What form of regulation would be most appropriate ?

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## Commission Questions

- What are the relevant merits of a cost based pricing principle as compared to a retail benchmarking pricing principle?
- What adjustments could be made to the current retail benchmarking pricing principle?
- What would be the efficiency consequences of adopting a cost-based pricing methodology?
- To what extent should the Commission be concerned about the degree of fixed-to-mobile "pass through"?
- How might public disclosure of wholesale termination rates by mobile carriers alleviate concerns regarding fixed-to-mobile pass through?


## Dealing with some conceptions

- My focus will exclusively be on the pricing of fixed-to-mobile calls.
- Mobile-to-mobile does not seem to be an issue as the traffic balance results in similar payments, and it is not an alternative for F2M termination (the interconnect pricing is based on $A$ and $B$ party number analysis, not the identity of the originating party)
- (small carve out for SIM diallers)
- Three questions to address
- Is pass through an issue?
- What is happening in consumer and business markets?
- What is the market size of F2M?


## Pass through

F2M Rates and Termination Rates (indexed to 2001)


Average F2M rates have declined, but not as fast as termination rates.

## Differentiation

AAPT F2M rates comparing Bus and Res


Rates in the residential market have been increasing while rates in the business market have been decreasing

## Market size

- At the Melbourne meeting it was suggested the total mobile termination market was less than $\$ 750 \mathrm{M}$
- The total number of minutes can be estimated

| Total Minutes (M) |  | Share |
| :--- | :--- | :--- |
| Telstra | 3944 | $70 \%$ |
| Optus | 845 | $15 \%$ |
| AAPT | 451 | $8 \%$ |
| Primus et al | 394 | $7 \%$ |
| Total | 5634 | $100 \%$ |

- This number of F2M minutes results in a termination market (including internal transfers) as follows:

Rate/min Market size (\$M)
0.251409
$0.2 \quad 1127$
$0.15 \quad 845$
$0.12 \quad 676$

## Retail benchmarking (mobile)

- If there is any merit to the argument that above cost mobile termination prices are justified because of a Ramsey pricing approach, this means that any attempt to reduce termination rates will result in an increase in retail mobile service rates (assuming there aren't economic profits to be confiscated).
- Therefore, the retail benchmarking approach would result in a price oscillation, the initially declining mobile retail price reduces termination rates, compensating mobile operators increase mobile retail rates, so they are then able to increase termination rates and decrease retail rates.
- In the presence of continuing overall cost reductions this would result in a saw tooth of price declines.


## Cost based

- Generally allocative efficiency is enhanced if prices are cost based. This is because it signals to the consumer accurately the resources used in their choice.
- The appropriate cost is probably marginal cost. TSLRIC (or TSLRIC +) is an appropriate method for determining a competitive equivalent cost.
- However, any version of cost based alone is likely to fail to be equitably passed through. The integrated operator has an incentive to capture network externalities, and give all the benefits of declining termination to customers who can bring mobiles to their network.
- Building the cost model is not as hard as PSTN.
- Therefore, while efficient, cost based alone is insufficient to deal with the market failure.


## Retail based (Fixed-to-mobile or M2M)

- Given the existence of significant incentives to inefficiently pricediscriminate there are three potential retail price indexes that could be used to set a ceiling on termination rates
- Half lowest mobile-to-mobile rate for unlimited or significant usage
- Implied termination rate for direct connected customers
- Internal transfer price of termination (constructed as the gap between on-net and off-net F2M deducted from mobile termination out payments)
- This simultaneously creates a link between termination rates and F2M rates.


## Efficiency consequences of cost based pricing principle

- The first concern to address is the suggestion that under-investment would occur, or that mobile take up rates would be slowed.
- First point is that no-one can quantify the elasticity in the F2M market to know exactly how much cost shifting needs to occur.
- That is, the extent to which lower mobile termination results in higher mobile retail rates and therefore lower mobile market growth is unknown.
- Second point is that this underestimates the dynamic efficiency costs of having fixed line customers subsidise fixed to mobile substitution.
- This is a consequence of the observation by King and Gans that mobile is now a substitute for fixed, not a complement.


## What concern should be had about "pass-through"

- It has been suggested the F2M market is not effectively competitive, and that as a consequence there might be issues with "pass-through"
- The extent to which the F2M market is not effectively competitive is the extent to which integrated firms bundle or attempt to capture network externalities by having differential on-net and off-net prices
- If the Commission deals with bundling and on-net pricing it deals with pass-through
- Then a move to greater cost based pricing is efficient


## Recommendation

- First establish mobile termination ceilings using any of the methodologies described
- Second consider whether any other constraints on retail F2M pricing in integrated firms is required
- Third invest in a TSLRIC cost model to establish a floor for termination prices
- Fourth implement an efficiency incentive price cap on mobile termination (CPI-TFP)
- Fifth review regularly

