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COMMERCE COMMISSION

Telecommunications Market Monitoring Report

Six months to June 2009

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This report is part of a continuing series of reports monitoring the state of competition in telecommunications markets in New Zealand.

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Executive Summary

Mobile Market

1. There has been continued new investment in mobile networks during the first half of the year. Telecom finished rolling out its new 3G XT network while Vodafone finished extensions to its 3G network. 2degrees finished the first stage of its new network, rolling out in Auckland, Wellington and Christchurch.
2. The entry of 2degrees into the 2G prepaid market has meant for the first time in the Commission's analysis, New Zealand's prepay prices are benchmarked at below the OECD average.
3. The building of technologically compatible mobile networks has made it easier to switch between networks without changing phones. In August and September there was more than triple the usual number of mobile subscribers switching to another network and taking their number with them.

Fixed Line Market

4. The unbundling of exchanges and Chorus's cabinetisation programme continue to be the main areas of investment in the fixed line market.
5. Although a further 18 exchanges were unbundled in the first half of 2009, bringing the total to 64, the growth in unbundled lines has been subdued. Growth is likely to have been affected by Telecom's wholesale loyalty offers encouraging the sale of broadband plans that rely on a wholesale bitstream service rather than unbundled lines. In addition, the further exchanges unbundled were largely outside Auckland and unbundled for TelstraClear which did not launch retail services using unbundled lines from these exchanges until October 2009.
6. The take up of broadband services has continued to grow at an annual rate of around 14 per cent, which is above the OECD average. The pricing of broadband services in New Zealand is broadly in line with that of similarly developed countries.
7. The number of wholesale services sold that allow other providers to offer retail services to consumers continues to grow, showing consumers are taking advantage of greater choice in the market. The number of Telecom's residential lines retailed by a service provider other than Telecom has doubled in the last two years to reach nearly 250,000 as at 30 June 2009.
8. Telecom's residential fixed line services remain relatively expensive according to OECD benchmarking. Telecom's residential line rental is one of the highest in OECD and its residential fixed-to-mobile prices are among the highest in the OECD.

Introduction

9. The Commission is responsible for monitoring competition in telecommunications markets, and for making publicly available reports, summaries, and information regarding the telecommunications industry and telecommunications services. Consistent with its monitoring function, the Commission produces regular telecommunications market monitoring reports.
10. The Commission is currently in the process of revising the format and content of its telecommunications market monitoring reports. This report largely covers the six months to 30 June 2009, but also includes some information through to 30 September 2009 to capture more recent developments particularly in the mobile communications market.
11. An annual monitoring report for the whole of 2009 containing a more comprehensive set of statistics, commentary and analysis of New Zealand's telecommunications markets will be issued in early 2010.

Mobile Market

Investment

12. Extensive investment in new mobile network infrastructure was a feature of the first half of 2009. Vodafone brought forward the completion of the final stage of the roll-out of its 3G network to cover 97 per cent of the population (around 40 per cent of land area) to 28 May 2009. Telecom completed the roll-out of its new 3G XT mobile network to achieve the same coverage on 29 May 2009. 2degrees completed the first stage of the roll-out of its mobile network in Auckland, Wellington, Christchurch, to cover approximately 45 per cent of the population, on 4 August 2009. This has allowed it to launch 2G GSM mobile services including GPRS and EDGE data services.

Technology

13. While voice and SMS services are still the main use for mobile phones in New Zealand, using mobile phone networks to access the internet is becoming more popular. Mobile data cards are used to connect laptops to the internet and mobile phones with screens large enough to display webpages are being used to directly access the internet. Internet access can be achieved on 2G GSM mobile networks using GPRS and EDGE data services but higher speed access is available on 3G networks.
14. The 2G EDGE technology used by 2degrees typically supports data speeds of up to 384 kbps. 2degrees uses 900 MHz spectrum for its GSM network. Vodafone uses 900 MHz and 1800 MHz spectrum for its GSM network.
15. Telecom's new 3G XT mobile network uses WCDMA technology like Vodafone and is advertised as supporting average data speeds of 3Mbps downstream and 1Mbps upstream, depending on conditions. Telecom is using 850 MHz spectrum for its XT network plus 2100 MHz in more populated areas. Vodafone advertises its 3G mobile network as giving an average download speed of 800 kbps to 1.4 Mbps for 3G broadband devices. Vodafone uses 900 MHz spectrum for its 3G network and like Telecom uses 2100 MHz spectrum in more populated areas. 2degrees intends to launch its 3G network, using WCDMA technology and 2100 MHz spectrum, sometime in 2010.

