia Post in planning its business are consistent across the cost data used for the purposes of the TFP analysis and the financial model.²²⁷

²²⁷ Strictly speaking, the cost data used for the purposes of TFP and the financial model are not directly comparable because Australia Post updated its demand forecasts during the September review process. The cost data from the September review also changes when updated allocation factors and volumes are incorporated. Therefore, the ACCC's assessment focuses only on whether the underlying assumptions over factors governing the business have changed.

Labour costs

Table 8.5 presents full-time equivalent (FTE) number of staff directly employed by Australia Post, classified by operational areas, from 2001–02 to 2006–07.

Table 8.5: FTE number of staff by operational areas²²⁸

	<i>2001–02</i>	<i>2006–07</i>	<i>Change (per cent)</i>
Mail processing	8269	6591	-20.29
Mail transport	2551	2552	0
Mail delivery	12381	12569	1.52
Retail	6060	5822	-3.93
Other	5068	5297	4.52
Total	34329	32831	-4.36

Table 8.5 shows the following:

- Total FTE number of staff directly employed by Australia Post fell by 4.36 per cent over the five years to 2006–07.
- Most of realised labour savings come from operational areas.
 - Labour usage decreased by 20.29 per cent in mail processing due to the adoption of sorting automation technology in implementing FuturePost program.
 - Retail business had experienced a fall in employment by 3.93 per cent as a result of network rationalisation.
 - Changes in employment in mail delivery and transport were minimal..
- Labour usage in non-operational areas, including head office, rose by 4.52 per cent.

Despite of the increasing number of employees working in non-operational areas, overall there is a clear trend of declining labour usage within the operation of Australia Post in recent years. However, according to the Meyrick and Associates data, labour usages (including staff engaged by agency and LPO) in both reserved and non-reserved services are assumed to increase in the immediate year after the notification before falling in the following years. Table 8.6 presents the forecasts for the period considered.

²²⁸ Sources: Australia Post, Draft Price Notification 2008, p. 25; Annual Reports 2002 and 2007.

Table 8.6: Forecasts on full-time equivalent number of staff²²⁹

	<i>Reserved services</i>		<i>Aggregate services</i>	
	<i>FTE number</i>	<i>Yearly change</i>	<i>FTE number</i>	<i>Yearly change</i>
2006–07	20163		37755	
2007–08	20311	149	38066	311
2008–09	20061	-251	37609	-457
2009–10	19783	-278	37127	-482
2010–11	19564	-219	36760	-367

The ACCC considers that the forecast rising labour usage in 2007–08 may not be robust given that:

- The rising labour usage cannot be justified by the outlook of modest growth in reserved letter volumes. In recent years, there have been continuous labour reductions associated with modest letter growth, resulting from considerable improvements in labour productivity.
- The forecasts seem to be inconsistent with Australia Post’s statement that ‘reductions in FTE numbers in the retail and mail networks are assumed to continue to be achieved to the end of 2008/09 and beyond’.²³⁰

The ACCC considers labour usage could be reduced in the immediate year, as is predicted for the later years. Australia Post’s forecast temporary rise in labour usage in 2007–08 may result in an over-estimation of the labour usage (and consequently labour costs) for the forecast period considered.

The ACCC also treats the level of wages and conditions as part of its consideration of the efficiency of the cost base under which the level of profitability implied by the proposed prices is assessed. In its draft price notification, Australia Post submitted that under EBA7 wages are increased by 4 per cent per annum from 2007–08 to 2009–10. This is slightly higher than Reserve Bank of Australia’s forecast of CPI at around 3.5 per cent over the years to December quarter 2008 before falling gradually to 3 percent by June quarter 2010.²³¹ This implies that Australia Post employees will benefit, to some extent, from outperforming the productivity performance of the national economy.

Contractor costs

The Meyrick and Associates data show that costs incurred in delivering and carrying mail are forecast to rise for both reserved services and aggregate services. This is consistent with the information provided by Australia Post in its draft price notification.

²²⁹ Sources: Meyrick and Associates, *Australia Post’s Aggregate and Reserved Service Productivity Performance: Report prepared for Australia Post*, Canberra, 22 November 2007, pp. 39–41.

²³⁰ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008 p. 31.

²³¹ Reserve Bank of Australia, *Statement of Monetary Policy*, 11 February 2008, p. 52.

Other operating costs

As for other inputs covering a wide range of materials and services used by Australia Post, the Meyrick and Associates data shows that:

- the price of other inputs is assumed to go up with the CPI;
- the quantity of other inputs used in aggregate services is forecast to rise marginally over the next four years; and
- the quantity of other inputs used in reserved services is forecast to fall markedly over the next four years.

Australia Post's draft notification assumes that diesel prices will increase by 7.5 per cent per annum while other non-labour costs will generally increase in line with CPI.²³² No detailed information is available for the quantities of inputs.

The assumption on the prices of other inputs seems to be reasonable and consistent between the two analyses.

Capital costs

The same investment and retirement dataset has been used for both the TFP analysis and the financial model to construct the capital stock measure. The prices of capital are not comparable between the two datasets due to the differences in methodology and underlying assumptions on future prices associated with reserved services.

For the TFP analysis, Meyrick estimates capital price using the residual revenue approach and assumes that future prices in reserved services are constant at the 2006–07 level. As a result, the future returns to capital used in the reserved service seem to be very pessimistic with the capital price index falling from 173 in 2006–07 to 92 in 2007–08 and then to 33 in the following years.

Assessment of drivers of potential productivity gains

As outlined before, productivity gains are driven by three major drivers, namely efficiency change, technical change and economies of scale change. Australia Post believes that it has shifted from a phase of technical advancement to a phase of sustained process improvement, which makes future productivity gains more difficult to obtain.

The ACCC considers Australia Post's potential productivity gains in the medium term from the three major drivers in turn:

Efficiency change

Australia Post acknowledges that it has experienced some efficiency improvements through process standardisation and benchmarking in recent years.²³³ In terms of mail sorting operation in Australia Post, there has been a trend towards centralisation of mail centres and increasing automation within the centres. The trend is expected to continue

²³² *ibid.*

²³³ *ibid.*, p. 40.

with a number of future productivity and efficiency programs, particularly deep sequencing and QLD network restructure initiatives, being implemented by Australia Post.

According to Australia Post, expected savings from both deep sequencing and network restructure initiatives are small and have been incorporated into the projected cost base for 2008–09.²³⁴ The ACCC has sought further information on the deployment of these initiatives and their financial implications. In its subsequent responses, Australia Post outlined its scheduled phases of deploying automated sequencing technology.²³⁵

From an exercise of international comparison in postal operators, the ACCC considers that Australia Post's approach to better utilising and extending current technologies to the deployment of automated sequencing is conservative, given that:

- The planned deployment is slow and of small-scale: automatically sequenced delivery rounds will be gradually rolled out from the present trial to 1400 rounds national-wide (that is, less than 15 per cent of all delivery rounds) over three years; and
- Australia Post has not fully considered the implementation beyond 1400 rounds that require further investment in mail processing machines.

The ACCC also considers that the projected savings from the deployment of deep sequencing appear to be relatively low, compared with outcomes from implementations of this technology by overseas postal operators.

For example, the United States Postal Service (USPS) initiated its testing program in delivery point sequencing of standard letters in 1991 and started its implementation in 1993. By 2007, 86 per cent of standard-sized letters have been sequenced to the order of delivery point, with a target of 95 per cent by 2010.²³⁶ The USPS estimated that sequencing would reduce in-office hours for processing mail by about 80 minutes per day.²³⁷ The TPG and Deutsche Post have also mass-deployed deep sequencing to 40 and 80 per cents of all letters, respectively, by 2005.²³⁸ Royal Mail, in its 2005–06 Corporate plan, proposed to introduce deep sequencing to more than 80 per cent of total

²³⁴ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008, pp. 42–43.

²³⁵ Australia Post, *Response to information request on financial model, WACC, asset base and productivity*, 14 May 2008; and *Response on further questions on sequencing and letter demand*, 20 May 2008.

²³⁶ United States Postal Service, *2007 Comprehensive Statement on Postal Operation*, 2007, p. 44.

²³⁷ United States General Accounting Office, U.S. Postal Service: Progress Made in Implementing Automated Letter Sequencing, but Some Issues Remain, *Report to the Chairman, Sub-committee on the Postal Service, Committee on Government Reform and Oversight, House of Representatives*, GAO/GGD-98-73, April 1998., p. 14

²³⁸ LECG, *Future Efficient Costs of Royal Mail's Regulated Mail Activities*, 2 August 2005, p. 141.

sequencing walks by 2009–10 and estimated net present value of this initiative at £132m.²³⁹

Large scale adoption of deep sequencing by those overseas postal operators indicates that the technology is cost-effective in reducing processing and delivery time and improving quality of processing and delivery. The reported savings in hours and/or costs seem to be higher than those estimated by Australia Post.

The ACCC notes that, despite its initial small scale, the scheduled deployment of deep sequencing by Australia Post requires little additional capital investment, and would bring significant labour savings in this traditionally labour-intensive manual-sequencing activity. Utilisation of this technology could also help improve quality in sequencing to street level and make Australia Post better prepared for the fast growing delivery network.

It is evident to the ACCC that Australia Post still has some scope for greater efficiency through full utilisation of existing technologies and business rationalisation. Many interested parties, particularly those pre-sort mail users, have pointed out that there appear to be unrealised efficiency gains within Australia Post, which could flow from previous technological advances made under the Future Post program, if actively pursued.

Technical change

Internationally some postal service operators have continuously and vigorously advanced mail sorting and sequencing automation technology in recent years. In contrast, Australia Post has made no major capital investment in its mail network since the completion of the Future Post program in the early 2000s. It may have been significantly behind the world best-practice postal operation in terms of the deployment of the state-of-the art automatic sorting and sequencing technology.

The USPS is scheduled to begin its initial deployment of flats sequencing machines in 2008 to sequence large letters, catalogues and periodicals into the order of delivery for carriers. According to the USPS, the flats sequencing system equipment will be capable of sequencing 280,500 pieces of large mail items per day to more than 125,000 delivery addresses.²⁴⁰ Similar initiatives have also been identified by Royal Mail in its 2006 price control review.²⁴¹

Australia Post questions whether the adoption of flats sequencing technology is practical for Australia given its relatively small large mail volume to the U.S. market.²⁴² Even if this is the case, Australia Post may explore other longer-term opportunities of

²³⁹ LECG, *Future Efficient Costs of Royal Mail's Regulated Mail Activities*, February 2006, pp. 80–82.

²⁴⁰ United States Postal Service, 2004, Washington DC, United States of America, Flat-out Efficient: Flat Sequencing Systems is Coming, *Media Release*, accessed on 04 April 2008 at www.usps.com/mailpro/2007/mayjune/page3.html.

²⁴¹ LECG, *Future Efficient Costs of Royal Mail's Regulated Mail Activities – Bottom-up Review of Royal Mail's Strategic Plan: Final Conclusion*, February 2006.

²⁴² Australia Post, *Response to the ACCC 1 May Questions*, 14 May 2008.

advancing its sequencing technology, such as the Delivery Point Packaging (DPP) system currently under development by the USPS that can simultaneously sequencing letters and flats to delivery point order.

Therefore, the scope of technical progress from adopting more advanced technology for Australia Post may not be as limited as it has suggested in Australia Post's draft price notification.

Economies of scale change

Another possible driver of productivity gains is scale efficiency change. The Meyrick 2007 study assumes constant returns-to-scale technology in aggregate services for its econometric decomposition of TFP growth. While this may be the case for aggregate services, the mail network, particularly in the mail sorting area, may still exhibit increasing returns-to-scale characteristics. The strong growth in pre-sort letters, facilitated by further improvement in mail automation and deep sequencing technology, may continue to drive productivity gains through economies of scale.

Literature review on productivity of postal services

There is only a limited amount of research on international benchmarking of postal service performance in the academic literature.

Australia Post

Both the index number and the data envelopment analysis (DEA) approach were adopted by Abbott in examining Australia Post's TFP performance over the period 1976 to 1999.²⁴³

For time-series analysis, Australia Post was modelled as using labour, contractors and capital to produce mail and other services. Using a Tornqvist Index, Abbott found that productivity in Australia Post had improved over time as a result of successful transition through corporatisation in 1989 and that its productivity improvements were faster than that of the overall economy.

For international comparison, the choice of inputs and outputs was further constrained by the availability of data.²⁴⁴ Outputs were modelled as mail delivered and the number of total customers. Two sets of inputs were used: labour and capital expenditure; labour, letter scanners, motor vehicles and motor cycles/scooters. Using DEA, Abbott compared postal administrations in 22 countries for the year 1997. These countries were selected on the basis of high income (measured by gross national income per capita), high incidence of delivery and high urbanisation with the vast bulk of mail delivery being conducted over short distances within the larger cities. He concluded that Australia Post still had room for productivity improvements. However, the estimated relative national performance was unadjusted for differences in services provided and operating environment across international markets. The work was

²⁴³ M Abbott, 'An Economic Evaluation of the Australian Postal Corporation Act 1989', *Economic Papers*, 19, 3, 2000, pp. 1–15.

²⁴⁴ The data are extracted from Universal Postal Union statistical data.

criticised by Meyrick (2007) for the absence of extensive quality control checking for the data.

Overseas postal service operators

Cohen, Chu, Ferguson and Xenakis conducted a cross-sectional comparison for postal administrations of 21 industrial nations in 1997.²⁴⁵ Comparable statistics, such as labour cost, mail mix, and so on, were examined to gauge country-specific features of postal services. In particular, an econometric analysis was conducted to test the relationship between labour productivity and factors that may affect it, including labour cost and system size. The results showed that postal efficiency was positively related with labour cost and system size.

Frontier Economics compared the postal service performance in five European countries: UK, Italy, Germany, Netherlands and Finland during the period 1986 to 2003.²⁴⁶ Sweden was found to consistently out-perform other countries in labour productivity measured by the number of letters delivered per employee and in service quality measured by percentage of letters delivered the next day. The study was later updated by the LECG in its consultancy work for PostComm on assessing future efficient costs for Royal Mail's reserved service.²⁴⁷ Sweden was found to still out-perform other countries while the performance of other countries has converged.

International comparison of postal service operators

International benchmarking study on productivity

An international benchmarking study comparing the productivity performance of Australia Post with other overseas postal service operators could provide insight into the relative efficiency of Australia Post compared with postal operators overseas.

The scarcity of existing work in the literature likely reflects the degree of difficulty of a study involving international benchmarking of postal operations. For a valid international comparison, it is important to use consistent data on inputs, outputs and explanatory variables that should be controlled for in a frontier analysis. A number of data problems need to be overcome for making valid inferences from such an analysis:

- **Data consistency:** There is a lack of an internationally consistent set of country-level data on the postal services industry. Publicly available statistical data on individual postal administrations may be collected from the UPO website or company annual reports. However, data may be incomplete or incomparable due to the inherent differences in reporting standards across countries. For example, minor variations in definition may lead to comparability problems even if similar information is reported.

²⁴⁵ RH Cohen, EH Chu, WW Ferguson and SS Xenakis, 'A Cross Sectional Comparison and Analysis of Productivity for 21 National Postal Administrations', in MA Crew and PR Kleindorfer (eds.), *Managing Change in the Postal and Delivery Industries*, Kluwer Academic Publishers, Boston, 1997.

²⁴⁶ Frontier Economics, *Response to Consignia's Comments*, May 2002.

²⁴⁷ LECG Ltd., *Future Efficient Costs of Royal Mail's Regulated Mail Activities*, 2 August 2005.

- Sample countries: Postal administrations may differ from each other in terms of their operating environment, such as geographical condition and jurisdictional regulations. For a valid international comparison, it is important to have a uniform sample of postal administrations operating in similar environments. The appropriate reference countries for Australia may be other industrial countries or high-income countries. The remaining differences in operating environment that is beyond the control of postal service operators should be adjusted for in estimating productivity and efficiency. Without such an adjustment, the productivity estimates will only provide a broad cross-country comparison of postal administrations and thus, no conclusion should be drawn for policy directions.

The ACCC considered that it would not be possible within the time available for the ACCC's assessment of Australia Post's draft price notification to collect and construct a consistent dataset for the purpose of international benchmarking study on post productivity performance, during the process of assessing this notification. However, the ACCC views that it is still necessary to verify some of the claims that Australia Post has made in regard to its relative performance to overseas postal service operators.

International comparison on price and quality of postal services

Australia Post states in its draft notification that, despite Australia's large geographic size, highly dispersed population and relatively low mail density, its service standards rank among the best in the world.²⁴⁸ It also contends that letter prices in Australia are the third lowest among developed countries, just above New Zealand and South Korea.²⁴⁹

Table 8.7 compares the operation of postal services, in terms of letter product, regulations and delivery standards, between Australia and Canada. While the two countries have similar geographic and demographic characteristics, their delivery standards are also not considerably different from each other.

²⁴⁸ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories: Detailed Explanation of Price Changes*, 5 February 2008, pp. 15–16.

²⁴⁹ *ibid.*, p. 9 and p. 59.

