Market Clarity

Australia's Source for Telecommunications Intelligence

The Cost of Mobility
Comparing the Value of Fixed and Mobile Broadband

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1 Background

While debate rages over whether emerging wireless services can challenge the speed offered by the National Broadband Network, both politicians and advocates on both sides have overlooked the growing price gap between fixed and mobile broadband.

An analysis conducted in March 2011 by Market Clarity finds that on a per-Gigabyte downloaded basis, mobile Internet access remains far more expensive than fixed broadband. The introduction of very high allowance fixed broadband services, up to a Terabyte per month, during 2010 has served to widen that gap.

Based on the current tariffs from Telstra, Optus, Vodafone and Hutchison Three (VHA still operates two brands), Market Clarity's analysis has found that on a per GB basis, mobile broadband can be as much as 1,333 times more expensive than fixed broadband (when comparing the lowest price per GB available for fixed broadband plans with the highest price per GB charged for mobile broadband plans).

2 Mobile Broadband Cost per Gigabyte

It's perhaps not surprising that mobility comes with a cost premium when compared to a fixed broadband service, but it may be a bit of a shock to see just how expensive it is (in terms of value for money) to use non-contracted mobile broadband services.

Table 1. — Mobile Broadband Cost per GB (March 2011)

Broadband Price Per GB	Minimum Price per GB	Median Price per GB	Maximum Price per GB
Post-Paid Mobile BB (contract terms of 12- to 24-months)	$1.66	$5.27	$24.88
Pre-Paid Mobile BB (no contract)	$9.67	$16.67	$80.00
Multiplier Pre-Paid Mobile BB Price vs. Post-Paid Mobile BB Price	5.8	3.2	3.2

As Table 1 shows, pre-paid mobile broadband customers pay much higher rates than users of post-paid mobile broadband services. Even at the median price across all Telstra, Optus, Vodafone and Three plans, the pre-paid customer is paying more than three times as much per GB as the post-paid customer.

At the benchmark date, the best per GB post-paid mobile broadband deal available was from Optus, which offers 8 GB peak and 16 GB of off-peak downloads (an aggregate of 24 GB) for $39.95 per month. This provides an

effective per GB price of $1.66. By contrast, the lowest price per GB pre-paid mobile broadband deal available was from Vodafone, which offers a 3 GB plan for $29.00 per month, providing an effective per GB price of $9.67.

However, the gap between pre- and post-paid mobile is trivial when compared to the gap between fixed and mobile broadband. In particular, the cheapest mobile broadband Gigabyte compared to the cheapest fixed broadband Gigabyte, shows a considerable gap.

As can be seen in Table 2 and Figure 1, the per GB prices offered by major providers for fixed broadband services are substantially cheaper than their mobile counterparts.

Table 2. — Fixed and Mobile Broadband Cost per GB (March 2011)

Broadband Price Per GB	Minimum Price per GB	Median Price per GB	Maximum Price per GB
Post-Paid Mobile BB	$1.66	$5.27	$24.88
Pre-Paid Mobile BB	$9.67	$16.67	$80.00
Fixed BB (ADSL, HFC)	$0.06	$0.30	$9.98
Multiplier Post-Paid Mobile BB Price vs. Fixed BB Price	27.7	17.4	2.5
Multiplier Pre-Paid Mobile BB Price vs. Fixed BB Price	161.1	55.1	8.0
Multiplier Maximum Pre-Paid Mobile BB Price vs. Minimum Fixed BB Price	1,333.6		