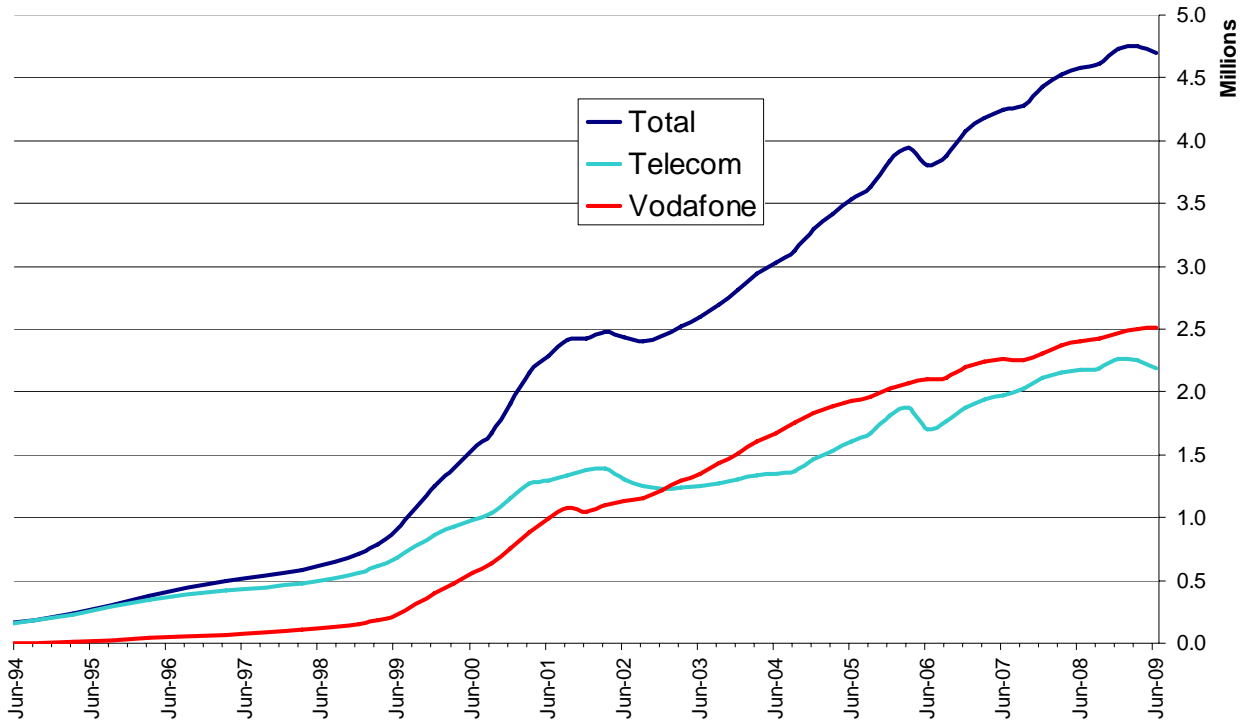
Wholesale Market

16. Wholesale mobile termination rates, the cost mobile operators have to pay to connect a voice call to another mobile network, are reducing under undertakings given by Telecom and Vodafone to the government in April 2007. The mobile termination rate dropped by one cent to 15 cents per minute from 1 April 2009. The wholesale termination rate for SMS messages was not covered by these undertakings. The prevailing rate for Telecom and Vodafone is 9.5 cents per SMS.
17. 2degrees is able to provide nationwide coverage equivalent to that of Vodafone through a commercially negotiated domestic roaming agreement with Vodafone, which gives coverage to 2degrees customers when they are out of range of the 2degrees network.

Retail Market

18. Mobile phone connections grew by three per cent in the year to 30 June 2009, reaching 4.7 million as shown in Figure 1. This equates to a penetration rate of 109 per cent of the population.¹

Figure 1: Mobile Phone Connections



Source: Telecom, Vodafone

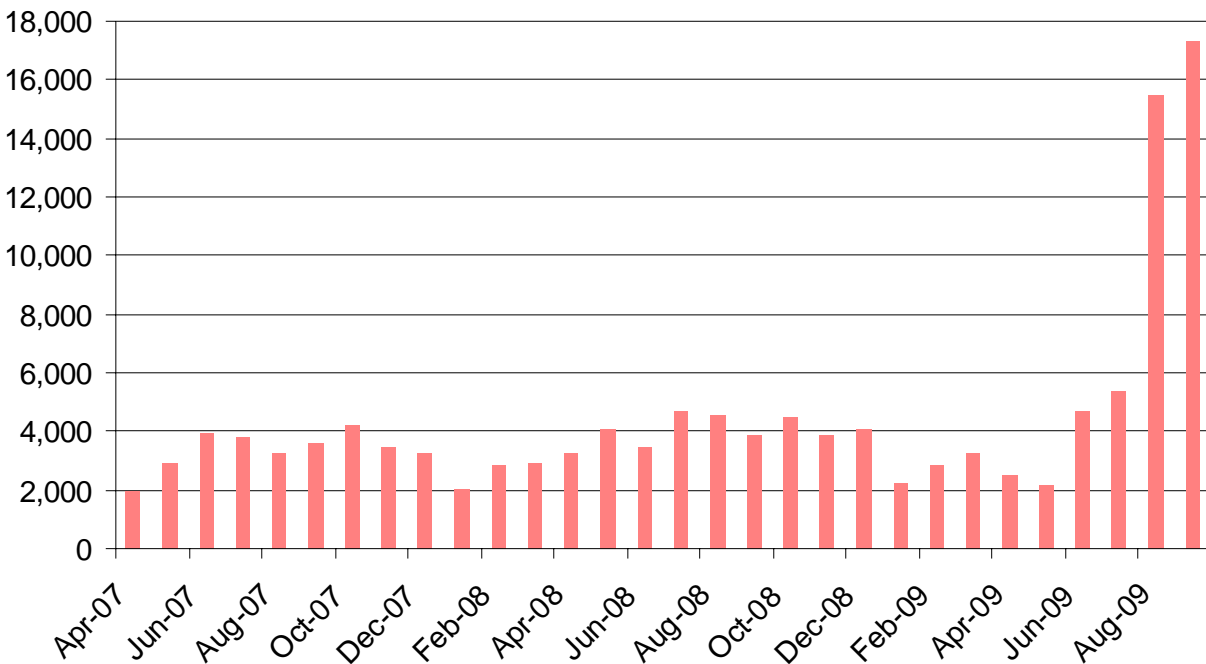
19. It is now possible for consumers to change between mobile phone operators without changing phones because the new mobile networks built by 2degrees and existing operators have compatible technologies. A person with a GSM mobile phone can change between Vodafone and 2degrees by merely changing the SIM card in the phone. A person with a 3G phone that works on Vodafone's 3G network may be able to change to Telecom's XT network by changing the SIM card in the phone². The phone number associated with the previous network can be transferred to the new network using mobile number portability.
20. The ease of changing networks has been reflected in an increasing number of people transferring their mobile phone number to a different network. Figure 2 shows the quantity of mobile numbers ported each month. The volume of porting was relatively low at around one per cent of total mobile connections per year and never exceeded 5,000 in a month from April 2007 until June 2009. In July 2009 the volume increased to 5,400 after the launch of Telecom's new 3G XT network at the end of May 2009.
21. Figure 2 shows a discernable break in the trend in mobile porting in August 2009 when the new 2degrees mobile network was launched. Mobile number ports increased to 15,500 in

¹ Population estimated from extrapolating Statistics NZ figures.

² This depends on the frequency bands able to be used by the phone.

August 2009 and 17,300 in September 2009. It was reported that around 3,000 of the mobile number ports in September were Vodafone customers switching to Telecom's new XT network and taking their existing number with them and a similar number were Telecom customers switching to Vodafone. This suggests the remaining approximately 11,000 mobile ports were Vodafone customers switching to 2degrees and taking their existing number with them.³

Figure 2: Mobile Numbers Ported each Month



Source: TCF

Retail Pricing

22. In order to compare the price of telecommunications services in different countries, the OECD has developed a series of standard consumption baskets reflecting different telecommunications end-user profiles.⁴ Details of publicly available plans are used to calculate the cheapest price of filling each basket in each OECD country. The benchmarking is performed by Teligen and the underlying data is available on a subscription basis. When interpreting the results it is important to note that the results are for the least expensive plan of two operators surveyed in each country and do not consider how widely used the plans are.
23. The Commission supplements the Teligen results by putting into the baskets additional commonly used New Zealand plans. This allows the Commission to observe price differences between New Zealand carriers. For this report the Commission has used Teligen's August 2009 benchmarking data and added the newly available 2degrees prepaid