Table 8.7: Service standards, demographics and mail density²⁵⁰

	<i>Australia</i>	<i>Canada</i>
• Letter product classifications	• Small and large letters classified by size and weights	• Standard letters & non-standard letters classified by size and weights
• Reserved letters	• Maximum of 250 grammes • Four times of BPR	• Maximum of 500 grammes • Three times of BPR
• Standard letter	• Size: 240L*130W*5T • Weight: 125gm	• Size: 245L*156W*5T • Weight: 50gm
• Price Regulation	• Price notification	• Annual BPR increases may not exceed two-thirds of CPI
• Regulator	• Australian Competition and Consumer Commission	• Government of Canada – minister responsible for Canada Post Corporation
• Prescribed delivery timetable	• Intrastate <ul style="list-style-type: none"> ○ Metro/Metro – 1 day ○ Others – 2 days • Interstate <ul style="list-style-type: none"> ○ Metro/Metro – 2 days ○ Metro/country – 3 days ○ Others – 4 days 	• Local – 2 days • Within a province – 3 days • National – 4 days •
• On-time delivery standard	• 94%	• 96%
• Network characteristics		
• <i>Persons/sq km</i>	• 2.7	• 3.6
• <i>Annual mail items per capita</i>	• 241	• 248

²⁵⁰ Sources: Australia Post Draft Price Notification 2008; Universal Postal Union, *Status and Structures of Postal Administrations*, Berne, Switzerland, viewed April 2008, <http://www.upu.int/status/en/status_en.pdf>.

In order to gauge comparative efficiency of Australia Post, a comparison of letter prices across countries, after adjusting for country differences in labour costs, service quality, geographic and demographic conditions, and the purchasing power of currencies, may be useful. Table 8.8 presents such a comparison of BPR (prices for a domestic standard letter) in developed country, drawing information from an annual Deutsche Post survey and information submitted by Australia Post in its notification.²⁵¹

Table 8.8: Prices for a domestic standard letter in some developed countries²⁵²

Country	Nominal price for a domestic standard letter	Letter price adjusted for purchasing power parity	Letter price adjusted for purchasing power parity and labour costs	Basic letter rate adjusted for purchasing power parity
Source	Deutsche Post	Deutsche Post	Deutsche Post	Australia Post
Currency	Euro	Euro	Euro	AUD
Australia				0.50
Canada				0.61
Norway	0.87	0.70	0.79	1.00
Denmark	0.74	0.57	0.62	0.99
Finland	0.70	0.64	0.67	1.03
Switzerland	0.61	0.50	0.52	0.90
Italy	0.60	0.61	0.66	1.18
Sweden	0.59	0.53	0.54	0.85
Poland	0.55	1.01	1.38	1.26
Austria	0.55	0.56	0.56	1.08
Ireland	0.55	0.48	0.63	0.92
France	0.55	0.53	0.52	1.01
Germany	0.55	0.55	0.55	1.04
Greece	0.54	0.68	0.78	1.23
Belgium	0.54	0.53	0.51	1.01
UK	0.53	0.49	0.52	0.87
Luxembourg	0.50	0.48	0.47	0.85
Portugal	0.45	0.56	0.71	1.09

²⁵¹ Deutsche Post, *Letter Prices in Europe: Up-to-date International Letter Price Survey*, March 2008; and Australia Post Draft Price Notification 2008. p. 59.

²⁵² The average exchange rate in March 2008 was 1 Euro = 1.67 AUD.

Netherlands	0.44	0.43	0.44	0.84
Spain	0.31	0.36	0.41	0.63
Average EU	0.48	0.59	0.78	

Note: the letter prices quoted by Deutsche Post are those as at March 2008 while the prices used by Australia Post are those as at December 2007.

Note that the standard letter prices surveyed by Deutsche Post are associated with the fastest letter mail product of each of the countries, which generally carries a next-day delivery target. They are the standard letters sent first-class. While Australia does not have a distinction between first and second class mail, the standard mail service seems to display a mixture of first and second class delivery standards.

Therefore, the basic postage rate in Australia is not directly comparable to the standard letter prices in European countries. Such a comparison, in fact, overstates the true overseas letter prices associated with letter products delivered at equivalent standards, making Australian letter prices appear more favourable than they really are.

As shown in the table, postal price rankings can change substantially after controlling for different factors capturing macro-economic condition in a country, including purchasing power parity and labour costs. The comparison conducted by Australia Post fails to take into account the unit labour costs differential between Australia and other countries. The Deutsche Post study finds that ranking of letter prices further adjusted by labour cost differentials can differ substantially from the unadjusted series.

8.4 ACCC's view

In assessing Australia Post's price notification, the ACCC considers that the application of the PTRM model to a sufficiently long period would provide Australia Post with strong incentives to seek out further productivity gains, given that Australia Post appears to have responded to these incentives since the previous notification. That is, extra productivity improvement beyond the expected productivity gains built into the cost forecast in the PTRM model will be actively pursued by Australia Post in the medium term since they can be retained as profits.

In assessing Australia Post's potential productivity gains, the ACCC has considered the following issues:

- the forecast and out-turn productivity performance by Australia Post during the period 2002–03 to 2006–07
- the forecasts by Australia Post in this notification
- the economic drivers of productivity gains.

The ACCC finds that, at the time of the 2002 notification, Australia Post formed a pessimistic view about its potential productivity gains, due to its perceived poor letter demand outlook and inability to control costs. Australia Post justifies its proposed price increases for this notification on the ground that sustained productivity gains become increasingly difficult. This pessimistic view of its potential productivity improvements may reflect its inherent incentives to under-estimate potential productivity gains *ex*

ante, but to engage in productivity improvements more aggressively *ex post*, in order to take away a larger share of its actual productivity gains from consumers.

The ACCC, in its assessment of economic drivers for productivity gains within in the mail network, considers that there is further scope for productivity gains from three main sources, efficiency improvement through better utilisation of existing technologies and business reorganisation, economies of scale in mail sorting and technical progress from advancing its mail sorting and process technology.

9 Return on capital

In assessing Australia Post's proposed price increases, the ACCC has regard to whether the prices are sufficient to cover the efficient costs of providing mailing services, including a return on capital. The provision for a return on capital compensates the firm for the cost of its operations in capital markets. The return on capital should reflect the opportunity cost to investors of choosing to finance the firm's operations.

Given that a firm can finance its operations using a combination of debt and equity, the return on capital provided is a weighted average of the opportunity cost of debt and equity. This return on capital is known as a weighted average cost of capital (WACC).

As outlined in Chapter 3, by incorporating a reasonable return on capital in the financial model used to assess the proposed price increases, the first criterion of s. 95G(7) of the TPA is addressed because prices will be sufficient to incorporate a return on capital such that the firm's ability to finance the investment necessary for its operations is maintained. Further, by ensuring that price increases are not inflated above the return on capital, the second criteria of s. 95G(7) of the TPA is addressed, as the firm is discouraged from taking advantage of its market power to increase prices to excessive levels.

This chapter reviews the return on capital used by Australia Post in its financial model which has been used to determine the maximum allowable revenue and thus the quantum of its proposed price increases. Each of the relevant parameters are reviewed in turn in light of Australia Post's proposal, interested parties views, recent academic theoretical and technical analysis, and the ACCC's estimation.²⁵³

9.1 Interested parties' views

The ACCC did not receive extensive comments from interested parties in response to the return on capital issues presented in the issues paper.

Having said that, the Post Office Agents Association Limited (POAAL) has made a general comment that

'While these issues [Australia Post's statutory tax rate and equity beta] are not the prime expertise of POAAL it would seem reasonable to follow earlier reviews by the Commission [ACCC] that used the statutory tax rate. The effective tax rate is not known until the end of the financial year. It can depend on a range of one-off in-year events that are not particularly relevant to the assessment of a reasonable rate of return.'²⁵⁴

POAAL have also expressed that "No doubt the equity beta is meant to represent the lower market risk of Australia Post..."²⁵⁵

²⁵³ The return on capital is currently the subject of ongoing review by the Australian Energy Regulator.

²⁵⁴ Post Office Agents Association Limited, *Submission to the Australia Post Draft Price Notification issues paper*, April 2008, p. 9

²⁵⁵ *ibid.*

9.2 Australia Post’s proposal

Table 9.1 outlines the WACC parameters proposed by Australia Post in its draft price notification. Australia Post has incorporated a post-tax nominal return on capital of 9.37 per cent in the financial model used to generate the maximum allowable revenue requirement for its proposed price increases. The ACCC notes that the figures Australia Post has proposed are values for the consolidated WACC. This means that this WACC relates to Australia Post’s reserved and non-reserved services.

Table 9.1 Parameters of the WACC proposed by Australia Post

<i>WACC Parameter</i>	<i>Value</i>
Risk-free rate	6.1%
Market risk premium	6.0%
Asset β	0.52
Gearing (debt/debt+equity)	25%
Imputation credits value	50%
Equity β	0.66
Tax rate	30%
Debt β	0.10
Cost of debt	7.30%
Post-tax nominal WACC	9.37%

9.3 Cost of equity

The return required by equity investors for investing in the firm is known as the cost of equity. The return required by equity investors can be estimated in a number of ways, however the approach generally applied by the ACCC is to use the capital asset pricing model (CAPM). The CAPM shows that the expected return demanded by investors on a risky asset depends on the risk-free rate, the expected return on the ‘market portfolio’²⁵⁶, the variance of the return on the ‘market portfolio’ and the covariance of the return on the risky asset with the market portfolio.^{257,258} The CAPM implies that equity investors should be compensated by the amount of systematic risk²⁵⁹ the firm faces. The CAPM formula is designated by equation Eq. 1.3

$$\text{Eq. 1.3} \quad E(r_e) = r_f + \beta(E(r_m) - r_f)$$

²⁵⁶ The ‘market portfolio’ is defined as the portfolio of all risky assets, weighted according to their market capitalisation

²⁵⁷ This is also known as the equity beta. The equity beta is a measure of the standardised correlation of the return of the asset compared with the return of the market portfolio.

²⁵⁸ G. Peirson, R. Brown, S. Easton, P. Howard, *Business Finance 8th Edition*, McGraw Hill, p. 220

²⁵⁹ Systematic risk refers to market risk that cannot be diversified away. This can be viewed as risk that all companies face in the same market. This is compared to unsystematic risk that is specific to the company.

where:

- $E(r_e)$ is the expected return on equity;
- r_f is the expected risk free rate;
- $E(r_m)$ is the expected return of the market portfolio;
- β is the standardised correlation of the return of the asset relative to the return of the market portfolio.²⁶⁰ In this case, the operations of the firm to the market portfolio.

Risk free rate (rf)

The risk free rate is the rate of return an investor expects to receive from holding an asset over a given amount of time with a promised repayment amount with no risk of default. The risk free rate compensates investors for the opportunity cost of not being able to invest in the next best 'riskless' investment. This can include compensation for the time value of money, inflation, as well as bearing interest rate risk, and liquidity risk.

The risk free rate should be based on the return of an asset that promises a given return assuming no risk of default. The problem, however, is that there is no such asset in the Australian market. Therefore, an appropriate proxy will be selected as the risk free rate. The risk-free rate that is estimated is not the risk-free rate, but rather a proxy of the risk-free rate.

Australia Post's position

Australia Post submitted its estimate of the risk-free rate according to the recommendations by Capital Partners.

Capital partners have stated that it is widely accepted that the proxy for the risk-free rate should be Commonwealth Government issued securities. However there is debate about the duration of Commonwealth Government issued securities. Capital partners stated that ideally the duration should be selected based on the duration of the planning period of which the CAPM is to be used to estimate the expected return. This means that if the planning period is based on a long term investment, a long term government security is the appropriate duration. Capital partners state that it has been conventional in Australia to use 10 year Commonwealth Bond Yields as the proxy, therefore they recommend a 10 year Commonwealth bond rate as the risk-free rate.²⁶¹

²⁶⁰ $\beta = \frac{Cov(a, m)}{Var(a)}$ where $Cov(a, m)$ refers to the covariance of the return of asset 'a' to the return of the market portfolio 'm', and $Var(a)$ refers to the variance of the return of asset 'a'.

²⁶¹ Capital Partners, *Australia Post: Consolidated Weighted Average Cost of Capital*, 17 August 2005, p.14

In accordance with the recommendations by Capital Partners, Australia Post proposes a risk-free rate of 6.1 per cent. They comment that this is the average 10-year Commonwealth bond rate estimated in January 2008.²⁶²

On 1 May 2008, the ACCC provided Australia Post with an opportunity to elect a period in the future to estimate the risk-free rate. As such, Australia Post has provided a revised risk-free rate period of 14 April 2008 to 16 May 2008, estimated to be 6.2 per cent.²⁶³

ACCC's analysis and view

There are at least four issues that need to be considered when estimating the risk free rate.

The four issues are:

- the choice of the proxy for the risk-free asset;
- the maturity of the risk free rate proxy,
- the length of the averaging period used to estimate the risk free rate proxy; and
- The date of the averaging period used to estimate the risk free rate proxy.

Choice of the risk-free proxy

It is generally accepted that the best risk-free asset proxy in Australia is Commonwealth government securities. These securities are the appropriate risk free asset proxy because they are the lowest risk debt instruments observable in the Australian market.

Length of the risk-free rate proxy

The term of the risk free asset should be chosen such that it results in the fair compensation of investors for investments of similar risk and length. The risk free rate provides investors a return for the opportunity cost of not being able to invest in the next best equivalent 'riskless' investment. This includes, amongst others, the compensation for the time value of money, expected inflation and risk premiums for bearing interest rate, inflation and liquidity risk.

The term of the risk-free rate should be the relevant regulatory period. This is because this is the length of time the regulated firm faces risk on its expected cash-flows. The risk of a regulated firm is eliminated at the end of the regulatory period because a new risk-free rate is re-determined. Because a firm should only be compensated for the length of time they face, setting the length of time greater or shorter than the length of time they face risk may result in over or under compensating the firm for the risk they are facing.

²⁶² Australia Post, *Draft notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p. 70

²⁶³ Australia Post, *Response 1 May questions*, 14 May 2008 p.3

It has been argued, however, that the term of risk-free asset should be set using a long-term risk-free proxy to match the life of the firm's long term assets.²⁶⁴ While this argument may have merit for non-regulated firms to match, amongst other risks, interest rate, inflation and liquidity risk to long-term assets, a regulated firm has their return re-determined at the start of each regulatory period. This eliminates the risks a regulated firm faces beyond the regulatory period.

In addition, recent empirical work by Kevin Davis (2005) finds that long term government bonds have had significant positive market risk.²⁶⁵ This may imply that long term government bond yields are above the true risk-free rate. In light of this, the ACCC is concerned that using long-term bonds to determine the risk free rate may result in an inflated estimate of the risk free rate.

While the argument indicates that the term of the risk-free rate should be set to the regulatory period, Part VIIA of the TPA allows regulated firms to seek increases in its prices at any time. This implies that the regulatory period is indeterminate.

Australia Post has detailed that there is scope for it to seek multiple small price increases, rather than a large one-off increase. Australia Post has stated that it

“...will explore with the ACCC pricing models and formulae that would enable small,, manageable price adjustments without the need for frequent, full reviews...Such incremental price changes, which would result in a more constant rate of return from domestic reserved letters, is considered to be more consistent with the outcomes of the competitive market...”²⁶⁶

Based on this, the ACCC still has the task of determining an appropriate term of the risk-free rate. Whilst the ACCC does know that the appropriate term of the risk-free rate should be the regulatory period, Australia Post has not indicated the length of the regulatory period. Australia Post have commented they ‘...will explore with the ACCC pricing models and formulae that would enable small, manageable price adjustments without the need for frequent, full reviews...’, signalling they are seeking regular price increases.²⁶⁷ Regular price increases indicates that using a long regulatory period is inappropriate for the ACCC's assessment.

Australia Post have also expressed that a five year price notification period is not appropriate for this price notification. They have stated that:

‘in contrast to the higher profitability in 2001/02, domestic reserved letter service profitability in the 2007/08 will be negligible. Therefore, a long period is not required to achieve an average profitability in line with the required rate of return; and’²⁶⁸

²⁶⁴ Application by GasNet Australia (Operations) Pty Ltd [2003] ACompT 6 (23 December 2003) (“GasNet”)

²⁶⁵ K Davis, *The Systematic Risk of Debt: Australian Evidence*, 2005, Australian Economic Papers 44(1), pp. 30-46.

²⁶⁶ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p.8

²⁶⁷ *ibid.*

²⁶⁸ *ibid.*

‘to bring about average returns over a number of years would require a significant upfront price increase. Australia Post believes that significant price increases should be avoided...[customers expressed] distinct preferences for modest price adjustments at more frequent intervals as opposed to significant increases at infrequent intervals.’²⁶⁹

In addition, due to Australia Post’s preference for more frequent moderate price increases, they have provided a financial model that ‘...models the financial outcomes for a one-year period only’.²⁷⁰

Australia Post however, has not specified what regulatory period it is seeking. Whilst the ACCC knows that Australia Post has expressed a preference for more frequent price increases, and by implication a relatively short regulatory period, the duration of the regulatory period is unclear. In addition, under the current regulatory framework Australia Post is able to determine the timing of price notifications. Therefore, there is uncertainty as to the duration of the regulatory period, and as such period over which the risk-free rate should be estimated.

It is likely that the regulatory period will be less than ten years. There is also a chance that the regulatory period will be less than five years. However, the timing of the next pricing proposal is uncertain. In the context of this uncertainty over the duration of the regulatory period, the term of the risk-free rate of five years is in the ACCC’s view a compromise given the uncertainty over the duration of the regulatory period.

Length of averaging period used to estimate the risk-free proxy

As outlined above, Australia Post used the average of Commonwealth bond yields for January 2008. Taking a simple average of bond yields for a specific time period will help contain the noise driven by market volatility. However, using too long an averaging period risks the inclusion of old information, while using too short of an averaging period may introduce market volatility driven errors. Therefore a balance must be struck between errors due to old stale information and errors caused by short term volatility. The ACCC considers that Australia Post’s approach of using the average over a month is a reasonable compromise.