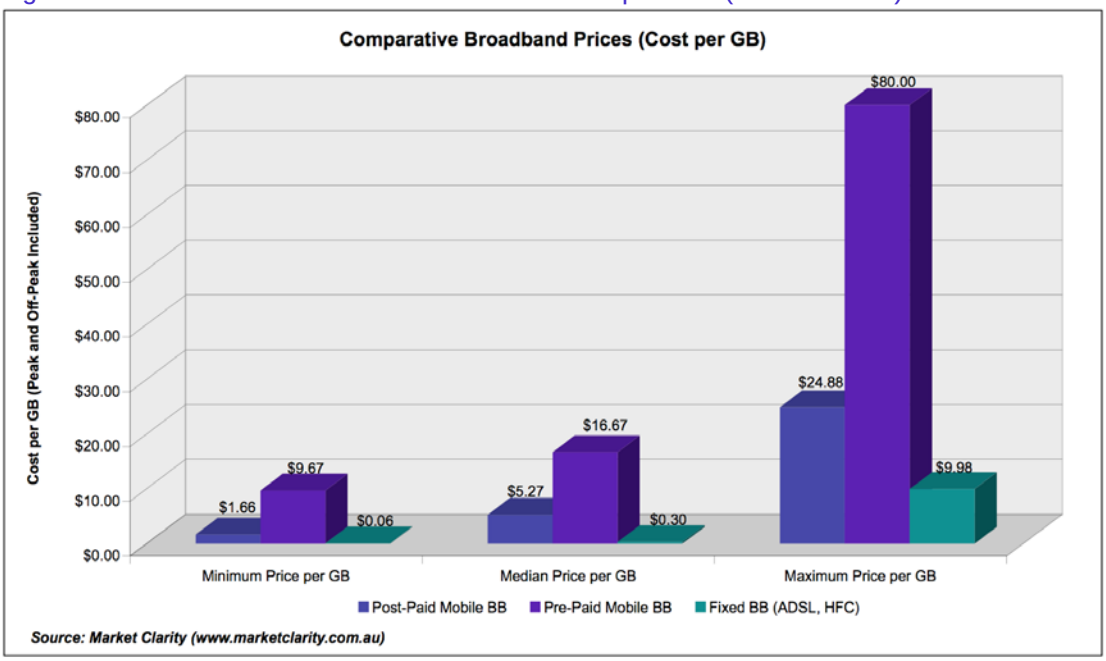
Table 2 illustrates that both pre- and post-paid mobile broadband plans are significantly more expensive per GB than fixed broadband.

Notes:

1. Market Clarity's analysis of mobile broadband plans was limited to only those plans that were offered on a stand-alone basis. Specifically, mobile broadband data packages offered as an add-on to a mobile phone plan were excluded from this analysis.

2. Similarly, the fixed broadband plans considered for this analysis were only those plans that were offered on an unbundled basis. In other words, broadband bundles were excluded from this comparative analysis.

Figure 1. — Fixed and Mobile Broadband Cost per GB (March 2011)



The lowest per GB price offered by a major provider for a fixed broadband service comes from TPG, whose $59.99 service offers unlimited downloads. If we assume that up to 1 TB can be downloaded in a month, this yields an effective price of 6 cents per GB.

There are a number of fixed broadband plans that include very large download allowances, which yield similarly inexpensive price per GB fees. For example, iiNet's $99.95 per month TB plan (500 GB peak + 500 GB off-peak), yields a 10 cent price per GB. Whereas Internode's $129.95 per month TB plan (which has no peak / off-peak constraints), yields a 13 cent price per GB.

Market Clarity notes that most fixed and mobile broadband plans split download allowances between peak and off-peak quotas. In this analysis, Market Clarity has not differentiated between time-of-day quotas. Broadband subscribers should carefully review their usage patterns in order to select the most appropriate plan for their needs.

In the fixed broadband market, providers who have their own DSLAMs tend to offer the most cost-effective plans in conjunction with their own infrastructure. Broadband services that are offered on third-party infrastructure generally attract a price premium.

Figure 1 clearly illustrates the price premium paid by mobile broadband customers.

An examination of the Minimum Price per GB provides a good example. Here, the lowest price per GB post-paid mobile broadband plan gives customers an aggregate of 24 GB at $1.66 per GB, which is 27.7 times more expensive (per GB) than the 6 cents per GB price of the unlimited TPG fixed broadband plan (rated at 1 TB usage).

Furthermore, the lowest price pre-paid mobile broadband plan yields an effective price per GB of $9.67, which is 161.1 times more expensive (per GB) than the above-mentioned TPG plan.

What is not obvious from the analysis of per GB pricing is that the more expensive ($/month) fixed and mobile broadband plans do not consistently yield the best price per GB. One would expect that higher priced plans, which include larger GB allowances, would yield the most cost effective per GB prices. However this is not always the case. Even within the portfolio of a single provider, we found numerous cases where more expensive plans – with higher per GB allowances - were more expensive on a per GB basis, than cheaper monthly alternatives. Market Clarity therefore advises consumers to do a simple check on the cost per GB before subscribing to a broadband plan.