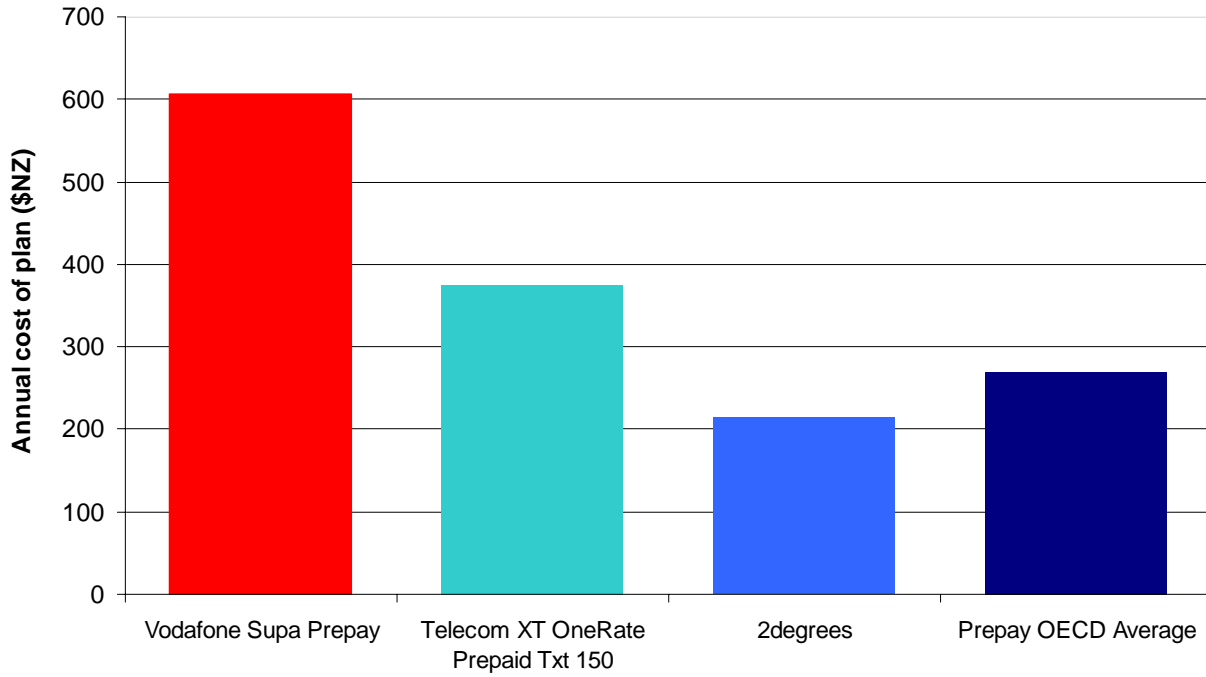
³ Paul Clearwater, *Communications Day*, 7 October 2009, Issue 3613.

⁴ http://www.teligen.com/t_basket.asp

mobile plan. For Telecom, the new XT network mobile plans have been included in the results but not the old CDMA network plans as Telecom is no longer selling CDMA phones or promoting its CDMA plans.

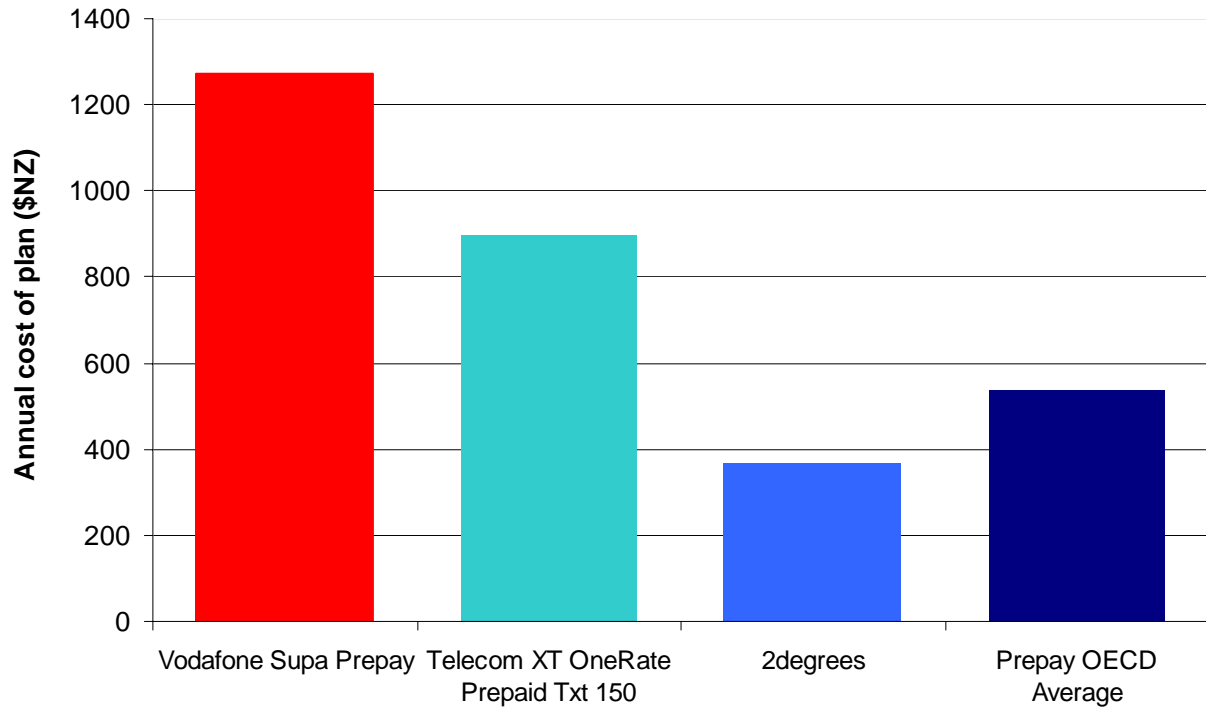
24. The results are indicative only. The benchmarking does not capture special or confidential deals and the baskets are likely to differ from New Zealand usage patterns. For example, the OECD high user basket includes only 55 texts per month while the average number of texts sent in New Zealand is in the order of three to four times higher than this. The OECD methodology is also unable to benchmark plans with restricted on-net calling offers like Best Mates that provide unlimited calling between one or several specified on-net numbers for a fixed monthly fee. While this may mean there are other variants of the plans benchmarked that offer better value, the Commission notes such plans offer this value only in the confines of the closed network groups (calling circles) they promote.
25. Approximately 67 per cent of mobile subscribers in New Zealand use prepaid plans and their use is likely to be even more predominant among lower spending users. The average percentage of prepay subscribers for the OECD was 44 per cent in 2007, indicating that prepaid plans are more popular with consumers in New Zealand than in many other countries. To reflect the importance of prepaid plans, the Commission is now benchmarking prepaid mobile plans separately. Prior to the August 2009 benchmarking, in the Commission's analysis the best ranking for a New Zealand prepaid plan was 26 out of 30 and more than one and a half times the OECD average.
26. The August 2009 prepaid benchmarking results are shown in Figure 3 to Figure 5 with the annual costs given in \$NZ (excluding GST). For the first time in the Commission's analysis, a New Zealand prepaid plan is priced at less than the OECD average. The 2degrees plan is significantly cheaper than the other New Zealand plans and below the OECD average for prepaid plans for all the baskets. In the benchmarking, Vodafone's prepaid plan is the most expensive New Zealand plan for all baskets by a significant margin and Telecom's XT prepaid plan is in-between 2degrees and Vodafone.
27. Although Telecom's prepaid plan has the same headline 89 cents per minute calling rate as Vodafone's, Telecom prepaid top-ups of \$20 on its XT network attract a bonus credit of 25 per cent (making prices effectively 20 per cent cheaper) and Telecom's plan bills per second after the first minute rather than rounding up to the nearest minute like Vodafone and 2degrees prepaid plans. The Teligen data was corrected to reflect these facts.