Date of the averaging period used to estimate the risk-free proxy

The final consideration is the date of the averaging period for the estimation of the risk-free proxy. This is especially important since the choice of the date directly affects the return on equity.

While theory has suggested that a period as close as possible to the regulatory period should be selected because it best reflects market expectations, in certain cases this is not desirable. The financial modelling assessment of the price notification is based on a certain set of assumed values, one of which is the estimate of the risk-free rate. While ideally this would be the latest possible estimate, in practice the selection of leaves a risk that it does not provide a sufficient return.

²⁶⁹ *ibid.*

²⁷⁰ *ibid.*

Current regulatory practice in the energy sector provides the regulated firm with an opportunity to nominate a specific period in the future before the regulatory period to estimate the risk-free rate. This provides certainty to both the regulated firm and the regulator, while avoiding data-mining issues if the regulated firm is allowed to nominate a period in the past. In addition, it provides an opportunity for the regulated firm to hedge the risk free rate.

Australia Post has elected to estimate the risk-free rate from 14 April 2008 to 16 May 2008. The ACCC finds this to be an acceptable date.

The ACCC's preliminary view is to apply a monthly average of the daily 5 year Australian government corporate bond. For the period 14 April 2008 to 16 May 2008, this is estimated to be 6.2 per cent.

Market Risk Premium (rm – rf)

The market risk premium (MRP) is the minimum premium an investor requires over the risk free rate such that they will invest in the market portfolio. The market portfolio is defined as the value weighted portfolio of all risky assets in the market.²⁷¹ The MRP is estimated by subtracting the risk free rate from the market portfolio.

Australia Post's position

Australia Post has suggested a MRP of 6.0 per cent on the advice of Capital Partners and Professor Officer.

Capital Partners in its report state that:

“A figure of 6% is commonly used in Australia and the US by regulators and academics, although some market participants use more recent data and subjective measures to justify using a lower MRP figure... The Australian historical MRP data has been reasonably consistent with that of the US, UK and New Zealand.”²⁷²

And that:

“Figure 2-1 and Figure 2-2 demonstrate a justification for a MRP of 6%...”²⁷³

ACCC's analysis and view

The MRP proposed by Australia Post is consistent with empirical research on the historic Australian MRP.

Academic studies have shown that the MRP lies around the 6.0 per cent mark. A 2006 study by Brailsford, Handley and Maheswaran 2006 found that the MRP on average is 6.2 per cent from 1883 to 2005, and is on average 6.3 per cent from 1958 to 2005.²⁷⁴ An

²⁷¹ The market refers to the market portfolio. The market portfolio consists of all risky assets.

²⁷² Capital Partners, *Australia Post: Consolidated Weighted Average Cost of Capital*, 17 August 2005, p. 16

²⁷³ *ibid.*

²⁷⁴ T. Brailsford, J. Handley, K. Maheswaran. *A re-examination of the historical equity risk premium in Australia*, Version: 1 August 2006.

updated version of Officer's 1989 study estimated that the MRP ranged from 5.7 per cent to 7.1 per cent if estimated between 1982 and 1997.²⁷⁵

Research has also been undertaken into the MRP used in the industry. A 2006 study by Truong, Partington and Peat received 38 responses to the question of an appropriate MRP.²⁷⁶ Of the 38 responses, nearly half of the respondents answered they use a MRP of 6.0 per cent with the average MRP used being 5.94 per cent. Another study by KPMG in 2008 show that empirical evidence demonstrates the historical MRP in Australia lies between the range of 6.0 per cent and 8.0 per cent.²⁷⁷ In addition, a 2004 KPMG paper shows that 25 out of 33 reports into market takeovers use 6.0 per cent as the value for the MRP.²⁷⁸ Finally the most recent Australian based study by Brailsford, Handley and Maheswaran (2008) showed an historical annual return in excess of the risk-free rate of 6.8 per cent from 1883 to 2005 if imputation credits are fully valued, and 6.2 per cent if they are valued at zero.²⁷⁹

Many other regulators have utilised a MRP of approximately 6.0 per cent. The Essential Services Commission of South Australia (ESCOSA) in its 2006 SA Gas distribution decision, Queensland Competition Authority (QCA) in its 2006 Queensland gas distribution decision and IPart in its 2005 Country Energy Gas distribution have all used a MRP of 6.0 per cent. The Economic Regulatory Authority of Western Australia (ERA) and IPart on the other hand, have adopted a MRP of 5.0 to 6.0 per cent in the 2005 Alinta Gas distribution and 2004 NSW electricity distribution decision respectively.²⁸⁰

In light of evidence from empirical studies, the proposed MRP of 6.0 by Australia Post is reasonable. The ACCC's preliminary view is to accept Australia Post's proposal to use a MRP of 6.0 per cent

Gearing

Gearing refers to the proportion of debt relative to the combined total of debt and equity used by a firm to finance investments. This is usually expressed as the debt to equity ratio or, in the ACCC's assessment, the amount of debt as a proportion of equity and debt. The gearing is used in the WACC to determine the appropriate weighting on the return to equity and the return to debt, as well as the levering and de-levering of the asset beta to estimate the equity beta in the benchmarking approach.

Australia Post's position

²⁷⁵ Officer, R.R, *Rates of Return to Shares, Bond Yields and Inflation Rates: An Historical Perspective*, 2nd Edition, University of Queensland Press, 1989

²⁷⁶ G. Truong, G. Partington, M. Peat. *Cost of Capital Estimation and Capital Budgeting Practice in Australia*, 2006.

²⁷⁷ KPMG, *2008 Gas Access Arrangement Review, Weighted Average Cost of Capital*, 2007.

²⁷⁸ KPMG, *Cost of Capital – Market practice in relation to imputation credits, prepared for the Victorian electricity distributors*, 2005.

²⁷⁹ Brailsford, T., Handley, J.C., and Maheswaran, K. (2008) *Re-examination of the historical equity risk premium in Australia*, *Journal of Accounting and Finance*, forthcoming.

²⁸⁰ KPMG, *2008 Gas Access Arrangement Review, Weighted Average Cost of Capital*, 2007.

Australia Post has proposed a gearing of 25 per cent. Australia Post notes that a gearing of 30 per cent was a long-term ceiling set many years ago by the Australia Post's board, and that the actual gearing has consistently been below that. Australia Post commented that for the purposes of the price notification, Australia Post's gearing reflects the adjusted gearing as at 30 June 2007. The proposed level of gearing is consistent with the data provided for the 2006–07 RKR assessment by the ACCC.²⁸¹

Australia Post has stated that a “steady decline in gearing reflects unchanged debt plus a rise in retained earnings each year...” Australia Post has also expressed that “...we can see great merit in having a strong balance sheet for prudential reasons. The gearing ratio is one factor in the corporation's [Australia Post] possessing a AAA rating from Standard & Poor's...” and “It is possible that some utilities might have sufficiently stable or predictable market conditions to justify higher gearing levels, but this is not the case for Australia Post. The domestic reserved service is facing inevitable volume decline, while in 2006/07 60% of Australia Post's revenue, and 95% of pre-tax profit arose in fully contested markets. In our view neither of these factors supports a large rise in gearing.”²⁸²

In addition, Australia Post has commented that “Standard & Poor's also issue ratings to utilities, and they do have higher allowable debt/capital rates at each rating level than those of industrial corporations...As these [utility firms] have no effective foreseeable lifecycle or competitive pressures, higher gearing may be affordable for such enterprises...”²⁸³

ACCC's analysis and view

The role of the ACCC in assessing the gearing of a regulated firm is to gauge whether the proposed level of gearing balances the taxation benefits of debt with the expected financial distress costs. In other words, the ACCC assesses whether the proposed level of gearing would minimise the cost of capital. A firm that is financed purely by equity is not preferred because of the taxation benefits, reductions in transaction costs and agency costs associated with debt financing.²⁸⁴ However, a firm financed purely by debt is not preferred either due to the large costs of financial distress. To assess the gearing, the ACCC will follow the *generalised theory of transaction costs*. The theory suggests that the optimal level of gearing involves balancing the taxation and administrative advantages of debt, against the present value of financial distress costs.

The ACCC however, acknowledges the two propositions by Modigliani and Miller (M&M). In the M&M theorem (1958)²⁸⁵, two propositions were made in relation to

²⁸¹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p.72

²⁸² Australia Post, *Response to ACCC 19 March questions*, 4 April 2008 p. 6

²⁸³ *ibid.*

²⁸⁴ Agency costs occur when the interests of the investor and the agent are mis-aligned. In the Australia Post price notification case, it occurs when the interests of equity investors and the management of Australia Post are misaligned. This occurs when one party has more information than the other about the business operations.

²⁸⁵ F. Modigliani, M.H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, American Economic Review, 48: 261-97, June 1958

capital structure. The first proposition states that the market value of any company is independent of its capital structure; this is known as the ‘conservation of value’. The second proposition states that the company’s cost of capital is not affected by its gearing; this proposition is known as the ‘conservation of risk’. Whilst this theory holds true in M&M’s world of a perfect capital market²⁸⁶, it does not hold if market imperfections are introduced.²⁸⁷ This implies that in the real world, the two M&M propositions do not necessarily hold. As such, an ideal capital structure can be achieved where the cost of capital varies according to gearing.

According to the *generalised theory of transaction costs*, the choice of the appropriate level of gearing for the regulated firm depends on the level of business risk of the regulated firm. Generally, the higher the business risk, the lower the amount of debt a firm can maintain before the costs of financial distress outweigh the benefits of debt.

In Australia Post’s case, the ACCC has to consider that Australia Post is a Government Business Enterprise (GBE). The Government earns its revenue from GBEs from either the net profits, or through taxation. As such, GBE’s may not have the same incentives as other corporations to reduce their taxation liabilities. The ACCC’s assessment of Australia Post’s gearing is based on characteristics of an efficient firm that minimises its cost of capital. Since Australia Post is a GBE, it is unlikely that the proposed level of gearing is optimal given its government ownership. Therefore, the ACCC will utilise an approach that allows us to determine the level of gearing an efficient firm would choose.

To assess the level of gearing Australia Post has proposed the ACCC will use the benchmarking approach. The benchmarking approach is the most appropriate method because it allows us to measure the level of gearing a comparable competitive firm would use. This approach allows us to assess whether the proposed level of gearing is one Australia Post would employ if the reserved services were operating in a competitive environment.

The benchmarking approach assesses Australia Post’s proposed gearing by comparing the level of gearing of similar firms with Australia Post. As with the benchmarking approach to estimating the equity beta, if there are no firms in the same regulated industry, the ACCC would use firms that are broadly under the same regulatory regime as the regulated firm. For example, the ACCC could use logistics companies as a proxy to estimate the appropriate gearing for Australia Post.

Assessing the appropriate level of gearing using the benchmark approach requires the ACCC to select firms comparable to Australia Post. The selection of comparable firms would depend on the type and level of business risk that they face compared to Australia Post. Ideally, the selected comparators would be in the same market as well as the same line of business as Australia Post, however international or firms in a similar line of business can also be used.

²⁸⁶ A perfect capital market refers to perfect information, no transaction costs and no taxes. A separate definition of a perfect capital market is the absence of any arbitrage opportunities

²⁸⁷ Market imperfections refer to any deviation from a perfect capital market

The ACCC have selected 7 firms to benchmark Australia Post's gearing. These firms are United Parcel Service (UPS), Federal Express (Fed Ex), TNT, Toll Holdings (TOLL), Deutsche Post (DPWN), Business Post Group (BPG) and Singapore Post (SingPost). It is noted that while these firms are mostly international firms and do not strictly provide the same services as Australia Post's reserved services, the unique nature of Australia Post's reserved service's legislated monopoly means it is not possible to find comparators in the Australian market that operate in the same industry. In addition, the available comparators are restricted to those where data is readily available. As such, these firms are selected as the best compromise of data availability and industry relevance.

Table 9.2 Gearing values

Company	Gearing
UPS	0.062
Fed Ex	0.108
TNT	0.130
TOLL	0.260
DPWN	0.865
BPG	0.041
SingPost	0.140
Average	0.229

The benchmarked figures that the ACCC has estimated, as seen above, show that comparable firms are on average leveraged at 23 per cent.²⁸⁸ As with the consideration of the equity beta, the ACCC will again pay special attention to Toll's gearing of 26 per cent.

Whilst the average benchmarked figures show that comparable firms are leveraged at 23 per cent, the ACCC must consider that the comparable firms all operate in a competitive environment. It is likely that their revenue streams are not as secure as Australia Post's reserved services, and as such is not in a position to undertake large amounts of debt. Due to Australia Post's statutory monopoly, it is reasonable to expect that Australia Post is of lower business risk than the comparable firms. Therefore it is reasonable to expect that Australia Post is in a better position to utilise a higher amount of debt to minimise its tax burden compared with the benchmarked firms. The ACCC also notes that TOLL, which is a firm that operates a similar line of business and in the same market as Australia Post, maintains a gearing of 26 per cent.

The ACCC also takes into consideration Australia Post's need to maintain a AAA debt rating. In the 2002 price notification, Australia Post maintained a AAA rating with a gearing of 30 per cent. While it is understood that this was determined in 2002, it is not unreasonable to expect that cash flow reliability and stability would remain very similar in 2008. Given Australia Post's statutory monopoly in reserved services, it is anticipated that a gearing of 30 per cent would not sacrifice Australia Post's AAA

²⁸⁸ The gearing is measured using data obtained from the Bloomberg data service. It is calculated as the value of short term and long term debt divided by the market value of the firm as at 29 February 2008. The average is calculated as an arithmetic average of the 7 firms.

credit rating. It must be noted that in the Capital Partners report, “an optimal gearing of 70 per cent equity/30 per cent debt has been assumed” to estimate Australia Post’s WACC.²⁸⁹

While a gearing of 30 per cent is determined through the benchmarking analysis, and was used by Capital Partners in the assessment of Australia Post’s WACC, the ACCC notes that there is a possibility for Australia Post to further substitute equity for debt. In past energy decisions on the WACC, the ACCC and AER has applied a 60 per cent assumption on gearing. While Australia Post is not considered a traditional infrastructure business, it does maintain a statutory monopoly over its reserved services. This is likely to provide Australia Post with a much more stable income stream than comparable postal companies, and as such should be able to take on more debt than comparable companies to minimise their tax expenses.

Based on the lower business risk of Australia Post’s reserved services, combined with the benchmarking analysis and the level of gearing Capital Partners adopted in its WACC report, the ACCC considers that 30 per cent gearing is appropriate with a AAA debt rating. The ACCC’s preliminary view is to use a gearing of 30 per cent debt.

Equity beta

The equity beta measures the amount of systematic risk of an asset relative to the market portfolio. The equity beta contains the underlying systematic risk of the asset²⁹⁰, and implicitly financial risk from debt²⁹¹. This is because as the company takes on more debt, equity holders will require a higher rate of return to compensate them for the higher costs of financial distress costs. Thus, the higher the debt relative to equity, the greater the financial risk and therefore, equity beta. This implies that the equity beta of a certain asset implicitly reflects a certain capital structure.

The market portfolio is, as defined above, the weighted average on all risky assets in the market. This means that if the equity beta is positive, the return of the asset moves in the same direction as the market portfolio. Subsequently, if the equity beta is negative, the return on the asset moves against the market portfolio. If the equity beta is one, it means that any movement in the market portfolio results in a move in the asset of the same magnitude.

The equity beta is used in the CAPM to measure an asset’s systematic risk. The CAPM framework assumes that an investor should only be compensated for the amount of systematic risk an asset bears. This is because any unsystematic risk can be diversified away by holding a portfolio of assets/investments. Therefore the equity beta measures the additional compensation an investor would require in excess of the risk free rate for investing in an asset that contains systematic risk.

²⁸⁹ Capital Partners *Australia Post: Consolidated Weighted Average Cost of Capital*, 17 August 2005, p. 21

²⁹⁰ Systematic risk refers to market risk that cannot be diversified away using other assets. It reflects the risk the whole economy contains.

²⁹¹ Financial risk from debt refers to the higher rate of return equity investors require to invest in the asset. This is because as debt increases, the risk of financial distress increases as well.

The equity beta can be estimated by measuring the standardised correlation of the assets return against the return of the market portfolio. This is commonly achieved by regressing the assets return with the market return using historical data. This form of empirical estimation of the equity beta relies on two key assumptions about the capital markets:²⁹²

- The required rate of return for equity increases linearly in direct proportion to the equity beta; and
- Investors when pricing an asset are concerned exclusively with systematic risk.

In addition to the equity beta, there are the asset beta and debt beta. The asset beta and debt beta are used in the benchmarking approach to estimating the equity beta through the Monkhouse formula.²⁹³ The asset beta is a concept that represents only the fundamental business risk associated with an asset. This means that an asset beta would be the same as the equity beta if the firm is financed with 100 per cent equity. Since the asset beta does not include financial risk from debt, the estimated value will lie below the equity beta with debt in the capital structure, assuming the asset beta is greater than zero. The debt beta reflects the covariance between the return of a particular debt instrument and the market portfolio.

Whilst the debt beta could theoretically be used to determine the cost of debt, the ACCC does not adopt this approach. As indicated in the cost of debt section, the cost of debt is more reliably estimated through a benchmarking approach. For the purposes of the ACCC's estimation of the WACC, debt beta is only used as an input in the process of levering and un-levering of the asset beta to estimate the equity beta.

Australia Post's position

Australia Post proposed a consolidated equity beta of 0.66, an asset beta of 0.52 and a debt beta of 0.10. This means the equity beta, asset beta and debt beta's are estimated for Australia Post as a whole, rather than just for its reserved services. These values are estimated under the advice of Capital Partners, who were commissioned by Australia Post to undertake an analysis of the consolidated WACC. The ACCC notes that this paper was published on 17 August 2005.

