



JOINT STANDING COMMITTEE ON THE NATIONAL BROADBAND NETWORK

The utility pricing approach discussed in my testimony and published work puts forward a very simple two-part wholesale pricing structure: a fixed fee plus a traffic fee (cents/GB).

At the wholesale level, the NBN's customers are ISPs (i.e. the NBN does not bill end users). The ISPs at the retail level, could choose to charge end users a corresponding traffic fee (as other utilities, such as gas/water and electricity, do) or a fixed fee which includes a monthly data cap. In 2008 there were no unlimited data plans in Australia. There are now but the cost of data is factored into the fixed fee – see last year's price review attached.

At the retail level, mobile operators do not charge a premium for speed; as the NBN has tried to do. Most mobile retail plans include unlimited national voice calls and text and include at least 1GB pm of data.

Singtel's CEO Consumer Yuen Kuan Moon arguing for a form of congestion pricing, albeit in relation to mobile (Tony Chan (2012), "Singtel offers 4G with tiered pricing", *Comms Day*, 6 June: p. 5):

We need to break away from the traditional one-size-fits-all approach, which is not sustainable in the long term. Today 64% of mobile data on our network is consumed by 10 % of our subscribers. This prevents 90 % from enjoying the full benefits of the network. With our tiered pricing models, subscribers will pay for what they use, and this ultimately allows us to keep prices for our plans the same over time despite rising network cost.

Singtel still has tiered pricing. For example, its Combo 3 plan includes 3GB for S\$68.80 pm while its Combo 6 plan offers 6Gb for S\$95.90; both include unlimited calls and SMS. <https://www.singtel.com/personal/products-services/mobile/postpaid-plans#postpaid> plan carousel2

I mentioned that Canada very nearly adopted the utility pricing which the cable companies and Bell (telephone) companies wanted.

In 2000 the cable companies were granted permission to charge wholesale per GB fees provided that they also charged their retail customers the same way. When the Bell Companies tried to follow, the CRTC launched an inquiry. <http://www.crtc.gc.ca/eng/archive/2011/2011-703.htm>

The CRTC noted that all parties supported a two-part tariff - the issue was how usage should be charged: usage based versus capacity based models.

The Bell Companies wanted to apply aggregated volume pricing (AVP) to the FFTN based on total traffic generated by an ISP's customers in a month. This is what I have been proposing.

The cable companies supported a similar approach but the smaller operators represented by the Canadian Network Operators Consortium (CANOC) objected on the basis that peak network capacity drives network investment decisions whereas a volume based model would charge for both peak and off-peak traffic.

One of CANOC's members, MTS Allstream, proposed a capacity model which is very close to the CVC approach used by the NBN. MTS initially proposed to sell capacity at 100, 400 and 1,000 Mbps but the CRTC amended this to 100 Mbps increments - as NBN Co. does now.

Unfortunately, the CRTC decided that there are two acceptable ways for large telephone and cable companies to charge independent service providers for the use of their networks: the flat-rate model, and the capacity-based model.

So, the NBN could still set world's best practice for the wholesale pricing of fixed access if it adopts the utility approach to pricing.