Figure 3: Performance of Prepaid Mobile Plans in Low User Calling Basket⁵



Source: Teligen T-Basket, Commission.

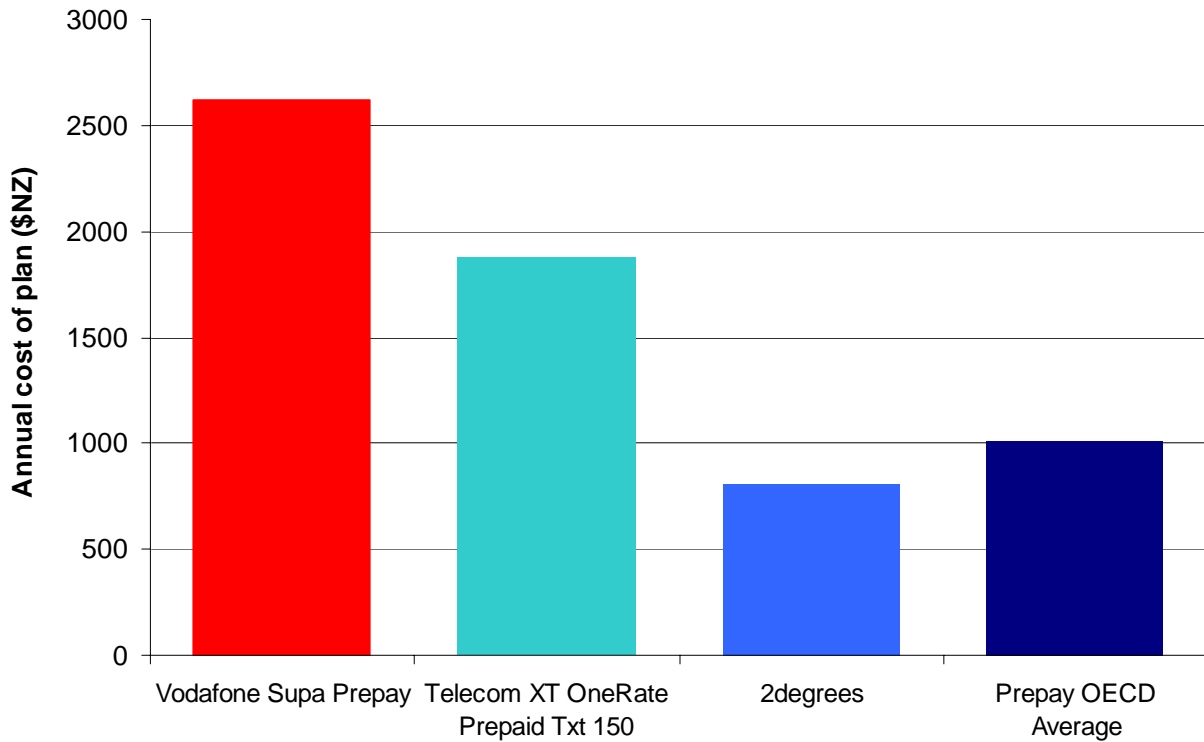
Figure 4: Performance of Prepaid Mobile Plans in Medium User Calling Basket³



Source: Teligen T-Basket, Commission.

⁵ It is assumed that a \$20 top-up is made each month for the 2degrees plan and \$20 top-ups are made when required for the Telecom plan.

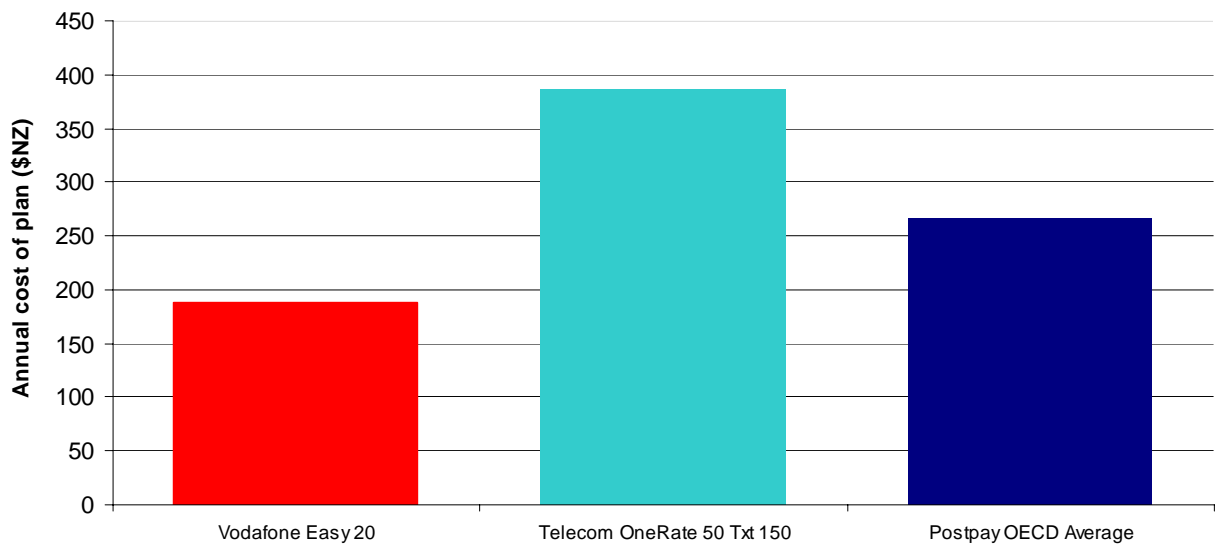
Figure 5: Performance of Prepaid Mobile Plans in High User Calling Basket³



Source: Teligen T-Basket, Commission.