Capital Partners has estimated a debt beta of 0.1 for Australia Post. They have recommended Australia Post use a debt beta of 0.1 because

“This is roughly equivalent to the expected yield on an investment grade security with strong ability to meet debt service. We [Capital Partners] recommend against the textbook practice of assuming debt beta of zero for simplicity as only the risk free asset meets this criteria.”²⁹⁴

²⁹² There are also additional assumptions. For details, see W. Sharpe, *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk*, Journal of Finance, Vol 19, pp.425-442.

²⁹³ The Monkhouse formula is developed by Peter Monkhouse to re-lever or de-lever beta estimates. A more thorough discussion can be read at P. H.L. Monkhouse, *Adapting the APV valuation methodology and the beta gearing formula to the dividend imputation tax system*. Accounting and Finance, 37: 69 – 88. 1997

²⁹⁴ Capital Partners, *Australia Post: Consolidated Weighted Average Cost of Capital*, 17 August 2005, p. 15

Capital Partners has stated that

“Typically equity beta estimates, computed by regressing stock returns on market returns, have large standard errors. This means that they are imprecisely estimated and the single point estimates cannot be relied upon with any great confidence. Hence we recommend that an industry average asset beta be applied.”²⁹⁵

The approach Capital Partners has adopted is similar to the benchmarking process the ACCC uses, explained below. They estimate the equity beta via a weighted average approach known as the *Multi-Divisional Beta*. This

“...approach is to:

1. Identify the industry segment a company operates in.
2. Estimate individual equity betas of comparable listed companies in the industry...
3. Estimate the un-levered beta for the industry segment
 - a. Un-lever the equity beta for each comparable company using the leverage of each company...
 - b. Calculate the average of the un-levered betas. This is used as the estimate of the industry asset beta.
4. Where an equity beta is desired, as needed for the calculation of WACC in approaches other than the Vanilla WACC, the industry asset beta should be re-levered using the firm’s market levels of debt and equity to derive the equity beta.”²⁹⁶

This approach is performed over the different industries a company operates in of which a weighted average of the appropriate asset betas will be taken to estimate the consolidated equity beta. Capital Partners has stated that “The weights should ideally be related to the relative contribution or exposure to other industries. The weighted average asset beta may then be re-levered at the relevant gearing level...”²⁹⁷

The comparable companies are listed in Appendix D in the Capital Partners report. Briefly, they comprise all of the services Australia Post provides. These include: listed postal services companies, express parcel delivery companies, Australian infrastructure companies, Australian logistics companies, stock exchanges, transactions processing companies, retailers and property development companies.²⁹⁸

In addition, three comparable listed post offices are used. They are TPG from the Netherlands, Deutsche Post from Germany and SingPost from Singapore.²⁹⁹

²⁹⁵ *ibid.*

²⁹⁶ *ibid.*

²⁹⁷ *ibid.*

²⁹⁸ Capital Partners, *Australia Post: Consolidated Weighted Average Cost of Capital*, 17 August 2005, pp. 39-40

²⁹⁹ *ibid.*, p. 38.

ACCC's analysis and view

The traditional way of estimating an equity beta would be direct measurement. Direct measurement involves regressing the asset return against the market return. In this case, it means regressing the returns of Australia Post against the returns of an Australian Stock Exchange (ASX) index. Direct measurement has two major assumptions:

- the company is listed on an exchange; and
- the regulated business is the primary business of the regulated firm, or is of the same systematic risk as the average business of the firm.

However, because Australia Post is not listed on the ASX, alternative methodologies must be used to assess the proposed beta estimates.

It should be noted that Australia Post has presented a consolidated WACC. The asset beta estimates proposed are for Australia Post as a whole, rather than just for the reserved services. By implication, the estimate for the equity beta is a consolidated equity beta. As a consequence, the assessment of the proposed equity beta will be different compared to the assessment of a reserved service equity beta.

A consolidated equity beta, as opposed to a reserved service equity beta reflects the business risk of Australia Post as a whole, rather than just the reserved services. The current assessment of the Australia Post price notification is strictly for the reserved services. The consideration of Australia Post's equity beta proposal should be made knowing that Australia Post proposed consolidated figures are used, rather than reserved service specific figures.

With the consolidated figures in mind, the ACCC will consider alternative methods to estimate the equity beta of reserved services at the agreed level of gearing. The ACCC will use two methodologies to assess Australia Post's equity beta proposal. These are:

- the accounting beta approach; and
- the benchmarking approach using domestic regulated firms and/or international postal firms as proxies.

Accounting Beta

The concept of the accounting beta is similar to the equity beta. An equity beta is designed to determine the standardised correlation of the asset (in this case Australia Post's market return) to the market return based purely on systematic risk, not total risk. An accounting beta uses an accounting measure such as profit or revenue as a proxy to determine the asset's return, and then measure the correlation against a market proxy like GDP. Damodaran explains that this is a viable method when it is difficult to directly estimate the equity beta through direct estimation.³⁰⁰

³⁰⁰A. Damodaran, *Estimating Risk Parameters* New York University, Leonard N. Stern School Finance Department Working Paper Series 99-019, 1999

A problem with estimating accounting beta is that accounting earnings tend to smooth out profit figures, and as such have a tendency to mean revert. This means that there is a downward beta bias for risky firms and an upward beta bias for safe firms. The choice of the measure of accounting earnings can also influence the accounting beta estimate. For example, using accounting net profit figures will not necessarily reflect firm profitability because they are influenced by factors that do not necessarily explain the operating efficiency, or actual profitability of the firm. Accounting treatment of depreciation or allocation of expenses can also vastly change the figures for accounting profit, and as such provides an opportunity for number manipulation. Finally, accounting records are not measured as regularly as market data. At most, quarterly figures are obtainable, which could induce large standard errors in accounting Beta estimation.

Another characteristic of accounting beta that needs to be considered is its mean reverting behaviour. Accounting values are generally smoothed out over time. This means that any large increases or decreases in revenue or costs are smoothed out over several periods. In this case, performance greater than the market will be understated, and performance lower than the market will be overstated. This would result in an upward bias on the actual equity beta if it is less than one, and lower than the actual equity beta if it is greater than one. Therefore, care must be taken in interpreting the result of the accounting beta

Benchmarking

This method involves determining the asset beta by reference to comparable companies, after adjusting for different financial structures. The asset beta's are estimated by estimating the comparable firm's equity beta, un-levering it using the Monkhouse formula to produce the asset beta, and then, using the regulated firm's capital structure, cost of debt and debt beta to re-lever the asset beta to obtain the equity beta. The principle behind using comparable firms as proxies is that these firms should face similar business risks to regulated firm, and as such the asset beta should be of a similar value. In addition, they usually operate in the same regulatory environment as the regulated firm.

There two forms of benchmarking available to determine the asset beta of the regulated firm. The ACCC could use the international form or the domestic form of benchmarking.

International benchmarking

International benchmarking involves selecting international firms in the same industry as the regulated firm to determine the appropriate equity beta. Firms are selected based on businesses that most resemble the regulatory firm. The advantage of this methodology, as compared to domestic benchmarking, is that the ACCC could select businesses that are in the same industry as the regulated firm. This means that the estimates should more accurately reflect the systematic risks faced by the regulated firm.

The problem is that these firms operate in international markets, therefore they may face different conditions compared to Australian firms. The basis for the CAPM framework is created based on consistent treatment of the market. Introducing an equity

beta estimated for a different market as compared to the other WACC parameters means the ACCC is not strictly applying the domestic CAPM consistently. In addition, since the ACCC is using an equity beta from an international firm, this means that the taxation system, form of regulatory regime and macroeconomic risks are different compared to those of Australia.

Domestic benchmarking

Domestic benchmarking involves selecting a sample of Australian firms which are expected to have similar levels of systematic risk compared to the regulated firm. To select a list of comparable Australian firms, a sample is usually chosen based on whether the firm's revenues are regulated or not and the line of business they operate in. A distinct advantage of this approach compared to the international benchmarking approach is that the sample firms are operating in the same market as the regulated firm. In addition, investors, systematic risks, regulatory regime and taxation system are all similar.

However, since the estimated asset beta is dependant on the selection of the firms, the choice of these firms are important. If there are no comparable firms in the industry, the sample should extend to firms operating in a similar operating environment such that the systematic risks these similar firms face are comparable to the regulated firm.

In the case of Australia Post, there are no firms in Australia that are similar to Australia Post's business as a whole, therefore comparable firms will extend to firms in a similar line of business, such as logistics companies.

ACCC's approach to estimating Australia Post's Beta

As the traditional method of directly estimating Australia Post's equity Beta is not possible, therefore the ACCC must utilise the methods outlined above. These methods are estimating the accounting beta, as well as the benchmarking approach. As discussed above, accounting beta's and benchmarked asset beta's are not exact. As such, they will be used as guides to aid us in assessing Australia Post's proposal.

The ACCC has attempted to approximate the equity beta using an estimate of the accounting beta, utilising accounting data from the 1974 to 2007 annual reports. For the market index, the ACCC used the Australian All Ordinaries index estimated at the end of each financial year. The proxy chosen to be Australia Post's return are revenue, EBITDA³⁰¹ and net profit. The estimation process involves a simple regression of either revenue, EBITDA or net profit against the market index, of which the estimated slope of the regression is the accounting beta.

The accounting beta's estimated are 0.01, -0.175 and -0.225 for revenue, EBITDA and net profit respectively. This suggests that either Australia Post's performance is not related to the Australian market, or is negatively correlated to the performance of the Australian market. This appears unlikely given that most infrastructure firms have at least a minor positive relationship with the market. The ACCC believes that the expected results from the accounting beta estimate are due to the difficult nature of

³⁰¹ EBITDA refers to earnings before interest, tax, depreciation and amortisation.

estimating an accurate equity beta from accounting data. As such, the accounting beta values have not been used in the assessment of Australia Post’s proposal. The ACCC will assess Australia Post’s proposal via the benchmarking approach.

Whilst the ACCC agrees with using industry comparators approach as suggested by Capital Partners, it finds that a “*Multi-Divisional Beta*” is not appropriate in this assessment. This is because the assessment of the price notification is restricted to reserved services. The “*Multi-Divisional Beta*” proposed by Capital Partners estimates a beta through a benchmarking process using comparators for both reserved and non-reserved services. The ACCC believes it is inappropriate to consider the ‘*Multi-Divisional Beta*’ approach as it includes non-reserved services in its estimate. The ACCC, however, agrees to the three comparators used to estimate Australia Post’s reserved service equity beta. These comparators are Deutsche Post, TPG and SingPost.

With the above consideration, the ACCC has estimated the following asset beta estimates using international and domestic benchmarked firms.

Table 9.3 Asset beta estimations

Company	Equity beta	Gearing	Asset beta
UPS	0.786	0.062	0.751
Fed Ex	0.767	0.108	0.707
TNT	0.545	0.130	0.493
TOLL	0.603	0.260	0.484
DPWN	0.643	0.865	0.117
BPG	0.36	0.041	0.349
SingPost	0.35	0.140	0.314
Average	0.579	0.229	0.460

As mentioned in the gearing section, these firms are selected due to the limited number of available comparators. These firms are selected to represent the best compromise of data availability and industry relevance.³⁰² Using the estimated asset beta’s, the ACCC have re-levered the asset beta to Australia Post’s proposed leverage levels in addition to other possible leverage levels to estimate the equity beta. This is listed in the following table.

Table 9.4 Equity beta estimations using various levels of gearing

Company	20 per cent gearing	25 per cent gearing	30 per cent gearing	35 per cent gearing	40 per cent gearing
UPS	0.911	0.964	1.025	1.095	1.177
Fed Ex	0.857	0.908	0.965	1.031	1.108
TNT	0.598	0.633	0.673	0.719	0.773
TOLL	0.587	0.621	0.660	0.705	0.758

³⁰² These values were obtained from the Bloomberg data service. UPS and Fed Ex equity beta is measured against the US S&P500, TNT and DPWN is measured against the DAX index, TOLL is measured against the ASX200, BPG is measured against the FTSE 100 index and SingPost is measured against the Straits Times index. These values represent an average of monthly beta estimates over the period 28 February 2003 to 29 February 2008.

DPWN	0.142	0.151	0.160	0.171	0.184
BPG	0.424	0.448	0.477	0.509	0.547
SingPost	0.381	0.403	0.429	0.458	0.492
Average	0.557	0.590	0.627	0.670	0.720

The average equity betas estimated are not dissimilar to the equity beta proposed by Australia Post. It is noted that the proposed beta is very similar to our estimated equity beta at 35 per cent gearing, rather than the Australia Post proposed 25 per cent gearing.

The ACCC's preliminary view is to accept Australia Post's proposal to use an equity beta of 0.66. Based on a gearing of 30 per cent, an equity beta of 0.66 implies an asset beta of approximately 0.484. Although the ACCC understands that the proposed beta estimates represent the beta estimates for Australia Post's consolidated business, our benchmarking analysis indicates that for the purposes of the 2008 price notification, it is broadly inline with the equity beta for reserved services. The ACCC also accepts Australia Post's proposal to use a debt beta of 0.1.

9.4 Cost of debt

The cost of debt in the WACC is the expected cost a firm would face to raise the required amount of debt over the regulatory period. This amount includes the value the regulated firm expects to pay to its debt capital providers, plus all expected transaction costs associated with raising the debt capital. To fairly compensate a firm for the actual cost of its debt capital, the cost of debt should be estimated based on a forward looking expected cost of debt to the firm.

In the ACCC's view, the expected cost for a regulated firm to raise its debt capital over the regulatory period is seen in Eq 1.4³⁰³:

$$\text{Eq 1.4} \quad E(r_d) = YTM + DIC$$

Where:

- $E(r_d)$ is the (maximum) expected cost of debt of the regulated firm;
- YTM is the yield on debt of the firm over the regulatory period is the expected return of investors in the debt capital of the firm assuming no default risk. Currently, the Bloomberg data service is used to estimate this and they report par yield;
- DIC is the expected debt issuance costs annualised over the regulatory period.

To assess the proposed cost of debt, five factors should be considered. These are the:

- appropriate yield on debt;

³⁰³ This ignores other capital costs such as ongoing legal and administrative costs that are compensated for in allowed operating expenses.

- the correct term of the debt;
- the length of the averaging period of which the cost of debt is estimated;
- the date of the averaging period of which the cost of debt is estimated; and
- the debt issuance cost.

Australia Post's position

Australia Post has initially proposed a cost of debt of 7.3 per cent.

Australia Post submit that the cost of debt and the associated interest rate margin over the bond rate has been derived from the weighted average floating interest rates that match Australia Post's debt structure. Australia Post has commented that "...Australia Post's debt is initially issued at fixed rates, it is then swapped into floating rate debt. The interest rate relevant to Australia Post is the 180 day bank bill swap rate..."³⁰⁴ The rates used to set the effective interest rate for this application is the average for January 2008.

On 1 May 2008, the ACCC provided Australia Post with an opportunity to elect a period in the future to estimate the risk-free rate. As such, Australia Post has provided a revised risk-free rate period of 14 April 2008 to 16 May 2008.³⁰⁵ From 14 April 2008 to 16 May 2008, it is estimated to be 7.96 per cent.

ACCC's analysis and view

The cost of debt capital should be the compensation debt investors expect to receive as a component of their opportunity cost of the investment over the period. This compensation includes the time value of money in real dollar terms, inflation, risk premium for inflation and other systematic risks, and the expected cost of default. In addition, the regulated firm should receive compensation for transaction costs incurred through debt raising activities.

The cost of debt should not compensate regulated firms for risks that debt providers themselves do not bear over the set period, except for debt issuance costs. This is because any risks, to the extent that they are systematic risks, are not borne by debt holders but are borne by equity holders.

Yield on debt

To correctly measure the yield of the debt, we should look at the ability of the regulated firm to meet its debt obligations. This means that the choice of the optimal yield of debt should depend on both the level of debt the regulated firm carries, as well as the riskiness of the firm's revenue stream. The higher the level of debt, or the higher the risk of the firm's revenue stream, the higher the yield debt holders require to issue capital to this firm. Based on Australia Post's strong balance sheet and its low business

³⁰⁴ Australia Post, *Response to 19 March questions*, 4 April 2008.

³⁰⁵ Australia Post, *Response 1 May questions*, 14 May 2008 p. 3

risk in reserved services, the ACCC accepts Australia Post's proposal to use AAA rated bonds at 30 per cent gearing.

The ACCC understands that the AAA rated bonds are proposed based on Australia Post's current level of gearing, rather than the 30 per cent the ACCC has determined. The ACCC also understands that a gearing of 30 per cent could influence the credit rating of Australia Post. However, as discussed in the gearing section of this chapter, Australia Post has been awarded a AAA credit rating with a gearing of 30 per cent in the 2002 price notification. Australia Post's reserved services business risk has remained largely similar, and as such is expected to maintain the AAA credit rating at a gearing of 30 per cent.

Term of the debt

In the ACCC's view, the appropriate term of the debt instrument should equate to the regulatory period. As noted in the risk-free rate section of this chapter, the choice of the term should depend on the term of the risk borne by investors; in this situation, the term of the risk borne by the debt holders. Since the awarded cost of debt is re-determined after every regulatory period, the length of the risk extends to the end of the regulatory period. Any choice longer or shorter than the regulatory period may over or under compensate the regulated firm. As with the term of the risk-free rate, the ACCC has determined that a 5 year term is, on balance, appropriate.