3 Data Allowances

Even the most generous mobile broadband allowances fall far short of those offered by fixed broadband providers, as is shown in Table 3 and Figure 4, below.

Table 3. — Data Allowances, Mobile Broadband vs. Fixed Broadband (March 2011)

Data Allowances	Minimum GB per Month / Recharge	Median GB Per Month / Recharge	Maximum GB Per Month / Recharge
Post-Paid Mobile BB	0.4	7.5	48.0
Pre-Paid Mobile BB	0.3	3.0	12.0
Fixed BB (ADSL, HFC)	2.0	300.0	1000.0
Multiplier Fixed BB Allowance vs. Post-Paid Mobile BB Allowance (GB)	5.0	40.0	20.8
Multiplier Fixed BB Allowance vs. Pre-Paid Mobile BB Allowance (GB)	8.0	100.0	83.3

In Table 3, “Recharge” refers to the purchase of additional Gigabytes in conjunction with a pre-paid mobile plan. All other figures refer to the Gigabytes included in a fixed or mobile monthly plan.

Figure 2. — Data Allowances, Mobile Broadband vs. Fixed Broadband (March 2011)

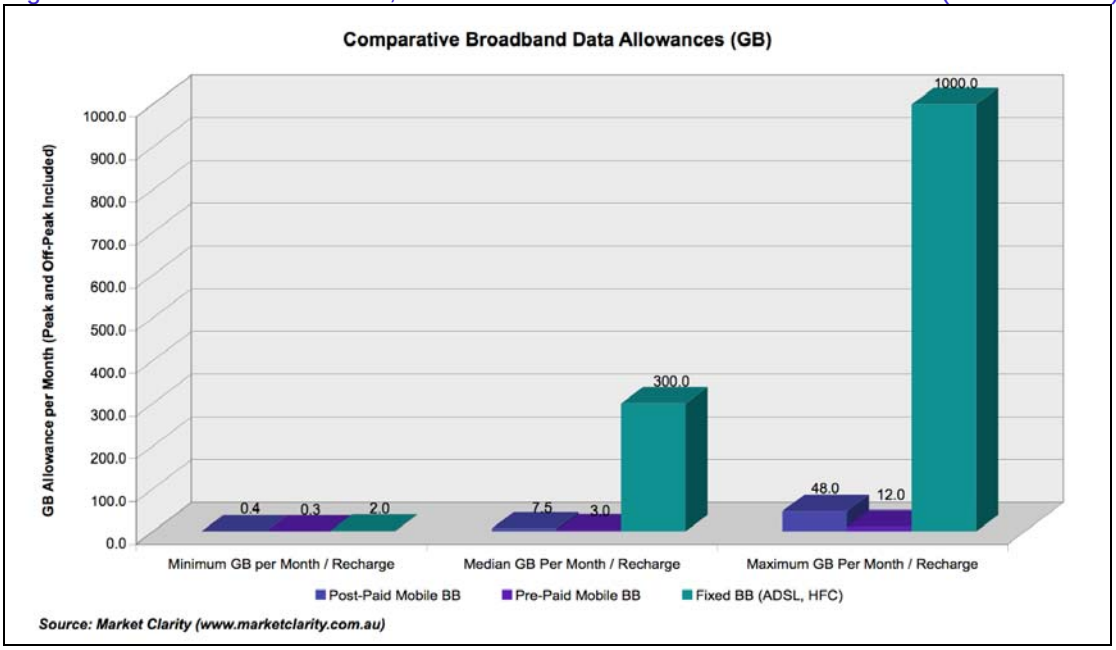


Figure 2 illustrates the variation in maximum data allowances by plan type. Whereas fixed broadband offerings allow for unlimited data usage plans, as well as plans with data allowances of up to 1 TB (1,000 GB), the maximum post-paid mobile data inclusion offered by Telstra, Optus, Vodafone or Three is 48 GB. And, for pre-paid mobile services the maximum data inclusion is a mere 12 GB.

While fixed broadband customers can currently access services with generous data allowances, mobile broadband subscribers do not have this option.

At the median of the plans analysed, the fixed broadband customer is offered 40 times more download allowance than the post-paid mobile broadband customer, and 100 times that of the pre-paid mobile broadband customer.

Market Clarity notes that both upload and download data usage is counted in the data allowances offered in conjunction with both fixed and mobile broadband plans.