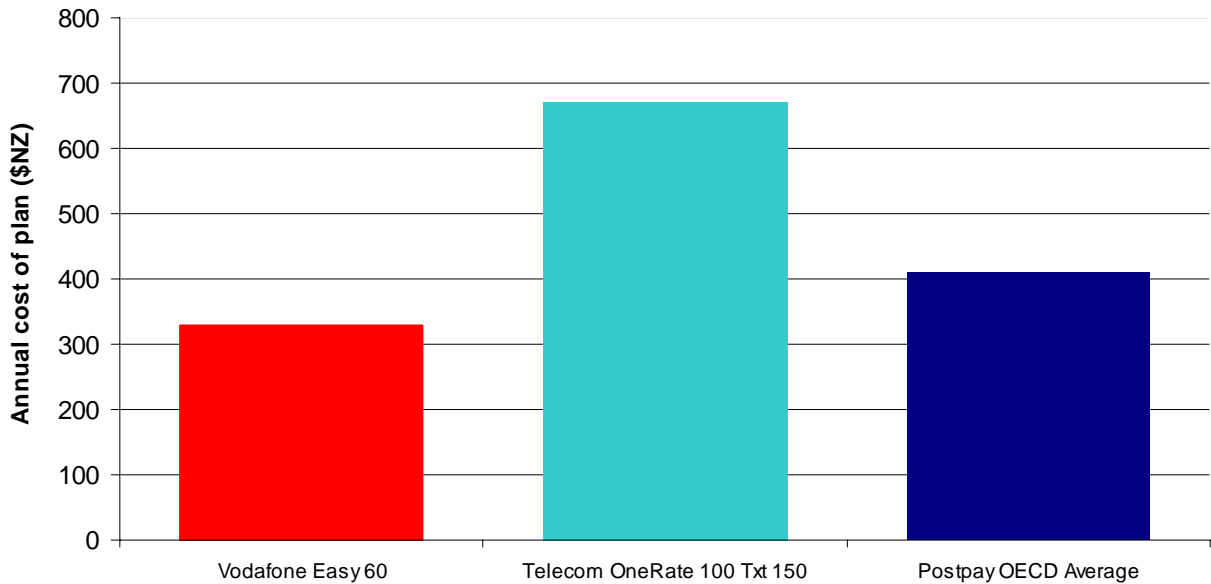
28. The postpaid benchmarking results are shown in Figure 6 to Figure 8 with the annual costs given in \$NZ (excluding GST). In the benchmarking, Vodafone’s ‘Easy’ plans are significantly cheaper than the other New Zealand plans in all three baskets and below the OECD average for prepaid plans.

Figure 6: Performance of Postpaid Mobile Plans in Low User Calling Basket



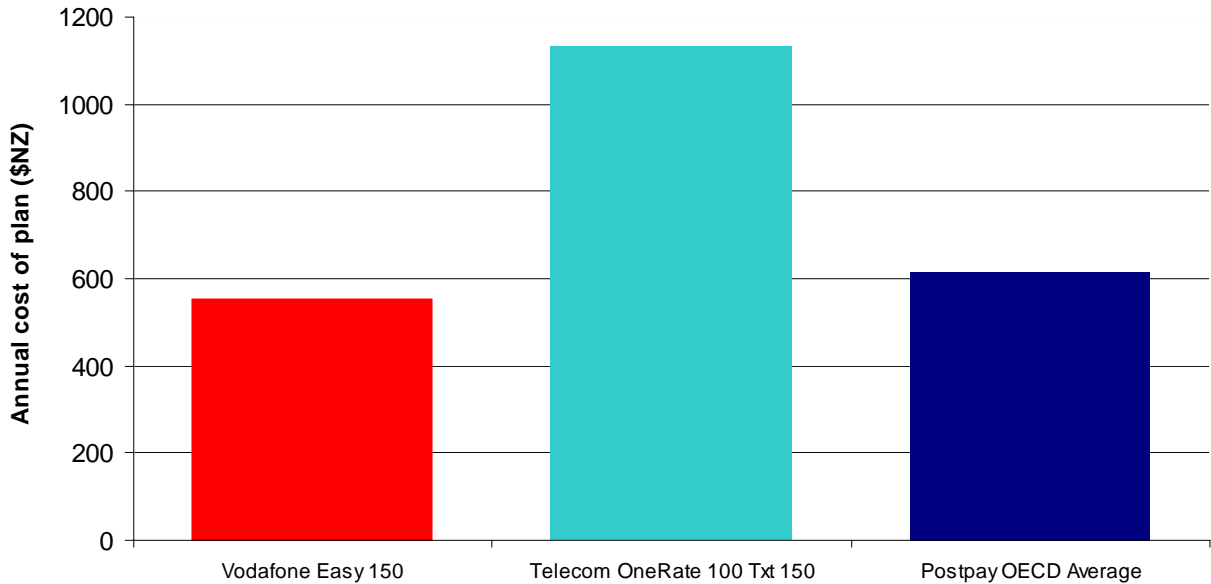
Source: Teligen T-Basket, Commission.

Figure 7: Performance of Postpaid Mobile Plans in Medium User Calling Basket



Source: Teligen T-Basket, Commission.

Figure 8: Performance of Postpaid Mobile Plans in High User Calling Basket



Source: Teligen T-Basket, Commission.

29. Vodafone's Easy 20, Easy 60 and Easy 150 plans have a fixed monthly price which gives a set number of peak and off-peak minutes that are closely aligned with the specifications of low, medium and higher user OECD baskets respectively. Any extra peak minutes cost 99 cents and restricted on-net calling offers like Best Mates are not available with the Easy plans.

Conclusions

30. There has been continued new investment in mobile networks during the first half of the year. Telecom finished rolling out its new 3G XT network while Vodafone finished extensions to its 3G network. 2degrees finished the first stage of its new network, rolling out in Auckland, Wellington and Christchurch.
31. The entry of 2degrees into the 2G prepaid market has brought lower prices. For the first time in the Commission's analysis New Zealand's prepay prices are benchmarked at below the OECD average.
32. The building of technologically compatible mobile networks has made it easier to switch between networks without changing phones. In August and September there was more than triple of the usual number of mobile subscribers switching to another network and taking their number with them.

Fixed Line Market

Investment

33. The unbundling of Telecom exchanges continued in the first half of 2009, although at a slower rate than the second half of 2008. The number of unbundled exchanges increased from 46 as at 31 December 2008 to 64 as at 30 June 2009. Operators, primarily TelstraClear in 2009, have been putting their equipment into these exchanges.
34. Chorus continued to progress the large scale cabinetisation of Telecom's access network. Cabinetisation is capital intensive because each year Chorus is placing hundreds of new roadside cabinets able to deliver broadband DSL services closer to customers, and rolling out fibre to connect these to the local exchange. The number of new roadside cabinets installed as at 30 September 2009 was 1095 out of the planned final total of 3,600.

Domestic Backhaul

35. Domestic backhaul is the transport of voice and data between Telecom exchanges and other service providers' networks. The term is sometimes also used in a more generic sense to refer to any long distance transport of voice and data. Investment in backhaul is important for growth in broadband services as lack of backhaul capacity limits the speed at which services can be delivered. Backhaul services are also required by mobile operators to connect cell sites to their core network.
36. TelstraClear completed a 40 gigabits per second link between Wellington and Christchurch in April 2009. This provides back-up for TelstraClear's customers and increased capacity to meet the growing demand for broadband services.
37. There continues to be a lack of competition on backhaul routes outside the main centres. In May 2009 the Commission finalised its first review of backhaul services and concluded that 13 of 41 new backhaul routes reviewed were competitive.