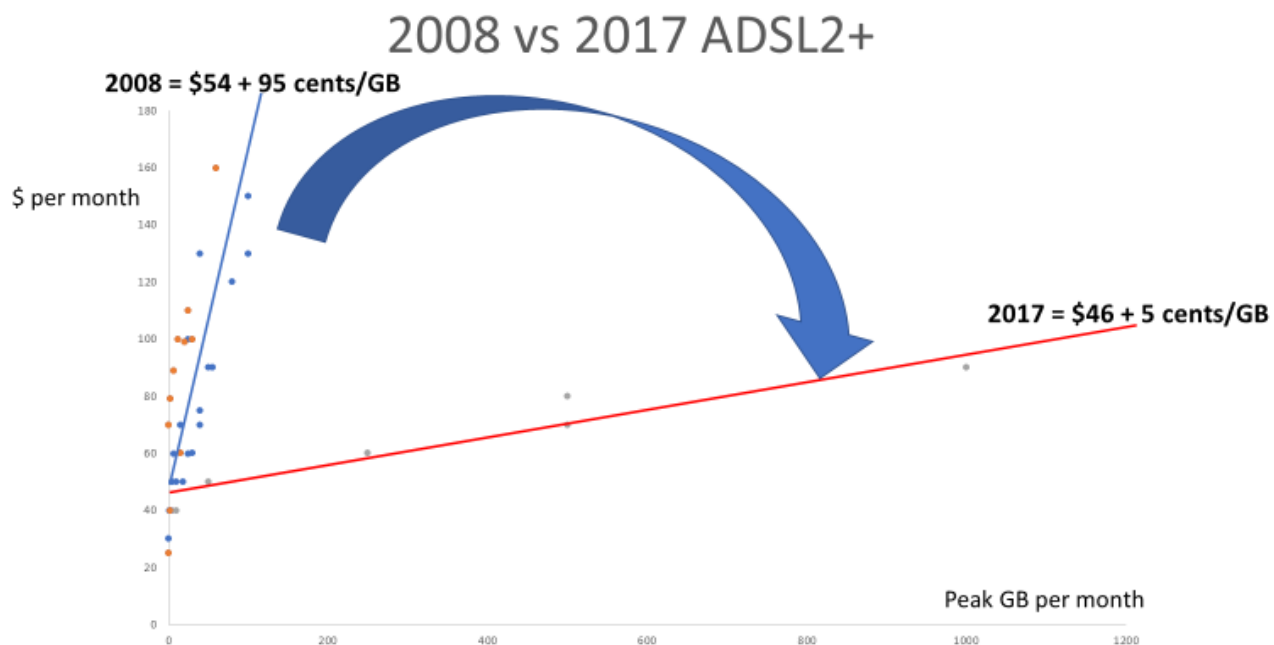
John de Ridder

2017 review of broadband pricing

Present trends will not address the major issues

This is my tenth annual review of the retail broadband market in Australia. It is interesting to observe how the market has evolved since 2008 and to speculate where it could go next.

In 2008 there were no unlimited plans and the maximum peak monthly download was 100 GB (TPG and Internode). Each of the top ISPs (BigPond, Optus, TPG, Internode and iinet) offered several plans with different data caps. Plotting these on a scattergram and estimating a best-fit (regression) describes the retail broadband pricing market.



In 2008, the best-fit plan cost \$54 per month for access plus 95 cents per GB for usage. The mean download then was around 5GB so the predicted cost of a 7GB plan is \$61. The actual cost of this plan with iinet and Optus was \$60 and \$89 respectively.

Excluding unlimited plans (discussed later), the best fit price line for 2017 for the same ISPs has pivoted down to make the best-fit retail ADSL2+ plan cost \$46 plus just 5 cents/GB. Unlike 2008, there are no challenger brands for ADSL2+ as pricing for capped plans by Belong (Telstra's fighting brand), Exetel and Aussie Brand is almost the same (i.e. including them would make the best-fit line \$46 plus 4 cents/GB).