Several years ago, most fixed broadband market plans tended to count data allowances for downloads only, whereas mobile broadband plans counted data allowances in both directions. This change in fixed broadband plan composition was most likely influenced by the growing consumer tendency to upload large amounts of information, such a videos.

4 Conclusions

The fast growth in mobile broadband services is driven by a potent combination of consumer factors. Consumers clearly place a premium on mobility, and they are enthusiastic about the promise of new devices such as the iPad and various Android-based products.

However, convenience comes at a cost: users pay far more for their mobile downloads, and receive far less.

The “convenience premium” is not a new phenomenon. The “effective data rate” of SMS is well over one million dollars per Gigabyte, but users still embrace it for interpersonal communications. They are willing to pay the price of the message, without treating the price of the message as something that could be benchmarked against other data types.

It’s also interesting to note that the most expensive way to consume mobile data services, not included this study, is through the mobile phone. Some “pay as you go” mobile phone data services have an effective per GB price in excess of $2 *million* dollars (a pay-as-you-go service which costs 2.2 cents per kilobyte; fortunately the service charges are capped).

The difference between SMS and mobile broadband, however, lies in likely customer expectations. It is evident that people using PCs (with USB dongles) or tablet computers (with SIMs) bring “PC-like” expectations to their user experience. As a result, Vodafone suffered fierce public criticism during 2010 for poor broadband performance on its 3G network.

It is also likely that users bring similar expectations to their downloading behaviour. In the context of the ordinary user, Australia’s broadband allowances are effectively “unlimited”, in spite of the ACCC’s dislike for the term.

As Market Clarity found in its study of download behaviour (*Broadband Download Behaviour in Australia)*[1] published earlier this year, the typical Australian fixed broadband user consumes far less than his or her download allowance.

According to ABS figures, in the December 2010 quarter an average fixed broadband user consumed 10.57 GB per month, and this continues to grow. In other words, the typical fixed broadband user already consumes more than the median plan allowance for pre-paid mobile broadband (7.5 GB) and more than triple the median plan allowance for post-paid mobile broadband (3.0 GB).

Mobile operators are under pressure from their shareholders to increase the income from their mobile broadband services, in order to resolve the conflict between user expectation of faster services and the cost of network upgrades.

At the same time, it is clear that fixed broadband prices continue to fall on a per GB basis — with monthly plan prices remaining stable, but data allowances continuing to rise.

Regardless of whether mobile broadband services can match the NBN for speed — a scenario Market Clarity believes is unlikely in the foreseeable future, except by the rough and inaccurate measure of the maximum radio channel speed for a given mobile technology (which ignores how that speed is delivered to multiple users) — the mobile broadband sector is still challenged to deliver equivalent data value compared to fixed networks.

Without a radical change in mobile broadband tariffs and data allowances to compete with fixed services, this is likely to remain for the foreseeable future.

1 http://www.marketclarity.com.au/freebies/

This is not, however, to deny the value consumers attach to mobility. The authors of this paper have multiple mobile broadband devices, and this is increasingly common in the Australian market.

At the same time, however, customers seeking higher download volumes at an acceptable price must continue to use fixed broadband services. Indeed, many mobile broadband users rely on WiFi connectivity to connect their laptops, mobile phones, iPads, and other devices to a fixed broadband network whenever feasible.

It appears certain to Market Clarity that the NBN will be valuable in an increasingly mobile world, because people use their devices in both fixed and mobile modes. For as long as mobile downloads attract a significant premium over fixed services, Market Clarity believes users will continue to buy both service types, and connect their mobile devices to fixed networks whenever feasible.

5 Data Sources

Data for this study was collected from 7-18 March 2011.

The data includes both pre-paid and post-paid mobile broadband plans from the following providers:

- Telstra
- Optus
- Vodafone
- Three (Hutchison)

Although Vodafone and Three are brands owned by Vodafone Hutchison Australia (VHA), at the time of this study, they maintained independent pricing strategies.

Market Clarity did not include plans that are bundled with particular devices, as it is difficult to factor the device subsidy into the cost of the plan.

Data was obtained for fixed broadband ADSL and HFC services from the following providers:

- Telstra
- Optus
- iiNet
- Internode
- TPG

As with mobile services, Market Clarity excluded tariffs for services that require bundling of other services, such as broadband/telephony bundles.