International Backhaul

38. International backhaul is important for providing broadband services, as transporting data over international routes is a major component of the cost of providing broadband services in New Zealand. This is apparent from the prevalence of data caps on broadband plans in New Zealand.
39. Southern Cross Cable announced a further price reduction of 15 per cent for circuits to the US in August 2009. Kordia announced in September 2009 that it is continuing to develop its project to deploy a trans-Tasman submarine cable. Kordia Chairman David Clarke stated that the key objective was to award a contract in early 2010 for the installation of the cable.⁶

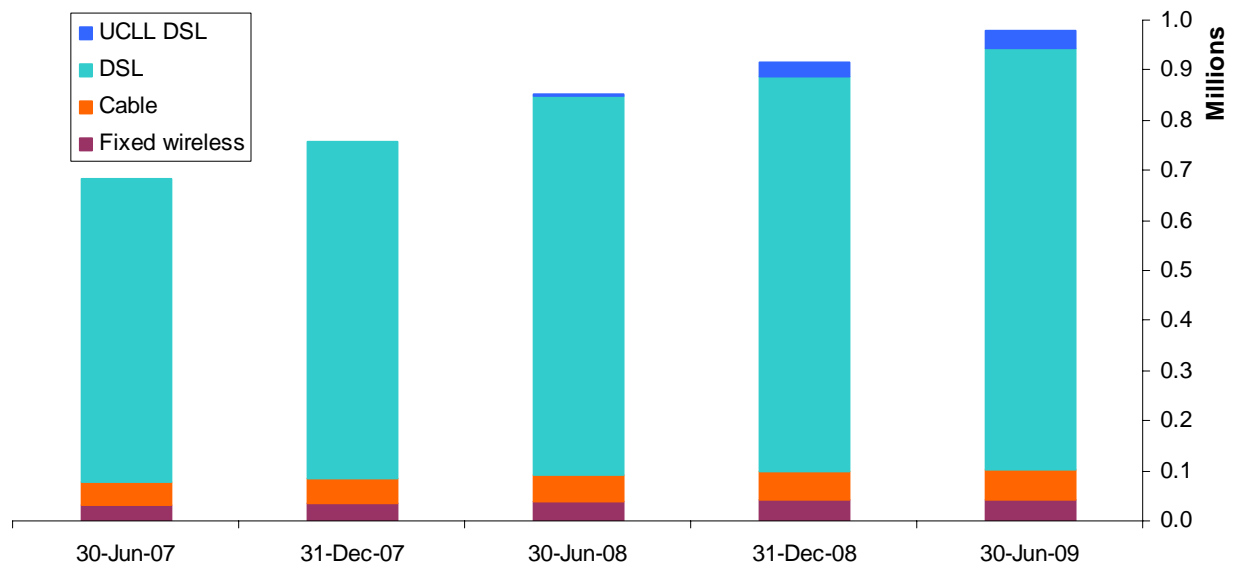
Technology

40. Increased demand for data and the speed at which it is transmitted is a prime driver for the adoption of new technology in the fixed line market. Networks continue to move to the use of internet protocol for transmission of data with fibre as the medium.

⁶ Kordia media release, 30 September 2009.

41. Diversity in technology is most apparent in the fixed broadband market with access being provided by copper phone lines, cable, fibre, various fixed wireless technologies including Wi-Max and satellite. A broadband connection is now often used for voice services as well as the usual access to email and the internet.
42. The proportion of fixed broadband connections using the different technologies that are available in New Zealand is shown in Figure 9. The fixed wireless category includes satellite connections, which make up around a quarter of fixed wireless broadband connections. Mobile broadband connections are not included.

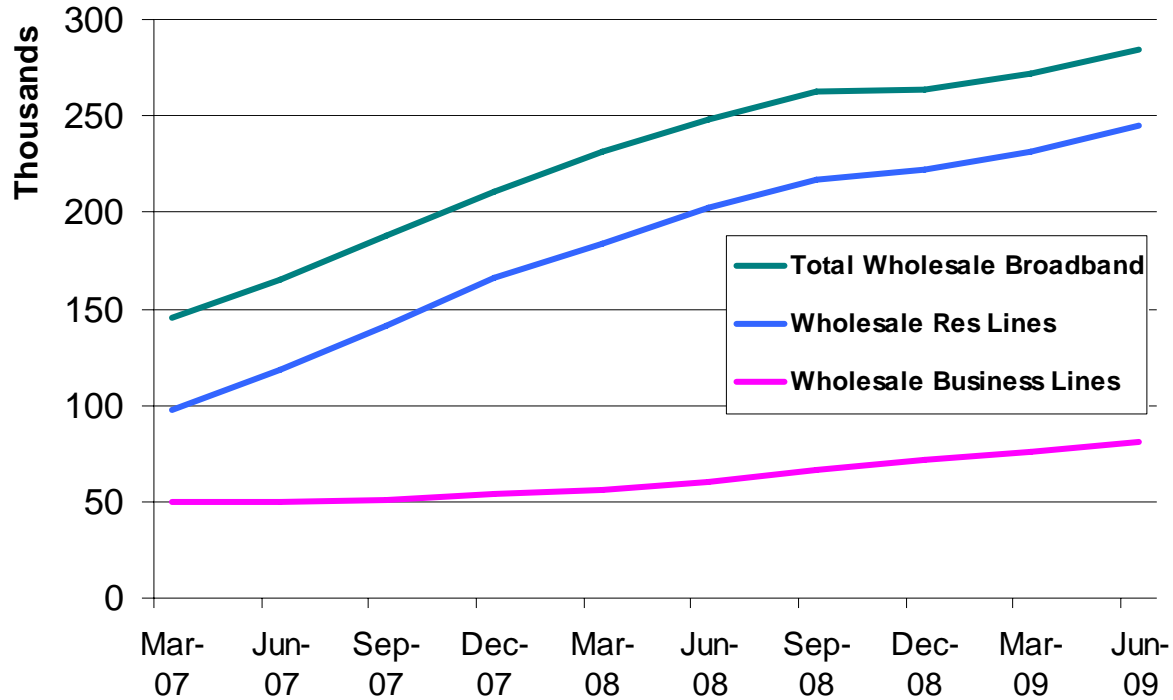
Figure 9: Fixed Broadband Connections by Technology