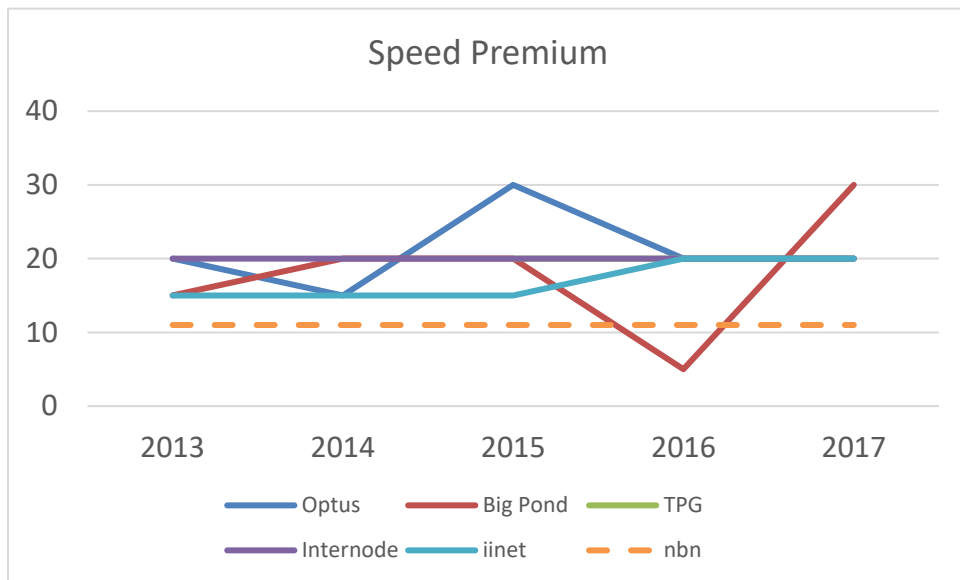
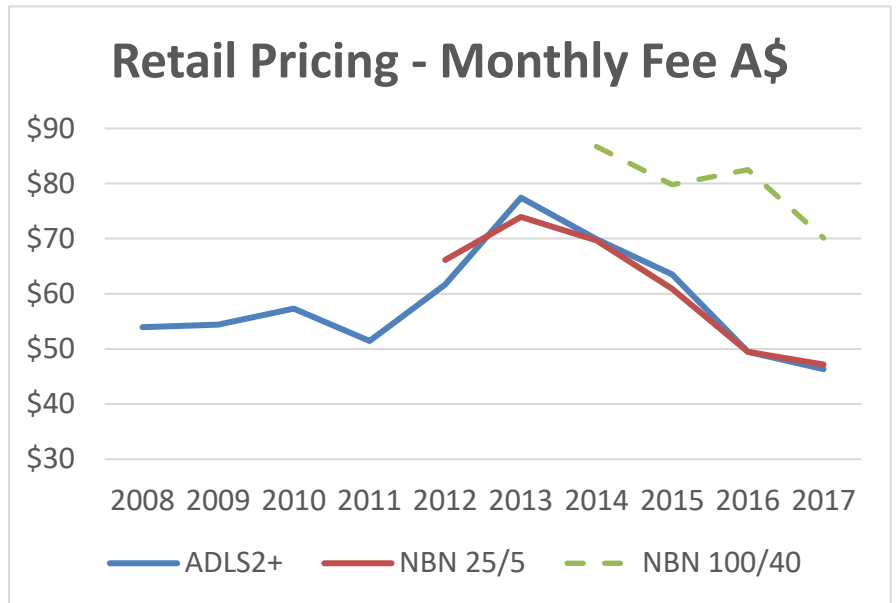
The second and fourth charts show the how the best fit line has moved by year for ADSL2+ as well as NBN 25/5 and NBN 100/40.

When the NBN became available, the annual price survey considered ADSL2+ and NBN 25/5 to be comparable. The NBN priced 25/5 that way to facilitate migration and that is also what happened in the retail market.

The second chart shows that the access components of monthly charges for ADSL2+ and NBN 25/5 have tracked each other down closely over recent years. The dotted line shows NBN 100/40.

The retail premium for NBN 100/40 over NBN 25/5 varies from \$17 to \$33 over time versus \$11 at the

wholesale level. The third chart shows how this premium has varied over time for the major ISPs.

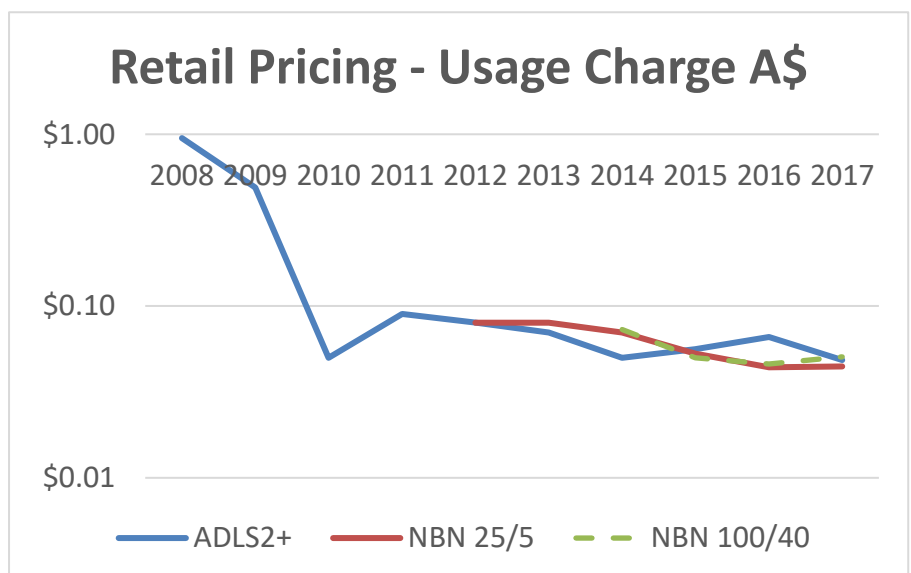


Big Pond went as low as \$5 last year (when the others were at \$20) and is now \$30 (as with Vodafone's new NBN plans). Is that because Telstra did not want to leave money on the table (people are prepared to pay \$20 or more) or because it did not want customers on 100 Mbps?