Length of averaging period of the cost of debt

As with the risk-free rate, the ACCC needs to consider the averaging period over which the cost of debt is estimated. Like the risk-free rate, taking too short or too long an averaging period will introduce market driven volatility or stale information respectively. Therefore, a balance must be struck between volatility errors and old information errors. The ACCC accepts Australia Post's proposal to take a monthly average of the interest rates to assess Australia Post's proposal.

Date of averaging period of the cost of debt

As with the risk-free rate, the ACCC will need to consider the date of the averaging period for the estimation of the cost of debt. Again, theory suggests that the ACCC should estimate the value as close to the start of the regulatory period as possible. Like the risk-free rate, the ACCC will adopt the current regulatory practise of allowing Australia Post to nominate a period in the future for the estimation of the cost of debt.

Australia Post has elected to estimate the cost of debt from 14 April 2008 to 16 May 2008. The ACCC finds this to be an acceptable date.

Debt issuance cost

The final consideration is debt issuance costs. Debt issuance costs depend on the level of debt the regulated firm carries. This is because the higher the amount of required debt, the more it costs to raise that capital. As such, the debt issuance costs of comparable firms will be used to assess the cost of debt proposed by Australia Post is reasonable. The ACCC will use a benchmarking approach and estimate how much it costs comparable firms to raise the amount of debt Australia Post has on issue.

ACCC's assessment

To make the assessment, the ACCC will compare the cost of debt the ACCC has estimated with the proposed value to determine whether the ACCC accepts the proposal or not.

The ACCC notes the 5 year AAA rated corporate bond averaged over a month, in addition to the debt issuance cost of the \$249 million in debt that Australia Post maintains for reserved services. The 5 year AAA rated corporate bond average from 14 April 2008 to 16 May 2008 is 8.304 per cent. The debt issuance cost of \$249 million in debt is 0.103 per cent. As such, the ACCC's estimation of the cost of debt for Australia Post is 8.407 per cent.

Australia Post has proposed a cost of debt of 7.96 per cent. Compared with our estimated cost of debt of 8.407 per cent, a cost of debt of 7.96 per cent is reasonable. The ACCC's preliminary view is to accept Australia Post's cost of debt proposal of 7.96 per cent.

9.5 Imputation factor

The imputation factor is the market value of every dollar of tax credit that are distributed and utilised as a franked dividend to shareholders. This is denoted by the parameter gamma (γ) in the WACC. These tax credits, known as franking credits, are utilised by shareholders to prevent the double taxation of company profits. The value of the franking credits is dependant on whether the shareholder is able to utilise the credit. These credits can only be used if the shareholder is under an imputation tax system. If the investor is based on a classical tax system, the franking credit is of no value to the shareholder.

Monkhouse³⁰⁶ (1997) defines γ as Eq 1.5.

Eq 1.5.
$$\gamma = \alpha.\theta$$

Where:

- α is the imputation credit payout ratio.³⁰⁷ This is defined to be the value of imputation credits obtained by shareholders divided by the amount of imputation credits generated in the CAPM period.³⁰⁸

³⁰⁶ P. Monkhouse, *Adapting the APV Valuation Methodology and the Beta Gearing Formula to the Dividend Imputation Tax System*, Accounting and Finance, 37, Vol 1, pp 69-88, 1997

³⁰⁷ This is defined mathematically by Monkhouse as:

$$\alpha = D.t_f / \{ [E(X) - P - r_d L] T \}$$

where;

X is the company's cash flow before interest and (Australian) tax.

$D = d / (1 - t_f)$. The grossed up dividend paid by the company. It is equal to the cash dividend plus the imputation credits distributed.

- θ is the utilisation factor of distributed imputation credits. That is, \$1 of imputation credits distributed via a dividend is assumed to be valued at \$ θ by the market.

Australia Post's position

Australia Post proposed its imputation factor to be 0.50 as part of the Capital Partners report. Australia Post notes that 0.50 is identical to the value preferred by the ACCC in the 2002 price notification.

Capital Partners in its 2005 report state

“In the case of Australia Post, we understand that the imputation tax credits are unable to be utilized. Hence at an Australia Post level the value of them [imputation tax credits] appears to be zero... However, the key consideration in the estimation of WACC (and treatment of franking credits) is the inherent risk of the opportunity cost of capital. This requires consideration at a broader level. In this context, the opportunity cost for investments in Australia Post is that of a normal, public commercial listed company. Hence franking credits should be valued. We consider a value of 50% to be appropriate (i.e. $\gamma = 0.5$). This reflects the approximate level of credits which are accessible (paid by the average company) and the actual proportion which is utilised by investors.”³⁰⁹

ACCC's analysis and view

To assess the proposed imputation factor, the ACCC needs to consider two factors. As illustrated in Eq 1.5, these are:

- The imputation credit payout ratio (α); and
- The imputation credit utilisation factor (θ).

Currently there is no agreement on the correct imputation credit payout ratio α . There has been many arguments for the work done by Hathaway and Officer (1999, 2004), which measures the aggregate value of franking credits accumulated against the amount of franking credits distributed for all Australian firms. They have computed the average

P is an adjustment to allow for the actual Australian corporate tax rate is not the same as the statutory tax rate due to factors such as depreciation for example. See Monkhouse pp 74 for more details.

L is the principal outstanding at the beginning of the period and repaid at the end of the period. Monkhouse assumes the outstanding debt is constant between periods, for details see section 4 of his paper.

T is the statutory corporate tax rate.

r_d is the cost of debt

t_f Indicates the level of franking of a dividend. $t_f = 0$ under a “classical” tax system or if the dividends are unfranked and $t_f =$ current statutory corporate tax rate (maximum) if the Australian dividends are fully franked.

³⁰⁸ For the purposes of this assessment, the CAPM period is defined as five years.

³⁰⁹ Capital Partners, *Australia Post: Consolidated Weighted Average Cost of Capital*, 17 August 2005, p. 8

imputation credit payout ratio ratio α to be 0.71. However, there have been criticisms for using a value of 0.71 for estimating the regulatory cost of capital, of which Lally (2002) agrees with and has provided a contrary view.³¹⁰ Lally examined the eight largest listed firms in Australia and has determined α to likely be equal to one. Whilst there is no agreement on the actual credit payout ratio, it is likely to be bounded by two figures of 0.71 and 1.0.

To determine the appropriate franking credit utilisation rate (θ), the most common method is dividend drop-off analysis. Dividend drop-off analysis measures θ by comparing cum-dividend share prices with ex-dividend share price. The difference in value theoretically represents the value of the dividend distributed, and as such a drop greater than the cash value of the dividend would represent the value of the franking credit. There have been many empirical studies undertaken on the optimal method to measure the value of θ , however the ACCC will highlight two recent Australian studies into the imputation factor. The first is a comprehensive study of Australian dividend drop-off study is by Beggs and Skeels (2006)³¹¹, and the second is a study into the efficacy of the Australian imputation tax system by Handley and Maheswaran (2008)³¹².

Beggs and Skeels use regression analysis to estimate θ . The analysis factors the current taxation regime and attempts to correct for multi-collinearity as much as possible, representing the most appropriate and rigorous study into the utilisation of franking credits. Beggs and Skeels have concluded that a value of 0.572 is the most appropriate value.

Handley and Maheswaran's study, while it focuses on the efficacy of the imputation taxation system in Australia, measures the credit utilisation rate as well. In the study, a credit utilisation rate is obtained by estimating the aggregate amount of imputation credits used as a proportion of the aggregate amount of imputation credits received by investors. This is estimated over the period 1988 to 2004. In this paper, Handley and Maheswaran concludes that the average credit utilisation rate has increased from 0.67 in 1990–00 to 0.81 in 2001–04.

Overall, based on the empirical studies, the credit payout ratio could range from 0.71 to 1.0, and the franking credit utilisation ratio could be either 0.572 as estimated by Beggs and Skeels, or 0.81 as estimated by Handley and Maheswaran. Given this, the ACCC does not object to Australia Post's imputation factor proposal of 0.5.³¹³ The ACCC's preliminary view is to accept Australia Post's proposal to use an imputation factor of 0.5

³¹⁰ M. Lally, *The Cost of Capital Under Dividend Imputation, A Report Prepared for the ACCC*, 2002

³¹¹ D. Beggs and C. Skeels. *The Market Arbitrage of Cash Dividends and Franking Credits*, *The Economic Record*, vol 82 no 258, September 2006.

³¹² J.H. Handley and K. Maheswaran *A Measure of the Efficacy of the Australian Imputation Tax System*, *The Economics Record*, vol 84, no.264, March 2008.

³¹³ This parameter is currently subject of ongoing review of by the AER

9.6 Taxation

Taxation plays an important role in the determination of the WACC. It is particularly important in determining the maximum revenue or price of a regulated firm. Therefore, regulators must take into account the taxation costs that regulated firms incur in running its business. In addition, the taxation liabilities of the regulated firm also influence the capital structure of the firm. This is because a major consideration in the capital structure is the size of the interest tax shield³¹⁴ available to the regulated firm.

The ACCC employs a post-tax nominal WACC. This suggests that the WACC estimated utilises post-tax cash flows, rather than pre-tax cash flows. The taxation component of the regulated firm is accounted via tax modelling, and as such in the Post Tax Revenue Model rather than the WACC.

Australia Post's position

Australia Post has proposed a tax rate of 30 per cent. Australia Post has stated that the effective company tax rate has been marginally below the statutory rate in recent years, however the gap is not material. Australia Post has stated that the adoption of the average effective tax rate for the past four years would result in a WACC change of less than a decimal point. The tax rate proposed by Australia Post is the statutory company tax rate.³¹⁵

ACCC's analysis and view

To assess Australia Post's proposed tax rate, the ACCC should estimate the effective tax rate of the regulated firm from its forecasted cash flows. The effective tax rate is the actual tax rate Australia Post faces because it takes into account any tax offsets incurred by the regulated firm from depreciation, or through other devices to defer or offset taxation payments.

Theoretically, the application of a too high or too low a tax rate would result in an inefficient firm. Applying an incorrect tax rate affects not only the cash flows of the firm, but also distorts the optimal capital structure as well as the levering and de-levering of the asset beta. Therefore it is important to set the tax rate to be the actual tax rate a firm faces in a competitive environment.

In the context of our consideration of the WACC, determining and setting the effective tax rate will have a minimal impact on the WACC. The ACCC uses a post-tax nominal WACC implying that instead of compensating Australia Post for their tax obligations in the WACC, the compensation for tax is achieved in the cash-flows. The choice of the tax rate for the WACC only impacts the levering and de-levering of the asset beta designed to estimate the equity beta.

³¹⁴ A tax shield is the reduction in income taxes that result from taking an allowable deduction from taxable income. The value of any tax shield will depend on a number of factors including: whether the firm is in a tax paying position; the type of personal taxes faced by the marginal investor and the costs of financial distress from excessive leverage.

³¹⁵ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p.71

Based on the negligible effects of estimating and setting the effective tax rate instead of the corporate tax rate, the ACCC accepts Australia Post's proposal of using the corporate tax rate for the estimation of the WACC.

The ACCC's preliminary view is to accept Australia Post's proposal to use a tax rate of 30 per cent.

9.7 ACCC's view

The ACCC concludes that an appropriate post tax-nominal return on capital is 9.5 per cent given the parameters the ACCC has discussed and estimated. This is 0.1 per cent lower than Australia Post's proposed value due to the differences in gearing.

The ACCC notes that the WACC parameters Australia Post has provided is for Australia Post's consolidated business, rather than its reserved services. The scope of this price notification is strictly for Australia Post's reserved services, therefore the proposed values are of limited use. The ACCC will however, refer to any material provided if they are of relevance.

For comparison purposes, the ACCC has listed the values Australia Post has proposed and the values the ACCC has estimated, including the pre-tax and post-tax nominal WACC. As mentioned above, we note that some of Australia Post's proposed parameters are different compared to the draft price notification submitted in February. This is due to amendments made in the proposal detailed within this chapter.

Table 9.5 WACC Parameters

<i>WACC Parameter</i>	<i>Australia Post's proposed value</i>	<i>ACCC's estimated value</i>
Risk-free rate	6.2%	6.2%
Market risk	6.0%	6.0%
Asset β	0.52	0.484
Gearing (debt/debt+equity)	25%	30%
Imputation credits value	50%	50%
Equity β	0.66	0.66
Tax rate	30%	30%
Debt β	0.10	0.10
Cost of equity	10.2%	10.2%
Cost of debt	7.96%	7.96%
<i>Pre-tax nominal WACC</i>	11.0%	10.8%
<i>Post-tax nominal WACC</i>	9.6%	9.5%

10 Financial Model

As outlined in Chapter 3, the ACCC considers that the criteria in subs. 95G(7) can generally be met by economically efficient prices which reflect:

- an efficient cost base; and
- a reasonable rate of return on capital.

One way in which a firm could take advantage of its market power in setting prices is by allowing its costs to inflate to inefficient levels, and then seeking to pass those costs through to customers in the form of higher prices. Thus, when assessing the prices proposed by the regulated firm the ACCC's analysis is based on the service provider's efficient cost base rather than its actual cost base.

The ACCC uses the building block model to assess the extent the prices proposed by a regulated firm are commensurate with its efficient costs. The ACCC ordinarily uses a specific form of the building block model known as the post tax revenue model (PTRM). The financial model used by the ACCC is a forward-looking model in that it ensures that future revenue is sufficient to cover future costs of an efficient service.

The building block model formula is defined in Eq 10.1 and Eq 10.2:

$$\text{Eq 10.1} \quad \text{MAR}_t = \text{WACC} * \text{RAB}_t + \text{Dep}_t + \text{Opex}_t + T_t$$

$$\text{Eq 10.2} \quad \text{RAB}_t = \text{RAB}_{t-1} + \text{Capex}_t - \text{Dep}_t$$

where:

- MAR_t is the maximum allowable revenue. This is the required revenue a regulated firm should receive given its costs;
- WACC is the weighted average cost of capital;
- RAB_t and RAB_{t-1} is the regulated asset base at the start of the regulatory period at time 't' and 't-1' respectively;
- Dep_t is depreciation incurred at time 't';
- Opex_t is the operating and maintenance expenditure incurred at time 't'; and
- T_t is the taxation obligations incurred at time 't'.

These formulae indicate that the maximum allowable revenue a regulated firm should receive in each year should cover the day to day running costs of the business including depreciation and taxation, as well as a reasonable return on and of capital.

However, it should be noted that the building block model is used as a tool to assess the reasonableness of the proposed price increases, rather than to generate a specific set of prices for reserved services. There are practical impediments such as the aggregated nature of the cost information in the financial model provided by Australia Post, and

also in the further cost information separated into categories sought by the ACCC. As a result, the maximum allowable revenue results of the building block model relate to a large number of individual price points for postal services.

10.1 Australia Post’s proposal

Australia Post submits that it ‘...has modelled the proposed prices using the PTRM used by the ACCC in the 2002 notification.’³¹⁶ However, in contrast to the financial model constructed by the ACCC in its assessment of Australia Post’s price notification in 2002 (which looked at the extent forecasted revenues would cover costs over a five year period), Australia Post’s proposed financial model looks at the extent forecasted revenue will be sufficient cover its costs in the 2008–09 financial year.

Australia Post has estimated each of the components of the building block model outlined in equations 10.1 and 10.2. In addition (and as discussed in detail in Chapter 7), Australia Post has also proposed that the asset base should include some current assets (and liabilities) that the ACCC’s financial model does not ordinarily include in determining an efficient maximum allowable revenue requirement.

Australia Post’s financial model is outlined in detail in Table 10.1. Australia Post’s financial model has three different maximum allowable revenue amounts for the 2008–09 financial year which reflect:

- an asset base which includes fixed assets only as per the financial model used by the ACCC in its assessment of Australia Post’s prices in 2002;
- an asset base which also includes cash in the field; and
- an asset base which includes cash in the field and makes other adjustments to the asset base according to Australia Post’s interpretation of the paper prepared by Officer and Bishop.

Table 10.1 Australia Post’s proposed financial model, 2008–09 financial year, \$ million³¹⁷

Nominal Values	PTRM	PTRM with cash in field	PTRM Officer and Bishop
Revenue at proposed prices	\$1,975	\$1,975	\$1,975
Required revenue	\$1,983	\$1,986	\$2,011
<i>Revenue at proposed prices less required revenue</i>	<i>(\$7)</i>	<i>(\$10)</i>	<i>(\$33)</i>

³¹⁶ *ibid.*, p. 54.

³¹⁷ Note: Values may not add due to rounding.

Australia Post states that ‘...Australia Post’s proposed prices [...] would not generate revenue in excess of the required revenue as based on efficient costs and a reasonable rate of return.’³¹⁸

10.2 ACCC’s assessment

As discussed above, the ACCC has conducted a detailed assessment of the efficiency of the components of the financial model described above. These components are:

- Demand
- Allocation of revenue, costs and assets;
- Costs;
- Cost of capital; and
- Productivity.

The ACCC’s considerations on these components of the financial model have been taken into account in developing the financial model used to assess Australia Post’s draft price notification.

Financial Model

In addition to some differences arising from alternative views on some of the components of the financial model outlined above, the ACCC has decided to estimate the extent the prices proposed by Australia Post will generate sufficient revenue to cover its costs for three financial years, and has disaggregated the financial model into revenue requirements for small ordinary, small pre-sort, large-ordinary and large pre-sort categories of reserved services.

It should also be noted that these financial results are based on the increased pricing applying for the full 2008-09 financial year. Given that the introduction of any price increases will not be precisely aligned with this year these results over-estimate the revenue that Australia Post will receive in the 2008-09 financial year.