Source: Telecom, Commerce Commission

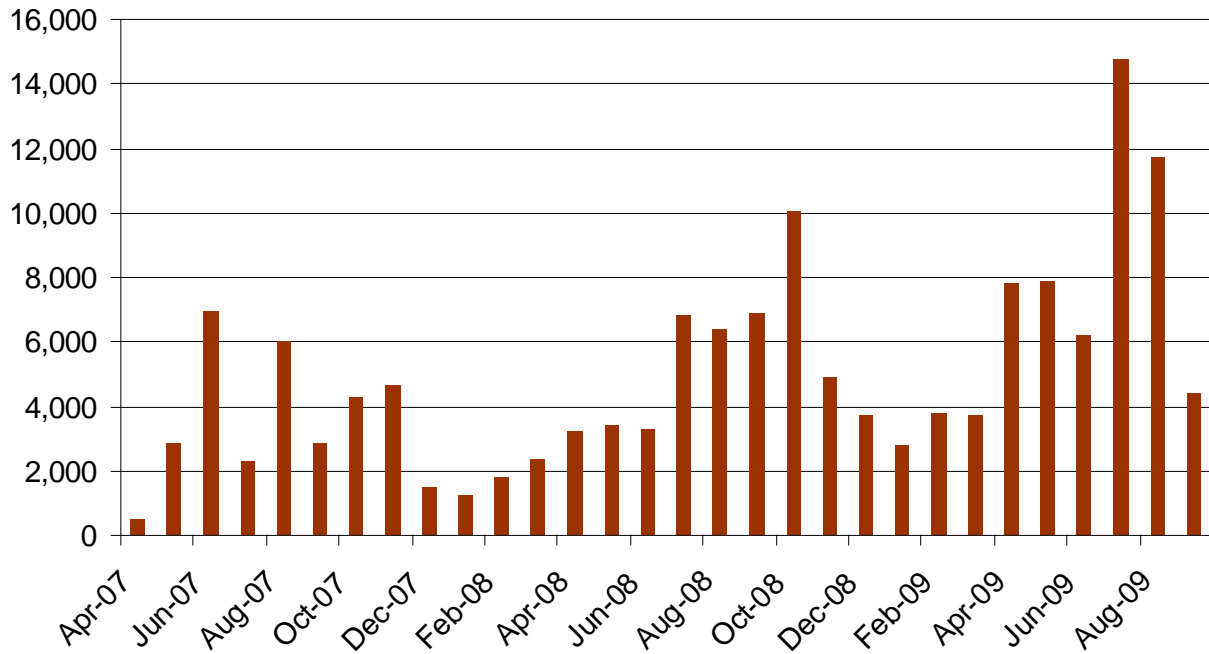
Wholesale Market

43. As Telecom is the owner of the fixed lines connecting consumers' premises in most parts of New Zealand, Telecom's competitors usually need to purchase services from Telecom Wholesale to enable them to offer an alternative retail service to consumers. The Commission tracks a number of the more popular regulated and unregulated services provided by Telecom Wholesale. An alternative to purchasing wholesale services is to purchase unbundled copper local loop (UCLL) services from Telecom's local access network operator, Chorus. This is discussed further below.
44. After slowing in the quarter ending December 2008, the number of wholesale broadband connections (principally bitstream connections) and wholesale residential lines resumed growing at a reasonably strong rate in the March and June quarters as illustrated in Figure 10.
45. It is estimated that approximately one in six of Telecom's residential lines and one in four of Telecom's business lines are wholesaled to another retailer. In the case of residential lines, the number has doubled in the last two years to reach nearly 250,000 as at 30 June 2009.

Figure 10: Retail Services provided using Telecom Wholesale Products

Source: Telecom

46. When a Telecom line is retailed by another provider, the Telecom telephone number can be retained by the customer without the need to use the number portability system. Numbers only have to be ported when a consumer switches to a different network and wants to retain their number.
47. The UCLL service which Telecom's competitors purchase directly from Chorus effectively allows such competitors to offer voice and broadband services over their own network. Customers taking a UCLL service and wanting to retain their number therefore have to have their numbers ported using the number portability system.
48. Figure 11 shows the quantity of local numbers ported each month since number portability was introduced in April 2007. Until mid-2008 the volume of porting was running at around two per cent of total fixed connections per year. The volume increased significantly from July 2008 when UCLL started being promoted in Auckland. After falling over the Christmas holiday period, local number porting volumes rebounded to relatively strong levels in April and May 2009. This coincided with further take-up of UCLL.
49. An unexpected large increase in the volume of local numbers ported occurred in July and August 2009, bringing monthly totals to unprecedented levels, before dropping back to around the historic average in September 2009. The Commission has been informed that porting by a large government department in July and August contributed significantly to local porting volumes over that period.

Figure 11: Local Numbers Ported each Month

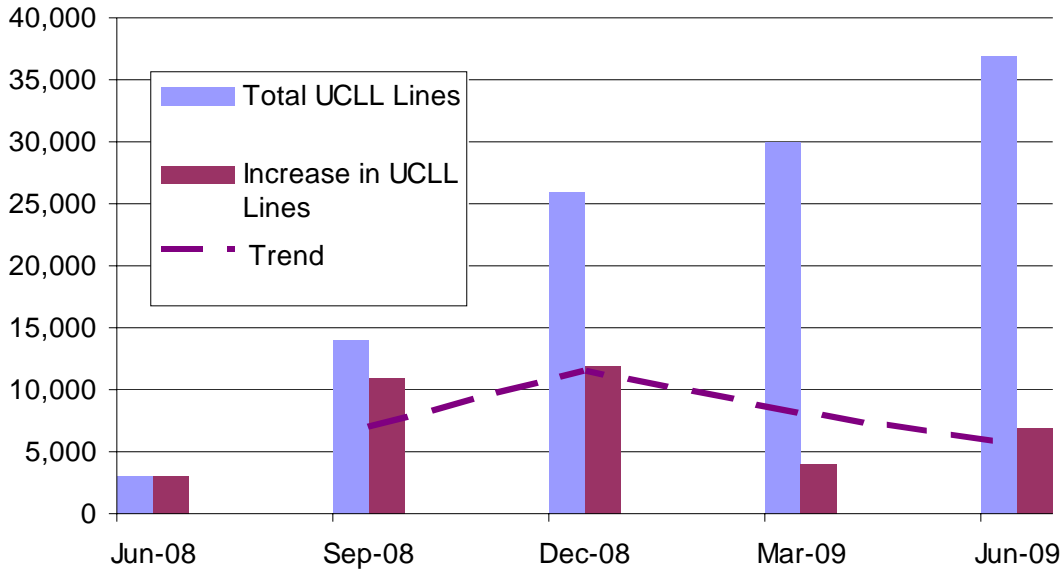
Source: TCF

DSL Broadband Market

50. Around 90 per cent of broadband connections in New Zealand are provided over a standard copper telephone line using DSL technology. Almost all DSL connections are provided over Telecom's network.
51. Around a third of the DSL connections provided over Telecom's network are wholesale connections which are retailed by a provider other than Telecom.
52. Since mid-2008 Telecom's retail competitors have also been able to put their equipment in some Telecom exchanges and offer their own telephone and broadband service using the UCLL service purchased from Chorus.
53. The number of unbundled lines reached 37,000 as at 30 June 2009, as shown in Figure 12. These are limited largely to Auckland, where most exchanges are now available for unbundling. The growth in unbundled lines slowed significantly in the March 2009 quarter with only 4,000 net additions. Growth picked up somewhat in the June quarter with 7,000 net additions.
54. It is likely a number of factors have impacted on the slow down in UCLL growth including the completion of the planned unbundling of exchanges in Auckland in late 2008 for Vodafone and Orcon, and the launch of Telecom's wholesale loyalty offers in late 2008 and the first half of 2009. These loyalty offers gave discounted wholesale prices to retailers sourcing 90 per cent of their services from Telecom Wholesale, discouraging the purchase of UCLL services from Chorus. This first offer applied to Auckland and later offers applied to the rest of the country.

