FIXED LINE PRICING PRINCIPLES - DOCUMENTATION FOR INDEXED HISTORIC COST CALCULATION

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TABLE OF CONTENTS

1. INTRODUCTION

The ACCC has proposed a new pricing model for the pricing of Telstra's wholesale fixed line services. That model involves valuing Telstra's assets as at 30 June 2009 (the initial asset base), and recovering that initial base over the remaining lives of the relevant assets through depreciation and cost of capital payments.

The initial asset base can be valued at depreciated indexed historic cost. This report documents the methodology for calculating Telstra's indexed historic costs for assets used to supply wholesale fixed services as at 30 June 2009.

2. THE RELEVANT ACCOUNTING SYSTEMS

The ACCC proposes a new accounting system from 1 July 2009, which is different to the accounting system employed by Telstra to 30 June 2009.

2.1. TELSTRA'S HISTORIC COST ACCOUNTING SYSTEM

The accounting system employed by Telstra to 30 June 2009 (and beyond) is a historic cost accounting (HCA) system. Under the HCA system the balance sheet for a single asset is generally constructed in the following way:

$$OBV(t+1) = OBV(t) - D(t)$$

Where:

- $OBV(t)$ is the nominal opening book value of assets at time t;
- $D(t) = OBV(0)/L$;
- $OBV(0)$ is the initial cost of the asset; and
- L is the asset's life.

On the P&L side, annual costs are calculated as follows:

$$AC(t) = E(t) + D(t)$$

Where:

- $AC(t)$ is the annual cost at time t; and,
- $E(t)$ is the expense at time t.

2.2. THE ACCC'S INFLATION ACCOUNTING SYSTEM

The ACCC has proposed an alternative accounting system based on inflation accounting (IA). Under the ACCC's IA system, the initial asset base is valued in current dollars as at 30 June 2009. Under this system, the balance sheet for a single asset after 30 June 2009 is constructed as follows:

$$OBV(t+1) = OBV(t) \times (1+i) - IAD(t)$$

Where:

- i is the rate of inflation;
- $IAD(t) = [OBV(30/6/09) / RL] \times (1+i)^s$, is the nominal amount of depreciation at time t under the ACCC's IA system;[1]
- RL is the remaining life of assets as at 30 June 2009; and,
- s is the number of periods for which inflation is applied, after 30 June 2009 until t.

On the P&L side, annual costs are calculated as follows:

$$AC(t) = E(t) + IAD(t)$$

One major difference between the ACCC's IA system and the HCA system is the amount of depreciation that is booked each year in the P&L.

2.3. INDEXED HISTORIC COST SYSTEM

The calculation of an indexed historic cost valuation of assets as at 30 June 2009 must satisfy the following constraints.

First, inflation must be accounted for, as this is the basis for indexed historic cost.

Second, in calculating the indexed historic cost of the relevant assets as at 30 June 2009, it is important to refrain from retrospectively adjusting Telstra's P&Ls for years prior to 30 June 2009. As discussed above, Telstra's P&Ls under the HCA system were calculated on the basis of the depreciation booked under that system in each year, D(t). However, if it were assumed that the ACCC's IA system were applied prior to 30 June 2009, then depreciation booked under that system would have been IAD(t). The difference between D(t) and IAD(t) is large when inflation is high and when assets are older.

To account for inflation without retrospective adjustment of the P&L, inflation must be capitalised in the balance sheet, rather than expensed in the P&L which is what happens with the ACCC's IA system. The calculation of the opening asset base prior to 30 June 2009 that respects both these constraints is calculated as follows:

$$OBV(t+1) = OBV(t) - D(t) + OBV(t) \times i$$

On the P&L side, annual costs would be calculated consistent with the HCA system as follows:

$$AC(t) = E(t) + D(t)$$

3. CALCULATING INDEXED HISTORIC COST

The calculation of the indexed historic cost is undertaken using the formula for OBV(t) in section 2.3. One change is that capex, C(t), is also added into that formula so that it becomes:

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[1] If this accounting system was used over the entire life of an asset, then IAD(t) would equal D(t) $\times (1+i)^t$, which is the depreciation under the HCA system multiplied by the inflation factor.

$$OBV(t+1) = OBV(t) + C(t) - D(t) + [OBV(t) + C(t)] \times i$$

The following describes the contents of the excel spreadsheet in which the calculations of indexed historic costs are performed.

3.1. THE INPUT WORKSHEET

Telstra's financial asset register records Telstra's historic cost and accumulated depreciation of assets that have not been fully depreciated from its accounts. As at 30 June 2009, the asset register records only assets that have a remaining value at that time (referred to as "30 June 2009 assets"). It also groups the written down value, historic cost and accumulated depreciation of assets into the financial year in which they were purchased (that is, their vintage). For example, the historic cost of 30 June 2009 assets purchased in 1901 was [c-i-c] ▬▬▬▬ [c-i-c]. The written down value is also [c-i-c] ▬▬▬▬ [c-i-c], since the asset is land, which is not depreciated.

3.2. CAN, IEN AND NETWORK SUPPORT WORKSHEETS

These three worksheets implement the formula above for three sets of assets: CAN assets, IEN assets and Network Support assets, which include land, buildings, power and support assets. All three worksheets have a separate table to calculate each component of the formula above as set out below.

3.2.1. OPENING ASSET VALUE (30 JUNE 2009 ASSETS)

This corresponds to OBV(t) in the formula above. It is set equal to the closing book value at t-1 for all years except the year prior to the first vintage of 30 June 2009 assets, when it is set to zero.

3.2.2. CAPEX (30 JUNE 2009 ASSETS)

This corresponds to C(t) in the formula above. It is set equal to the historic cost of vintage t, which is sourced from the Input worksheet.

3.2.3. DEPRECIATION (30 JUNE 2009 ASSETS)

This corresponds to D(t) in the formula above. To determine depreciation in each year, the accumulated depreciation for each vintage, sourced from the input worksheet, is averaged over the age of that vintage. For example, if the accumulated depreciation of the vintage of 30 June 2009 assets that was purchased on 30 June 2003 was $6, then the depreciation in each year from 2003 to 2009 is assumed to be $1 ($6/6 years).

3.2.4. INFLATION (30 JUNE 2009 ASSETS)

This corresponds to [OBV(t) + C(t)] x i in the formula above. Inflation for any year is calculated by applying the CPI to the opening value of the asset base and capital expenditure in the same year. The CPI that Telstra uses is a weighted average CPI for all capital cities published by the Australian Bureau of Statistics.

Telstra's financial asset register records some asset vintages and categories at a re-valued amount. In particular:

(a) pre-1975 communications plant was revalued in 1975; and

(b) some pre-1991/92 land and building assets were revalued in 1991/92.

The historic cost value for these assets categories are in currency as at the date of revaluation, not the date of acquisition. To account for this, the effect of inflation on these assets is only counted after the date of revaluation.

3.2.5. CLOSING ASSET VALUE (30 JUNE 2009 ASSETS)

This corresponds to OBV(t+1) in the formula above and is calculated as such.

3.3. SUMMARY WORKSHEET

The summary worksheet identifies the closing asset values for vintages of assets prior to a specific date. The columns tilted "Asset Value (pre-30/6/09 vintages)" provides the indexed historic cost for 30 June 2009 assets.

There are also inputs for the WACC and the date at which inflation is set to begin for the relevant assets.