We note that the ACCC needed to obtain financial information from Australia Post to create these financial models, and are aware that the provision of this information does not prejudice Australia Post’s view that prices for reserved services should recover the MAR for reserved services at an aggregate level.³¹⁹

The ACCC considers that the extent the proposed prices are likely to generate sufficient revenue to recover Australia Post’s costs in the future is a relevant consideration in its assessment of the price increases proposed by Australia Post. This is because the ACCC’s role in this instance is limited to assessing price increases. If in the future, it is expected that Australia Post will experience revenues greater than the estimated maximum allowable revenue (due to reductions in costs, or increases in volumes) this would be relevant to the decision on whether to object to the proposed price increases.

³¹⁸ *ibid.*, p. 55.

³¹⁹ Australia Post *Response 1 May questions*, 14 May 2008.

The ACCC also considers that where possible, the efficient costs of the categories of services provided by Australia Post should be separated in the financial model. This provides information on the extent to which categories of Australia Post’s reserved services are expected to generate revenue in line with Australia Post’s efficient costs.

As a result, the ACCC has constructed:

- an aggregate financial model, that considers the extent the proposed prices for reserved services are expected to generate revenue in line with Australia Post’s costs for the financial years 2008–09, 2009–10 and 2010–11; and
- a financial model that considers the extent the proposed price increases for categories of Australia Post’s services (small letter full-rate, small letter pre-sort, large letter full-rate, large letter pre-sort) are expected to generate sufficient revenue to recover Australia Post’s costs for the financial year 2008–09, 2009–10, and 2010–11.

Aggregate financial model

Table 10.2: Aggregate financial model for the financial years 2008–09, 2009–10, and 2010–11, \$ million in nominal values

Nominal Values	2008–09	2009–10	2010–11
Revenue at proposed prices	\$1,975.0	✗	✗
Required revenue	\$1,982.9	✗	✗
<i>Revenue at proposed prices less required revenue</i>	<i>(\$7.9)</i>	✗	✗

The ACCC’s revised modelling results in a slightly higher maximum allowable revenue requirement for all reserved services for 2008-09. This is attributable to the different gearing and WACC figures. As a result, the ACCC’s modelling indicates that Australia Post’s proposed price increases will slightly under recover the aggregate maximum allowable revenue requirement in the 2008–09 financial year.

The ACCC’s modelling of financial outcomes beyond 2008-09 indicates that the profitability of reserved services as a whole is expected to decline in the 2009-10 and 2010-11 financial years. This is due to costs for reserved services increasing faster than revenues.

Disaggregated financial model

Tables 10.3, 10.4, 10.5 and 10.6 compare expected revenues for small ordinary, small pre-sort, large ordinary and large pre-sort against maximum allowable revenues for the 2008–09, 2009–10 and 2010–11 financial years.³²⁰

Table 10.3 Maximum allowable revenue for small letter full rate for the financial years 2008–09, 2009–10, 2010–11, \$ million in nominal values

³²⁰ Note that the disaggregated figures may not sum due to rounding.

<i>Small letter full-rate</i>	2008–09	2009–10	2010–11
Revenue at proposed prices	✂	✂	✂
Required revenue	✂	✂	✂
<i>Revenue at proposed prices less required revenue</i>	✂	✂	✂

The ACCC's modelling shows that Australia Post's proposed price increases will result in a under recovery of the maximum allowable revenue requirement for small letter full-rate mail over the 2008–09, 2009–10 and 2010–11 financial years.

Table 10.4 Maximum allowable revenue for small letter pre sort for the financial years 2008–09, 2009–10, 2010–11, \$ million in nominal values

<i>Small letter pre-sort</i>	2008–09	2009–10	2010–11
Revenue at proposed prices	✂	✂	✂
Required revenue	✂	✂	✂
<i>Revenue at proposed prices less required revenue</i>	✂	✂	✂

The ACCC's modelling shows that Australia Post's proposed price increases will result in an over-recovery, minor under-recovery and under-recovery of the maximum allowable revenue requirement for small letter pre-sort mail over the 2008–09, 2009–10 and 2010–11 financial years respectively.

Table 10.5 Maximum allowable revenue for large letter full rate for the financial years 2008–09, 2009–10, 2010–11, \$ million in nominal values

<i>Large letter full-rate</i>	2008–09	2009–10	2010–11
Revenue at proposed prices	✂	✂	✂
Required revenue	✂	✂	✂
<i>Revenue at proposed prices less required revenue</i>	✂	✂	✂

The ACCC's modelling shows that Australia Post's proposed price increase will result in an over-recovery of the maximum allowable revenue over the 2008–09, 2009–10 and 2010–11 financial years.

Table 10.6 Maximum allowable revenue for large letter pre sort for the financial years 2008–09, 2009–10, 2010–11, \$ million in nominal values

<i>Large letter pre-sort</i>	2008–09	2009–10	2010–11
Revenue at proposed prices	✂	✂	✂
Required revenue	✂	✂	✂
<i>Revenue at proposed prices less required revenue</i>	✂	✂	✂

The ACCC’s modelling shows that Australia Post’s proposed price increase will result in the over-recovery, minor under-recovery and under-recovery of the maximum allowable revenue requirement for small letter pre-sort mail over the 2008–09, 2009–10 and 2010–11 financial years respectively.

11 ACCC's preliminary view

The ACCC considers that there are two key issues to be addressed before forming a view on the proposed price increases. These are:

- the frequency of the ACCC's assessment of proposed price increases; and
- the level of disaggregation in the supporting financial modelling.

11.1 Frequency of the ACCC's assessment of proposed price increases

Australia Post has submitted a one-year financial model that predicts a maximum allowable revenue target for all reserved services for the full financial year 2008–09. The period modelled is much shorter than the five-year financial model covered in the ACCC's assessment of Australia Post's previous price notification in 2002.

Australia Post notes that the five year period was appropriate for the 2002 notification where the proposed price increase resulted in a 'reasonable, economic rate of return for a five year period.'³²¹ However, Australia Post submits that a five-year period for this price notification is inappropriate because:

- 'in contrast to the higher profitability in 2001/02, domestic reserved letter service profitability in the 2007/08 will be negligible.' Therefore, a long period is not required to achieve an average profitability equal to the required rate of return.
- To generate average returns over a number of years would require a significant upfront price increase. Australia Post believe that significant price increases should be avoided, as experience with customers who use other non-reserved letter products (e.g. Print Post and Unaddressed Mail) indicates that there has been a distinct preference for modest price adjustments at more frequent intervals compared to significant increases at infrequent intervals.³²²

Australia Post argues that experience with customers of non-reserved services (for example, Print Post and Unaddressed Mail) '...indicates that there has been a distinct preference for modest price adjustments at more frequent intervals as opposed to significant increases at infrequent intervals.'³²³

Australia Post also believes that high up-front price increases should be avoided as the 'elasticity effect' – that is, the impact of the proposed price changes on the future

³²¹ Australia Post, *Draft notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p. 7.

³²² *ibid.*, p.7–8.

³²³ *ibid.*, p. 8.

demand for letter services – would become more ‘visible and pronounced as customers adopt an increased use of different communication channels / media’.³²⁴

In particular, Australia Post submits that the modelling of financial outcomes in the current notification are modelled over a one year period only. Australia Post notes that any initial period longer than this would either ‘...result in price rises that may be too large in view of the maturity of the letter market’, or may ‘...result in an inadequate profit for the domestic reserved letter service.’³²⁵

Australia Post has also signalled that it is seeking to explore with the ACCC pricing models that would ...enable small, manageable pricing adjustments without the need for frequent, full reviews.³²⁶

Interested parties’ views

In the ACCC’s issues paper, interested parties views were sought on:

- the period over which the reasonableness of Australia Post’s proposed prices should be considered by the ACCC;
- the implications of more frequent price notifications for cost efficiency; and
- the impact of future price increases on customers’ planning (including investment decisions).

Interested parties expressed opposing views on the proposed duration of the notifications. The first view, expressed by the licensed post offices, supports the more frequent and modest price increases proposed. The opposite view, expressed by users of postal services, is that a longer duration of the notification is preferred.

The POAAL agrees that letter prices now need to be reviewed on a more regular basis than the five-year period set in the 2002 price notification, allowing better management of issues emerging in the communication industry that now is experiencing accelerating changes.³²⁷ Feedback from its members — licensed post offices — supports regular and modest price increases perceived to enable better planning than large periodic increases. Meanwhile, POAAL does admit that larger mail users need a longer period of notification for budget adjustment than smaller mail users, with medium-size business preferring notification before the end of the financial year to assist with budget planning for the year ahead.³²⁸

³²⁴ *ibid.*, p. 20.

³²⁵ *ibid.*, p. 8.

³²⁶ *ibid.*

³²⁷ Post Office Agents Association Limited, *Submission to the ACCC: Australia Post Draft Price Notification Issues Paper*, April 2008., p. 1.

³²⁸ *ibid.*, p. 4.

The MMUA is opposed to any move to introduce more frequent changes of postage rates without the ACCC's full review process that currently exists.³²⁹ The MMUA believes that making it easier for Australia Post to introduce annual price increases will not be an inducement for any improvement in service quality and/or efficiency and productivity. The MMUA considers that a three-year period is needed for price stability.

The ADMA views a five-year timeframe as appropriate for industry planning purposes and to provide certainty for organisations undertaking significant capital and business investment.³³⁰ While the ADMA does not object to the proposal for modest price increases, it acknowledges that these increases will raise the cost bases of mail users — by many hundreds of thousands of dollars in some cases. The ADMA believes that Australia Post's proposal for price increases being effective on 1 July 2008 is unacceptable given the adjustment time required by businesses.

The Consumer Association of Western Australia (CAWA) requests that proposed price increases be introduced within a definite time period, as many consumers using Australia Post for personal mail would be inconvenienced by changes occurring too frequently.³³¹

ACCC's view

In principle, if price increases can be anticipated and if a small price increase each period equals an infrequent, albeit large, price increase, users should be indifferent to the periodicity of those increases. The equality between these two pricing options is known as an 'inter-temporal equality' that is achieved only if the following conditions are met:

- Future prices changes in terms of timing and magnitude under both options are known to the user.
- The two options produce the same present values of future costs incurred by the user.

Under the two conditions, price elasticity of demand would be the same for the two options. Therefore, the ACCC disagrees with Australia Post's belief that 'if regular, modest price adjustments are replaced by infrequent significant increases, then the elasticity effect would become more visible and pronounced as customers adopt an increased use of different communication channels / media'.³³²

However, the ACCC considers that the price elasticity effect should be the same if the inter-temporal equality conditions are met for any two options known to the users. The

³²⁹ Major Mail Users of Australia, *Submission in Response to the ACCC Issues Paper of February 2008: Australia Post's Draft Notification Postal Pricing Increases*, April 2008,, pp. 8–11.

³³⁰ Australian Direct Market Association, *ACCC Mail Pricing Submission*, 4 April 2008, p. 4.

³³¹ Consumer Association of Western Australia, *Submission on Australia Post Price Increases*, 3 April 2008, p. 1.

³³² Australia Post, *Australia Post, Draft notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories*, 5 February 2008, p. 20.

two options — frequent small price increases proposed by Australia Post versus infrequent large price increases like those previously adopted — should satisfy the inter-temporal equality conditions if prices are allowed to adjust to cover costs, irrespective of the periodicity of the price increases. This requires that the same full review processes with similar efficiency incentive structures and accurate forecasts are followed under both options.

In practice, this is unlikely to be the case given the following:

- Incentives for Australia Post to improve its productivity may be lost under a model where prices are frequently determined.
 - Under commonly used regulatory models, any additional productivity improvements beyond those incorporated into the estimate of the regulated firm's costs can be retained by the firm during the regulatory period. This provides the regulated firm with a strong incentive to seek out further productivity gains during the regulatory period.
 - However, if price adjustments are reviewed too frequently, the regulated firm will have a reduced incentive to improve its productivity performance. Specifically, where no future targets are agreed on with the regulator, no such incentive exists.
 - In a model where prices are subject to frequent review but where future targets are set, any productivity performance beyond forecast will be more quickly incorporated into the financial model used to determine small price adjustments. This approach may result in reduced incentives than those subject to less frequent review.
- As proposed by Australia Post, frequent small price increases may not need full reviews. On the one hand, incomplete reviews may make it easier for Australia Post to introduce price increases — a point made by the MMUA. On the other hand, excessive regulatory costs are incurred under more frequent full reviews as substantial administration and compliance costs will be incurred by Australia Post, the ACCC and all interested parties for each price notification.
- Future demand and costs over a longer period are less predictable than those in the shorter term. Under a model of frequent small price increases, forecasts are made over a shorter period and, as a result, should be more reliable. However, while there is the potential for accurate forecasts to be made under more frequent price notifications, the incentives for Australia Post to forecast accurately are similar to those where reviews are held on a less frequent basis.

The ACCC notes that the future path of price increases beyond 2008–09 is unknown to mail users. As a consequence, mail users will face uncertainties relating to their capital and business planning which usually is made for a longer term than one year.

Aware of being held up *ex post*, users may choose to reduce investment specific to the use of Australia Post's service or make investment that is not exclusive to Australia Post's service. Individual users may also re-negotiate long-term contracts with Australia Post to remove the uncertainties associated with pricing. Inefficient resource allocation may occur as resources are diverted by mail users to resolve the uncertainties associated with price changes in the longer term.

The ACCC also notes that users of letter services in Australia have become accustomed to infrequent price adjustments in the past. Over the past fifteen years the basic postage rate and the rate for other ordinary letters have been increased only once (following Australia Post's 2002 notification) and there has been no price increase for pre-sort letters. As reviewed before, the literature shows that users generally adjust slowly to price increases if they are accustomed to infrequent price changes. The ACCC believes that mail users' slow speed to respond is unlikely to change considerably when the duration is reduced for the first time from five years or more to one year.

The ACCC considers that the absence of information about how prices are expected to change in the medium term, the submission of price notifications on a more frequent basis is unlikely to significantly reduce the process of assessment of proposed price increases. However under such an approach, the ACCC considers that Australia Post would have significantly lower incentives to reduce costs, pursue productivity gains and increase volumes compared to a regime where a path of prices is specified for a future period.

In addition, under a regulatory framework where the regulated firm faces low incentives to reduce costs and improve productivity over time, a greater burden is placed on the ACCC to conduct detailed analysis and modelling of the efficiency of the costs that Australia Post is seeking to recover through price increases. Such complex analysis increases the time required for the ACCC to assess Australia Post's pricing proposal.

An alternative option would be for Australia Post to provide the ACCC with a detailed forward-looking financial model and pricing proposal to apply for the next three year period. While the ACCC expressed the view in previous decisions that a five-year regulatory period was appropriate, three years seems more appropriate in the case of Australia Post given the latter's concerns about forecasting costs and revenues into the future, and the timing of its corporate plan to the Government.

Under such an approach, the ACCC could conduct an initial detailed assessment on the proposed price increases to apply into the future. If the ACCC's assessment required additional price changes during this period, the ACCC could conduct a reduced assessment in light of its previous assessment of the proposed price change.

11.2 The level of disaggregation in the supporting financial modelling

Australia Post contends that the package of proposed price increases should be considered for reserved services as a whole, not on the basis of financial modelling that separates the maximum allowable revenue required for reserved services into different categories of mail services.

In Australia Post's submission in response to issues raised by interested parties, it provided additional detail on its view that, in addition to the uniform pricing for postal services, which results in cross subsidies within categories of mail services, there also should be cross subsidies between categories of mail services.

Australia Post submits that cross subsidy between letter services is required ‘to fund its CSOs’.³³³ Citing statements in reading speeches accompanying the APCA, and legislation amending the APCA, Australia Post contends that ‘successive governments have confirmed that CSOs are to be funded by an internal cross subsidy within the reserved letters service (rather than by budget appropriation).’³³⁴

Australia Post provided the ACCC with an additional submission clarifying its position on this issue on 5 June 2008. In this submission, Australia Post noted that such an approach was consistent with the approach adopted by the ACCC in its 2002 assessment of Australia Post’s price notification. Australia Post cited:

“The Commission’s predominant concern is normally with the overall level of pricing for regulated services rather than the structure of relative prices for individual products, especially where there are numerous products as with Australia Post.”

“... the Commission generally prefers to leave questions of price structure to the regulated business, providing the overall level of prices does not seem excessive.”³³⁵

Australia Post contends that the letter pricing principles attached to its current draft price notification ‘...also underpinned the proposed prices that were submitted in the 2002 notification and were not rejected by the ACCC as a basis for setting prices.

Australia Post’s letter pricing principles are outlined its current price notification. Relevantly these include:

- Letter prices will be set to enable Australia Post to meet its statutory requirement to provide an adequate commercial return and to fund the CSO;
- Carriage of the Ordinary Small Letter at a uniform rate is central to the CSOs. Pricing of the BPR reflects the need to maintain an affordable rate. Consequently, the BPR will not always fully recover the costs of providing these services and as such, prices for other letter services will contain a cross subsidy to the BPR.
- Subject to this need to cross subsidise letter products, letter prices have been set to achieve an appropriate aggregate rate of return for the letters business as a whole.³³⁶

Australia Post believes that assessing the proposed revenue from domestic reserved letters as a whole is consistent with Direction 11 and ensures that Australia Post is not

³³³ Australia Post, *Australia Post’s Response to Public Submissions*, May 2008, p. 22.

³³⁴ *ibid.*

³³⁵ ACCC, *Australian Postal Corporation Pricing Proposal –Preliminary view*, September 2002, p. 103, 142.