Affordable entry level plans are getting scarce. Although the typical plan in 2008 was

\$54 + \$1/GB, Optus offered 0.4GB for \$24.99 (the cheapest then). Today, the Optus plan at NBN 25/5 is \$80 for unlimited data (and \$60 for NBN 12/1 with unlimited data) and the cheapest NBN 25/5 among our top ISPs is \$60 from Internode giving 100GB.

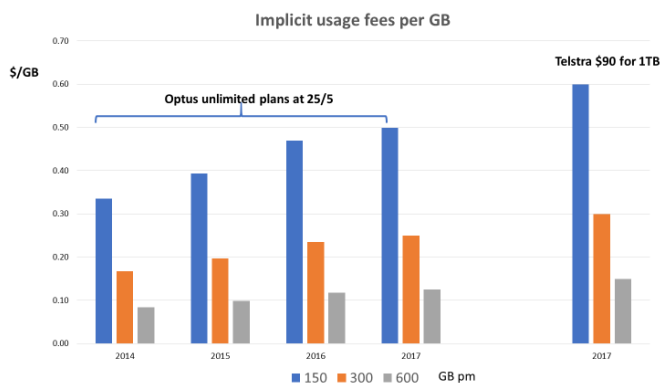
The fourth chart below shows that the usage fee component of the best fit line fell sharply between 2008 and 2010 and now stands at about 5 cents per GB. This reflects more generous data allowances. In 2008 the



largest peak data cap was 100GB (Internode for \$150 per month). The first TB (1,000GB) plans were made available in 2010 (TPG and Internode at \$80 and \$120 respectively). 2014 saw the first unlimited plans among our top ISPs (Optus and TPG for both ADSL2+ and the NBN). This year and last year, Big Pond was the only one of our major ISPs not to offer unlimited plans – which is neither [dumb nor stupid](#).

Unlimited data plans cannot be shown on the scattergram of retail broadband plans. But we can draw inferences about the implicit cost of data. And, we can also see if they have become more generous over time – apparently not in the case of Optus (fifth chart).

The inference about the implicit cost of data in unlimited retail broadband plans is made by deducting the best fit access fee (estimated from capped plans) from the advertised plan fee for an unlimited plan and dividing the remainder by an assumed usage to get the implicit cents per GB.



Optus was one of the first to offer unlimited data plans. The fifth chart shows how the implicit usage fee has moved over time (upwards) for different assumed levels of use ranging from 150GB to 600GB per month.

Obviously, if you buy a 1,000GB capped plan but use only 150GB, the effective cost per GB (plan price divided by usage) is going to be higher – higher than for the Optus unlimited plan in the case of Telstra which is shown on the same slide.

In my view, the major issues with retail broadband prices stem from current NBN pricing. They are:

- The lack of affordable entry-level prices
- The poor take-up of high speed (over 85% on 25Mbps or less)
- The increasing pressure on ISP margins due to CVC pricing (leading to under-provisioning)
- The growing threat (to the NBN) of increasingly competitive mobile broadband

The genesis of the pricing survey was the development of a wholesale pricing for broadband. This anticipated bestowing fast speeds (no AVC tiers, like mobiles) and cents/GB usage pricing (not CVCs) The wholesale plan would sit parallel (same usage fee as in retail market) and below the best fit retail broadband price line. This can be tweaked to offer entry level pricing and also to charge a premium for over 100 Mbps.

Over the next three years the bulk of migration to the NBN will take place. There is a sense that the experience of the NBN is not much different - or worse (some ISPs are, as Bill Morrow has observed, are even pushing NBN 12/1 to improve their [margins](#)) – than what was previously available. It does not have to be like that.

John de Ridder