³³⁶ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories — Detailed Explanation of Price Changes*, 5 February 2008, p. 58.

only able to generate a reasonable rate of return but is also able to continue to provide a letter service consistent with the requirements of section 27.³³⁷

Australia Post notes that its proposed price increases takes account of relativities between different prices, and that these relativities have been set to encourage users to adopt more efficient practices and other mail services.

Additionally Australia Post submit that if each major part of the letters business was required to immediately meet a separate required rate of return for the letter business as a whole, the package would involve a significant rise for the BPR which would not be acceptable from a broader social perspective. In particular, Australia Post submits that this would result in:

- the more profitable components of the BPR moving to PreSort (ie through an over incentive to move to PreSort prices);
- the responsibility of funding the CSO (including the universal rate) to a smaller user base (generally ad hoc / non structured mail from individuals and businesses); and
- a cycle of high increases to the BPR.³³⁸

ACCC's view

The ACCC considers that the extent to which the price increases proposed by Australia Post result in categories of mail services recovering allocated costs is relevant to its assessment of the proposed price increases in reserved services.

Such information makes transparent the reasoning behind the structure of Australia Post's proposed price increases. Absent such information, the ACCC would not be aware that in Australia Post's current proposal the proposed price increases for the 2008-09 financial year under recover the allocated costs of the small ordinary letter category, and over recover the allocated costs of the small pre-sort letter category, large ordinary letter category, and large pre-sort letter category. Indeed, aside from mention in the letter pricing principles that '...prices for other letter services will contain a cross-subsidy to the BPR'³³⁹ the extent to which different categories of mail services recovered allocated costs was not made explicit by Australia Post in its initial draft price notification submission.

While the ACCC noted in its 2002 assessment that its predominant concern was with the overall level of pricing for regulated services rather than the structure of prices for individual mail products, this relates to the degree to which it sought to prescribe the precise pricing structure for reserved services in light of the proposed prices for a large number of reserved services. The ACCC considers that the structure of the price increases is a separate issue from the extent to which the proposed price increases recover costs. Moreover, the ACCC did have regard to the extent to which the proposed

³³⁷ Australia Post, Views on disaggregated financial modelling, 5 June 2008.

³³⁸ *ibid.*

³³⁹ Australia Post, *Draft Notification of Change in Domestic Letter Pricing and Introduction of New Letter Categories — Detailed Explanation of Price Changes*, 5 February 2008, p. 58.

price increases would meet the allocated costs of providing those services in its assessment in 2002. In particular, the ACCC noted that:

The PCS [Product Costing System] data also suggests Australia Post's returns from ordinary small letters do not fully meet the costs of providing these services. The uniform price requirements means that there is inevitably a degree of cross-subsidisation between the high and low density routes within this service.

The existence of these cross-subsidies between different product groups leads the Commission to provisionally conclude that pricing efficiency will be enhanced if the price for ordinary small letters is increased while the price for bulk mail services is maintained at its current level. This approach would better align costs to revenues between the different product groups identifiable within Australia Post's PCS.³⁴⁰

The ACCC is aware that Direction 11 requires the ACCC to have regard to Australia Post's CSO. Yet, as identified in Chapter 4, Australia Post has not made a separation of its CSO costs in the cost information provided to the ACCC. This cost information reflects Australia Post's total costs of providing categories of reserved services. As submitted by Australia Post this allocation has been made in accordance with the allocation procedures Australia Post uses to comply with the ACCC's RAF RKR. Given that this cost information includes Australia Post's CSO costs, a disaggregated financial model provides the ACCC with some guidance on the extent to which Australia Post is able to recover its CSO costs from different categories of mail services.

In its assessment of Australia Post's current proposal the ACCC has been required to conduct extensive financial modelling in order to have regard to the extent to which the proposed prices for reserved services are aligned with the allocation of costs made by Australia Post. Given that the ACCC considers that such information is relevant to its assessment of Australia Post's proposed price increases for reserved services, the ACCC considers that further to its recommendation in section 11.1 for a forward looking financial model to accompany future price notifications, this financial model should be disaggregated into categories of different mail services.

11.3 The ACCC's preliminary view

The ACCC has undertaken a detailed assessment of all of the components of Australia Post's financial model, and has revised this financial model in light of this assessment. The results of the ACCC's financial modelling are outlined in Chapter 10. This modelling suggests that the proposed price increases, considered for reserved services as a whole, will slightly under recover the maximum allowable revenue in the 2008-09 financial year. The disaggregated financial modelling indicates that Australia Post's proposed price increases involve small ordinary letters under recovering maximum allowable revenue in the 2008-09 financial year, and small pre-sort, large ordinary and large pre-sort over recovering the maximum allowable revenue in the 2008-09 financial year.

As identified in Chapter 10, it should be noted that these financial results are based on the increased pricing applying for the full 2008-09 financial year. Given that the

³⁴⁰ ACCC, *Australian Postal Corporation Pricing Proposal – Preliminary View*, September 2002, p. 142.

introduction of any price increases will not be precisely aligned with this year these results over-estimate the revenue that Australia Post will receive in the 2008-09 financial year.

While the ACCC has some concerns with Australia Post's cost allocation methodology outlined in Chapter 5, and hence about the extent to which prices for categories of mail services are expected to recover allocated costs in 2008-09, the ACCC anticipates working closely with Australia Post to resolve the concerns identified with its cost allocation methodology. However, those are matters that would need to be reviewed in the future and the ACCC is prepared to accept Australia Post's proposed pricing structure for this current notification.

Equally, in light of the highly shared nature of the costs of providing reserved and non-reserved services, referred to in Chapter 5, the ACCC has concerns about not examining the contribution made by non-reserved services towards recovery of the shared costs of providing reserved and non-reserved services. Again, however, any reconsideration of the ACCC's existing approach to assessing price notifications for reserved services would need to be reviewed in future and the ACCC is prepared to accept Australia Post's restriction of its revenue and costs information to reserved services for this current notification.

Given that the revised financial modelling indicates that absent prices increases, Australia Post would be unable to recover the costs of providing reserved services, the ACCC's preliminary view is to not object to the price increases proposed by Australia Post.

The ACCC notes that, in practice, the structure of the proposed price increases will not exactly result in categories of services recovering allocated costs, and also considers that Australia Post should be provided with some degree of flexibility in recovering the costs of reserved services (including its CSO costs). While the ACCC is prepared to accept the level of divergence between Australia Post's prices and allocated costs in Australia Post's pricing structure in the current notification the ACCC would be concerned about increases in the magnitude of these divergences in future notifications — particularly given that the divergences between prices and allocated costs are expected to decline over time.

The ACCC also does not object to the proposed introduction and establishment of prices for the new Acquisition mail service. The introduction of semi-addressed geographic targeting is a form of product differentiation which provides an alternative avenue for Australia Post to increase mail volumes and increase use of its extensive collection and delivery network. Further, the ACCC does not object to the introduction of imprint rates for items that are paid for by Postage meters or contain a postage paid imprint. The ACCC notes Australia Post's contention that these discounts are reflective of the different acceptance and processing costs associated with this method of payment.

In addition to working with the ACCC to address the concerns identified with Australia Post's cost allocation methodology outlined in Chapter 5, the ACCC considers that any future price notifications submitted by Australia Post should provide guidance on how Australia Post expects the prices of reserved services to change over a period of three

years into the future, and should be supported by a three-year disaggregated financial model and information on the revenues and costs of those non-reserved services that share the same costs as reserved services. Such information would enable the ACCC to give further consideration of the issue of the recovery of costs that are shared between reserved and non-reserved services.

The ACCC's preliminary view is to not object to the price increases for reserved services proposed by Australia Post. As such, the ACCC does not object to the proposed increases in the prices of reserved services in Attachment A.

However, the ACCC requires that any future price notifications to be supported by a forward looking proposal that provides more certainty to customers about prices for a reasonable period of time.

Therefore any future price notifications submitted by Australia Post should provide:

- **a disaggregated financial model over at least a three year period;**
- **information on how prices for Australia Post's reserved services will change over this period; and**
- **information on the revenues and costs of those non-reserved services that share the same costs as reserved services over this period.**

The ACCC also expects Australia Post to address the concerns that have been identified with its cost allocation methodology, as outlined in Chapter 5.

Appendices

There are five appendices to the ACCC's preliminary view. These are:

- Appendix A – Australia Post's existing and proposed prices;
- Appendix B – Relevant legislative instruments; and
- Appendix C – Technical notes on total factor productivity analysis

Appendix A – Australia Post’s existing and proposed prices

Note: all prices are GST inclusive, except for external territories where they are as stated but GST free.

Ordinary Letters	Current	Proposed Prices	
		Amount	% Change
Small Letters			
Ordinary – General (eg. Stamp)	\$ 0.50	\$ 0.55	10.0%
Ordinary – Imprint/Metered (new)	\$ 0.50	\$ 0.54	8.0%
Clean mail	\$ 0.45	\$ 0.48	6.7%
Seasonal greeting	\$ 0.45	\$ 0.50	11.1%
Barcoded and Metered	\$ 0.48	\$ 0.54	12.5%
Large Letters			
Seasonal greeting cards			
Up to 125g	\$ 0.90	\$ 1.00	11.1%
Ordinary letters – General			
Up to 125g	\$ 1.00	\$ 1.10	10.0%
Over 125g up to 250g	\$ 1.45	\$ 1.65	13.8%
Over 250g up to 500g	\$ 2.45	\$ 2.75	12.2%
Ordinary large – Imprint/Metered (new)			
Up to 125g	\$ 1.00	\$ 1.08	8.0%
Over 125g up to 250g	\$ 1.45	\$ 1.62	11.7%
Over 250g up to 500g	\$ 2.45	\$ 2.70	10.2%
Ordinary letters barcoded and metered			
Up to 125g	\$ 0.95	\$ 1.08	13.7%
Over 125g up to 250g	\$ 1.40	\$ 1.62	15.7%
Over 250g up to 500g	\$ 2.35	\$ 2.70	14.9%
Clean mail			
Small plus size			
Up to 125g	\$ 0.70	\$ 0.75	7.1%

Local Delivery (only available in specified postcodes)	Current	Proposed Prices	
		Amount	% Change
Small letters			
Up to 125g	\$ 0.46	\$ 0.51	10.9%
Medium letters			
Up to 125g	\$ 0.60	\$ 0.70	16.7%
Over 125g up to 250g	\$ 0.85	\$ 0.95	11.8%
Large letters			
Up to 125 g	\$ 0.85	\$ 0.90	5.9%
Over 125g up to 250g	\$ 1.20	\$ 1.30	8.3%
Over 250g up to 500g	\$ 1.30	\$ 1.45	11.5%

Notes: Local delivery – Local delivery postcodes to be reviewed.

Reply Paid	Current	Proposed prices	
		Amount	% Change
Small			
Barcoded	\$ 0.40	\$ 0.42	5.0%
Unbarcoded	\$ 0.60	\$ 0.63	5.0%
Annual fee	\$60.00	\$65.00	8.3%
Large			
Up to 125g	\$ 1.10	\$ 1.20	9.1%
Over 125g up to 250g	\$ 1.55	\$ 1.75	12.9%
Over 250g up to 500g	\$ 2.55	\$ 2.85	11.8%

Notes/Comments: Ordinary letters

Small, 50c to 55c, Large rounded to multiples of 55c

Introduction of new price category for items that are paid for by a charge account or postage meter.

Large letter prices are also multiples of the 54c price.

Prices for barcoded and metered have been aligned with the new category

Note: all prices are GST inclusive, except for external territories where they are stated but GST free.

PrePaid envelopes	Current prices			Proposed prices			% Change		
	Single	1-4 Packs of 10	5+ Packs of 10	Single	1-4 Packs of 10	5+ Packs of 10	Single	1-4 Packs of 10	5+ Packs of 10
Plain envelopes									
Small (DL and C6 size)	\$ 0.60	\$ 5.85	\$ 5.70	\$ 0.65	\$ 6.34	\$ 6.18	8.3%	8.3%	8.3%
C5 Size	\$ 1.20	\$ 11.70	\$ 11.40	\$ 1.30	\$ 12.68	\$ 12.35	8.3%	8.3%	8.3%
C4 Size	\$ 2.35	\$ 22.91	\$ 22.33	\$ 2.50	\$ 24.38	\$ 23.75	6.4%	6.4%	6.4%
B4 Size	\$ 2.70	\$ 26.33	\$ 25.65	\$ 2.90	\$ 28.28	\$ 27.55	7.4%	7.4%	7.4%
One rate to the world postcard	\$ 1.20	NA	NA	\$ 1.50	NA	NA	25.0%	NA	NA
Window faced		Pack of 50	Box of 500		Pack of 50	Box of 500		Pack of 50	Box of 500
Small (DL and C6 size)	N/A	\$ 29.70	\$ 286.00	N/A	\$ 32.20	\$ 309.50	N/A	8.4%	8.2%

Notes/Comments – PrePaid envelopes

Small letter prices increased in line with basic postal rate and to reflect increased stationary costs

Large letter prices increased slightly to reflect change to ordinary prices with rounding to five cent multiples.

One rate to the world postcard price reflects first increase since circa 2000.

Barcode PreSort letters – Regular Delivery

Regular Delivery	Same state BDT			Other state BDT			Residue			Unbarcoded Residue		
	Current	Proposed price		Current	Proposed price		Current	Proposed price		Current	Proposed price	
		Amount	% Var		Amount	% Var		Amount	% Var		Amount	% Var
Small letters												
Up to 125g	\$ 0.374	\$ 0.399	6.7%	\$ 0.385	\$ 0.410	6.5%	\$ 0.424	\$ 0.449	5.9%	\$ 0.450	\$ 0.480	6.7%
Charity mail	\$ 0.312	\$ 0.344	10.3%	\$ 0.323	\$ 0.355	9.9%	\$ 0.356	\$ 0.394	10.7%	\$ 0.450	\$ 0.480	6.7%
Small plus												
Up to 125g	\$ 0.473	\$ 0.509	7.6%	\$ 0.495	\$ 0.531	7.3%	\$ 0.572	\$ 0.619	8.2%	\$ 0.700	\$ 0.750	7.1%
Medium												
Up to 125g	\$ 0.561	\$ 0.630	12.3%	\$ 0.594	\$ 0.674	13.5%	\$ 0.671	\$ 0.768	14.5%	\$ 0.803	\$ 0.905	12.7%
Over 125g up to 250g	\$ 0.724	\$ 0.823	13.7%	\$ 0.779	\$ 0.911	16.9%	\$ 0.889	\$ 1.015	14.2%	\$ 1.034	\$ 1.158	12.0%
Large												
Up to 125g	\$ 0.770	\$ 0.773	0.4%	\$ 0.825	\$ 0.817	-1.0%	\$ 0.935	\$ 0.938	0.3%	\$ 0.980	\$ 0.982	0.2%
Over 125g up to 250g	\$ 1.111	\$ 1.103	-0.7%	\$ 1.221	\$ 1.191	-2.5%	\$ 1.331	\$ 1.323	-0.6%	\$ 1.430	\$ 1.433	0.2%
Over 250g up to 500g	\$ 1.584	\$ 1.543	-2.6%	\$ 1.694	\$ 1.675	-1.1%	\$ 1.804	\$ 1.763	-2.3%	\$ 1.980	\$ 1.983	0.2%

Barcode PreSort letters – Off Peak Delivery

Off peak delivery	Same state BDT			Other state BDT			Residue			Unbarcoded Residue		
	Current	Proposed price		Current	Proposed price		Current	Proposed price		Current	Proposed price	
		Amount	% Var		Amount	% Var		Amount	% Var		Amount	% Var
Small letters												
Up to 125g	\$ 0.363	\$ 0.388	6.9%	\$ 0.374	\$ 0.399	6.7%	\$ 0.402	\$ 0.432	7.5%	\$ 0.435	\$ 0.465	6.9%
Charity mail	\$ 0.296	\$ 0.328	10.8%	\$ 0.301	\$ 0.339	12.6%	\$ 0.340	\$ 0.372	9.4%	\$ 0.435	\$ 0.465	6.9%
Small plus												
Up to 125g	\$ 0.451	\$ 0.498	10.4%	\$ 0.473	\$ 0.520	9.9%	\$ 0.550	\$ 0.608	10.5%	\$ 0.671	\$ 0.720	7.3%
Medium												
Up to 125g	\$ 0.528	\$ 0.597	13.1%	\$ 0.534	\$ 0.630	18.0%	\$ 0.638	\$ 0.729	14.3%	\$ 0.759	\$ 0.850	12.0%
Over 125g up to 250g	\$ 0.653	\$ 0.757	15.9%	\$ 0.669	\$ 0.801	19.7%	\$ 0.818	\$ 0.949	16.0%	\$ 0.946	\$ 1.059	11.9%
Large												
Up to 125g	\$ 0.748	\$ 0.751	0.4%	\$ 0.792	\$ 0.784	-1.0%	\$ 0.902	\$ 0.905	0.3%	\$ 0.957	\$ 0.960	0.3%
Over 125g up to 250g	\$ 1.045	\$ 1.026	-1.8%	\$ 1.111	\$ 1.092	-1.7%	\$ 1.254	\$ 1.235	-1.5%	\$ 1.353	\$ 1.334	-1.4%
Over 250g up to 500g	\$ 1.298	\$ 1.301	0.2%	\$ 1.364	\$ 1.389	1.8%	\$ 1.551	\$ 1.521	-1.9%	\$ 1.815	\$ 1.741	-4.1%

Barcode PreSort letters cont.

Acquisition mail (new product)	Same state BDT			Other state BDT			Residue			Unbarcoded Residue		
	Current	Proposed price		Current	Proposed price		Current	Proposed price		Current	Proposed price	
		Amount	% Var		Amount	% Var		Amount	% Var		Amount	% Var
Off peak delivery												
Small – Up to 125g		\$ 0.280			\$ 0.300			\$ 0.432			\$ 0.465	
Small plus – Up to 125g		\$ 0.390			\$ 0.410			\$ 0.608			\$ 0.720	
Impact mail	Postcode direct tray			Area tray			Residue					
	Current	Proposed price		Current	Proposed price		Current	Proposed price				
		Amount	% Var		Amount	% Var		Amount	% Var			
Small – up to 125g												
Same state	\$ 0.550	\$ 0.600	9.1%	\$ 0.590	\$ 0.640	8.5%	\$ 0.660	\$ 0.700	6.1%			
Other state	\$ 0.560	\$ 0.610	8.9%	\$ 0.600	\$ 0.650	8.3%	\$ 0.670	\$ 0.710	6.0%			
Small plus – up to 125g												
Same state	\$ 0.800	\$ 0.850	6.3%	\$ 0.850	\$ 0.900	5.9%	\$ 0.950	\$ 1.000	5.3%			
Other state	\$ 0.810	\$ 0.860	6.2%	\$ 0.860	\$ 0.910	5.8%	\$ 0.960	\$ 1.010	5.2%			

Notes/Comments – PreSort letters

Small PreSort

Charity mail prices for barcoded items set at a specific cent reduction from ‘non-charity’ small Presort (Regular 5.5 cents and Off peak 6 cents)

Acquisition mail

New product barcode residue and unbarcoded residue are per the Off peak price structure.

Appendix B – Relevant legislative instruments

COMMONWEALTH OF AUSTRALIA

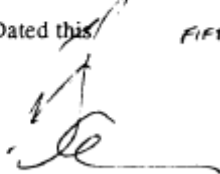
Prices Surveillance Act 1983

DECLARATION (NO. 75)

I, PETER BALDWIN, Minister of State for Higher Education and Employment Services, acting for and on behalf of the Treasurer, in pursuance of section 21 of the Prices Surveillance Act 1983, hereby:

- (1) revoke declaration No 53 of 18 April 1989 relating to the transmission of standard postal articles and registered publications by the Australian Postal Corporation published in the Commonwealth of Australia Gazette No. GN 16 of 3 May 1989; and
- (2) declare:
 - (a) the provision of letter services reserved to Australia Post under Division 2 of Part 3 of the *Australian Postal Corporation Act 1989*, and the carriage within Australia of registered publications, to be notified services for the purposes of the Act; and
 - (b) the Australian Postal Corporation to be, in relation to those services, a declared person for the purposes of the Act.

Dated this FIFTH day of FEBRUARY 1992.



Peter Baldwin
Minister of State for Higher Education and Employment Services
acting for and on behalf of the Treasurer

PRICES SURVEILLANCE ACT 1983


DIRECTION (NO 11)

I, SIMON FINDLAY CREAN, Minister of State for Science and Technology, acting for and on behalf of the Treasurer, in pursuance of section 20 of the Prices Surveillance Act 1983 hereby direct the Prices Surveillance Authority:

- (i) In exercising its powers and performing its functions under the Act in relation to prices charged by the Australian Postal Corporation (Australia Post) in respect of the transmission within Australia by ordinary post of standard postal articles and registered publications, to give special consideration to the following matters:
- Australia Post's obligation to pursue a financial policy in accordance with its corporate plans as set out in sections 35-41 of the Australian Postal Corporation Act 1989 and in particular the pricing targets and Government endorsed financial targets contained in Australia Post's corporate plan;
 - the functions and obligations of Australia Post as set out in sections 14-16 and 25-28 of the Australian Postal Corporation Act 1989 and to such directions or notifications given to Australia Post by the Minister for Transport and Communications under that Act as may from time to time be in force;
- (ii) To provide, where appropriate in confidence, advice to the Government on the appropriateness of pricing targets to be included in Australia Post's future corporate plans. Such advice should be given in the context of the financial targets contained in the corporate plan.

The matters set out in this direction are to replace those contained in the Treasurer's direction of 25 July 1984.

Dated this 19th day of September 1990.


Simon Crean
Minister of State for Science and Technology
Acting for and on behalf of the Treasurer

Appendix C – Capital price and quantity measures

The Meyrick and Associates study has disaggregated the capital stock into four asset categories: land, building, motor vehicles and plant and equipment. The capital stock of each type of assets is measured using declining balance method where the real capital stock for asset j in year t (S_{jt}) is calculated as follows:

$$S_{jt} = S_{jt-1}(1 - d_j) + (I_{jt} - R_{jt}) \quad (\text{C.1})$$

where d_j = economic depreciation rate on asset class j ;

I_{jt} = real investment in asset class j in year t ; and

R_{jt} = real retirements (sales) in asset class j in year t .

The declining balance method requires only a benchmark value for the capital stock S_{j0} , the depreciation rate d_j , the real investment series ($I_{jt} - R_{jt}$) during the period concerned.

S_{j0} :

The starting values of capital stock for 1990 are the same as those used in 2002 report. These estimates are drawn directly from the Swan Consultants work.³⁴¹ Using the Perpetual Inventory Method (PIM), Swan Consultants derived these point estimates for 1990 from benchmark capital stock estimated by the Bradley Committee for the values of capital employed by Australia Post at the year-end of 1982.³⁴² Note that the Bradley Committee was cautious about the appropriate valuation of some of Australia Post's land and buildings due to the lack of information.

Sensitivity analysis on the capital stock measure can be conducted if more up-to-date estimates of capital stock employed by Australia Post are available. Australia Post is required to comply with financial valuation and reporting guidelines issued by the Department of Finance and Administration. In particular, these guidelines require Australia Post to value fixed assets initially at the cost of acquisition, but then re-value them every three years 'in accordance with the deprival method of valuation'.³⁴³ However, the three-year cycles mean none of these asset values at a point of time can fully reflect the true value of all assets employed by Australia Post.

$I_{jt} - R_{jt}$:

³⁴¹ Swan Consultants, 'Performance Measures for Australia Post: 1975–76 to 1990–91', in Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Measuring the Total Factor Productivity of Government Trading Enterprises*, Canberra, 1992, p. 115.

³⁴² Committee of Inquiry into the Monopoly Position of the Australian Postal Commission (AE Bradley, Chairman), *Parliamentary Paper No. 275/1982*, AGPS, Canberra, 1982.

³⁴³ The deprival value calculates the monetary value of an asset based on its cash flows.

The 2007 Meyrick and Associates report derives the real yearly net investment (investment minus asset retirements) in an asset from deflating the current price series by the corresponding implicit price deflator for net capital stock of this asset published in the National Accounts.³⁴⁴ These capital price indexes are measured for all of the industries rather than for postal services exclusively.

Questions are raised by Meyrick and Associates concerning the appropriateness of these price series as proxies for pricing Australia Post assets. Meyrick and Associates consider that it is more appropriate to use the series for all industries rather than the Communications sector because the latter is dominated by the telecommunications industry where the price of its computerised equipment is falling over time. Meyrick and Associates believe that the composition of Australia Post's capital stock and investment is more similar to the aggregate of all industries rather than the telecommunications dominated Communications sector.

d_j :

A constant depreciation rate over time is assumed for each type of asset. The depreciation rates chosen for the Meyrick and Associates 2007 report are 6 per cent for buildings, 14 per cent for motor vehicles and 15 per cent for plant and equipment, which is considerably higher than those used in the 2002 study (4, 10 and 5 per cent for each respective asset). Meyrick and Associates claim that the revised higher values reflect the true actual asset lives for key capital components.

An examination of asset data submitted by Australia Post shows that the average depreciation rate applied to each class of asset is measured as the weighted sum of accounting depreciation rates for individual sub-class assets, weighted by their relative share of total costs. Note that Australia Post normally uses the straight-line method for accounting depreciation, i.e., assets are depreciated over their estimated useful lives by a constant amount instead of a declining amount. Under this method, the depreciation rate is calculated as the inverse of the expected years of asset lives.

Table C.1 documents the accounting depreciation rates applied to each class of asset by Australia Post.

³⁴⁴ Australian Bureau of Statistics, *National Accounts 2006–07*, catalogue no. 5204.0, Tables 88 and 89, 2007. The implicit price deflator for each type of asset is calculated as the value of net capital stock for this asset at current price divided by its value at chain volume.

Table C.1: Depreciation rates by asset class³⁴⁵

Asset / Year	2006–07	1997–98
Buildings – GPOs	70 years	70 years
Buildings – other facilities	40 – 50 years	40 – 50 years
Leasehold improvements	Lower of lease term and 10 years	Lower of lease term and 10 years
Motor Vehicles	3 – 7 years	
Specialised plant and equipment	10 – 20 years	10 – 20 years
Other plant and equipment	3 – 10 years	4 – 8 years

Problems arise in converting the asset lives in years into comparable depreciation rates used in the declining balance method. In the declining balance method, a constant depreciation rate is applied to the declining balance of a depreciated asset. Consider an asset with expected useful life of T_i years, under the declining balance method, it will not be depreciated to zero (or in some cases a pre-determined scrap value) at the straight-line depreciation rate. Instead, the remaining value at T_i is:

$$S_{it} = S_{i0} \cdot (1 - 1/T_i)^t . \quad (C.2)$$

Table C.2 presents a numeric example for comparing the straight-line method with the declining balance depreciation method. It shows the standardised value of a new asset bought in year 0 over the next 10 years, assuming an annual 10 per cent depreciation rate. Note that the asset will depreciate to zero value at the end of year 10 under the straight-line depreciation method. In contrast, the asset will depreciate to 35 per cent of its original value in 10 years and to zero value in infinite time.

³⁴⁵ Australia Post, *Annual report 2006/07*, p. 71; Australia Post, *Annual report 1997/98*, p. 53.

Table C.2: Alternative depreciation methods

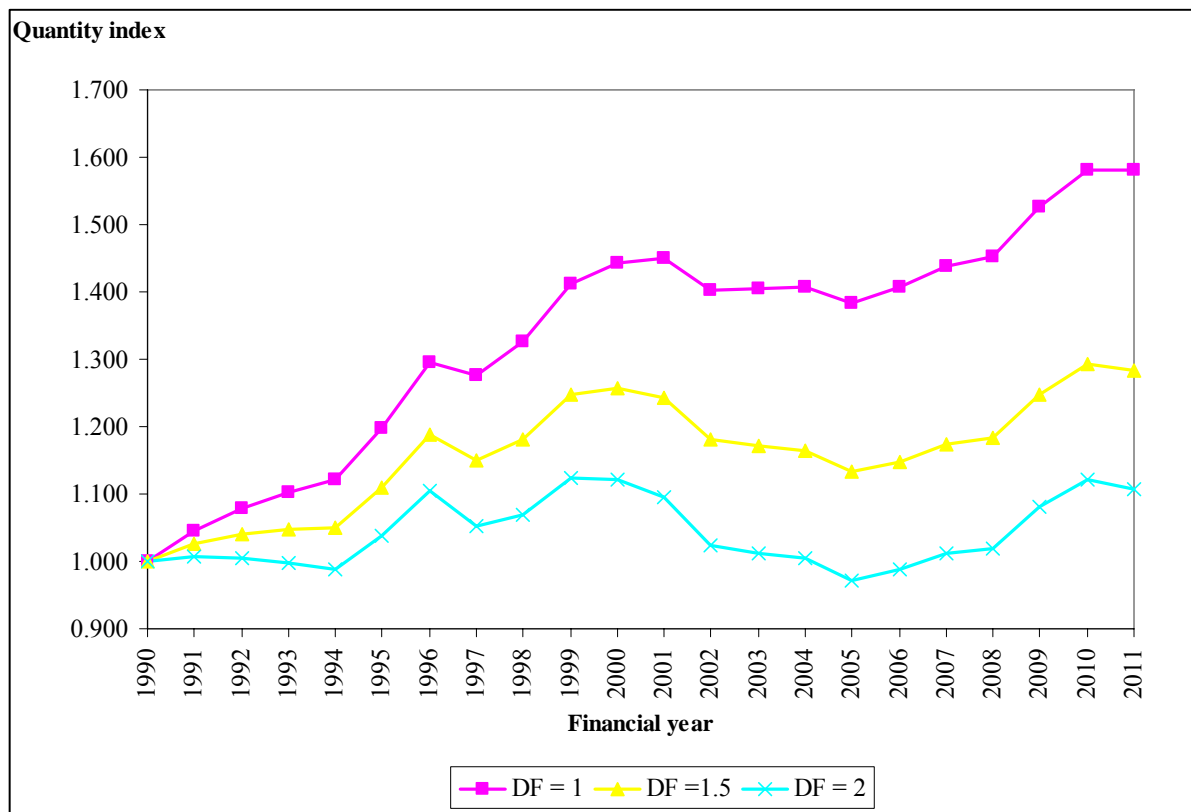
• Method / Year	• 0	• 1	• 2	• 3	• 4	• 5	• 6	• 7	• 8	• 9	• 10
• Straight-line depreciation	• 1 • 0 • 0	• 0 • 9 • 0	• 0 • 8 • 0	• 0 • 7 • 0	• 0 • 6 • 0	• 0 • 5 • 0	• 0 • 4 • 0	• 0 • 3 • 0	• 0 • 2 • 0	• 0 • 1 • 0	• 0
• Declining balance depreciation	• 1 • 0 • 0	• 0 • 9 • 0	• 0 • 8 • 1	• 0 • 7 • 3	• 0 • 6 • 6	• 0 • 5 • 9	• 0 • 5 • 3	• 0 • 4 • 8	• 0 • 4 • 3	• 0 • 3 • 9	• 0 • 3 • 5

If the straight-line depreciation rate derived from the accounting book is correct, then its direct application to declining balance method results in an under-estimation of geometric depreciation rate and therefore an over-estimation of capital growth. The solution is to apply a declining balance factor in order to accelerate the depreciation under the declining balance method. Commonly accepted depreciation factors include 2 in double declining balance method. Alternatively, we can derive comparable depreciation rates for the declining balance method that will deliver the same present value of future depreciations as that under the straight-line method. Note that this method requires a subjective discount rate.³⁴⁶

In evaluating Australia Post's price notification, a sensitivity analysis has been conducted to examine the robustness of TFP estimates to alternative depreciation factors. The Meyrick and Associates capital stock measure assumes depreciation factor of one. We will explore whether there is a material impact of using alternative depreciation factors: 1.5 and 2.

³⁴⁶ Industry Commission, *Measuring the Performance of Selected Government Business Enterprises*, Information Paper, Canberra, August 1990.

Figure C.1: Capital quantity indexes under alternative depreciation factors



As shown in Figure C.1, accelerating depreciation rates by a deflating factor of 1.5 will lower capital growth by half while a deflating factor of 2 will almost remove all capital growth.

Aggregating capital stock of individual asset classes

A capital quantity index is then formed from four respective capital stock series for land, building, motor vehicles, plant and equipment, using the Fisher ideal index. It uses current price stock values weights associated with each type of asset in forming aggregate capital input index.

Capital price measure

The cost of capital can be measured under two alternative approaches:

- *ex ante*/shadow price approach that accounts for the cost of depreciation, the opportunity cost of the funds tied up in the asset and the rate of capital gains/losses on the asset. It is a hypothetical price of capital that will prevail in a competitive rental market. A problem with this approach is the systematic divergence between the expected and actual rate of return.³⁴⁷

³⁴⁷ G L Cava, 'Financial Constraints, the User Cost of Capital and Corporate Investment in Australia', *Reserve Bank of Australia Research Discussion Paper 2005-12*, 2005. The paper contains a discussion on the measures of capital stock and user cost of capital.

Swan consultants have used a relatively sophisticated user cost formula that took account of interactions between the inflation rate, the depreciation rate and the opportunity cost rate.³⁴⁸

The Industry Commission has used a simpler formula to measure the user cost of capital.³⁴⁹ It is the sum of depreciation rate and the real opportunity cost of holding capital. The latter is the nominal opportunity cost of holding capital net of the rate of inflation. For public enterprises, the 10-year Government bond rate is used as a proxy for the nominal opportunity cost of funds employed.

- *ex post* approach that measures capital price as residual revenue divided by the amount of capital stock.

Diewert points out that this approach has the advantage of equalising the value of outputs with the value of inputs in a consistent accounting framework.³⁵⁰ US Federal Communications Commission (FCC) recommends the adoption of this approach.³⁵¹ The FCC believes that this method measures the actual flow of funds to capital and therefore accurately estimates the contribution of capital to the production of output.

However, the *ex post* rates of return tend to be very volatile and in some cases, are negative. If the purpose is to compute user costs that approximate user costs for capital facing firms at the beginning of a year, then it may not be appropriate to use an *ex post* return that are realised at the end of the year. In addition, as a residual revenue measure, it is subject to measurement errors from deriving labour, contractor and other costs.

³⁴⁸ Swan Consultants, 'Performance Measures for Australia Post: 1975–76 to 1990–91', in Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Measuring the Total Factor Productivity of Government Trading Enterprises*, Canberra, 1992, p. 115.

³⁴⁹ Industry Commission, *Measuring the Performance of Selected Government Business Enterprises*, Information Paper, Canberra, August 1990.

³⁵⁰ W E Diewert, 'The Measurement of Capital', *Applied Economics*, Lecture taught at the University of British Columbia, Vancouver, June 13, 2006.

³⁵¹ Federal Communications Commission, *Price Cap Performance Review for Local Exchange Carriers and Access Charge Reform*, CC Dockets No. 97–159, Washington DC, 1997.