55. Furthermore, exchanges unbundled in the first half of 2009 have largely been outside Auckland and unbundled for TelstraClear which did not launch retail services using unbundled lines until October 2009 (TelstraClear is the only fixed line broadband retailer that did not sign up for any of the Telecom Wholesale loyalty offers.).

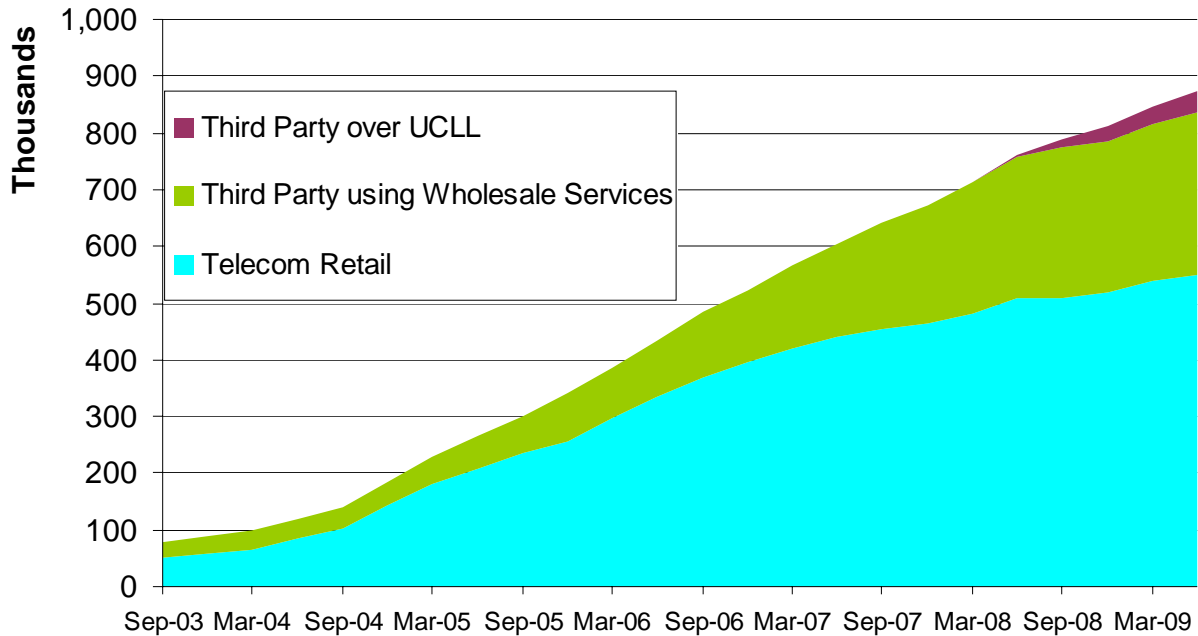
Figure 12: UCLL Connections



Source: Telecom

56. Total DSL broadband connections provided over the Telecom network continue to grow at a steady rate as can be seen from Figure 13.

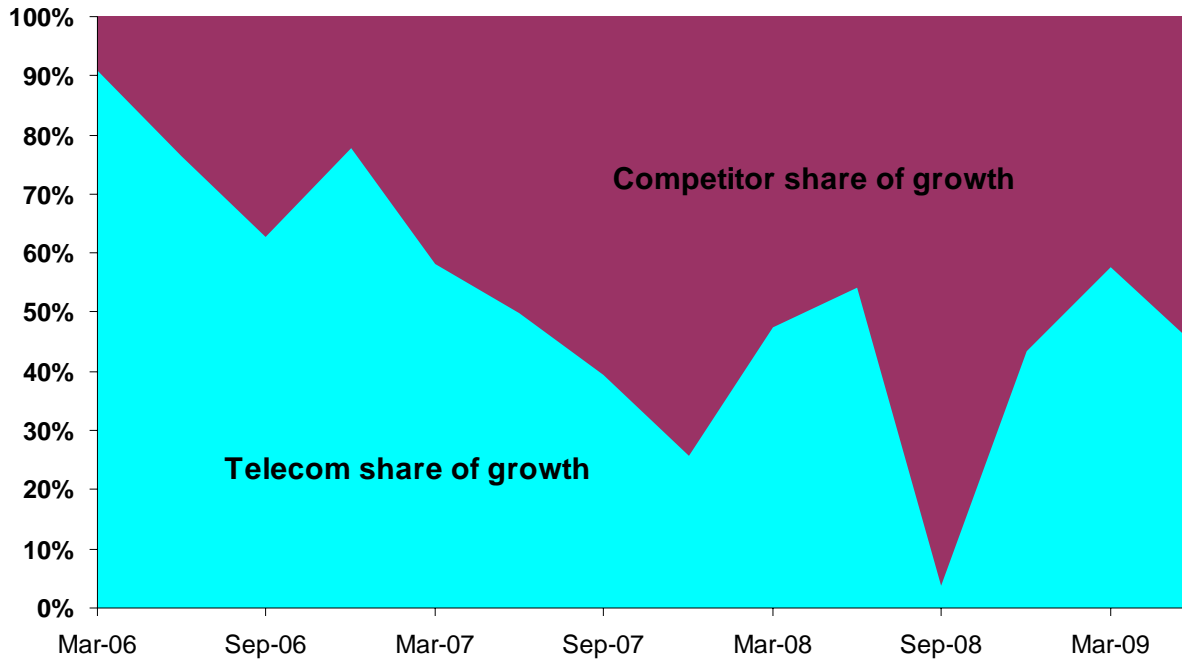
Figure 13: Telecom Network DSL Connections



Source: Telecom

57. Telecom Retail's share of the quarterly growth in net retail DSL connections compared to its competitors has tended to decline over the last three years but has fluctuated markedly, as can be seen in Figure 14. Telecom's particularly small share of net growth in the September 2008 quarter coincided with the end of its \$16.95 'broadband at dial-up prices' promotion. It is possible that Telecom customers who took up this promotion suffered 'bill shock' after exceeding the small 200 megabyte data cap then in place and being charged \$20 a gigabyte for extra data usage.

Figure 14: Share of Growth in Retail DSL Connections



Source: Telecom

Broadband Penetration

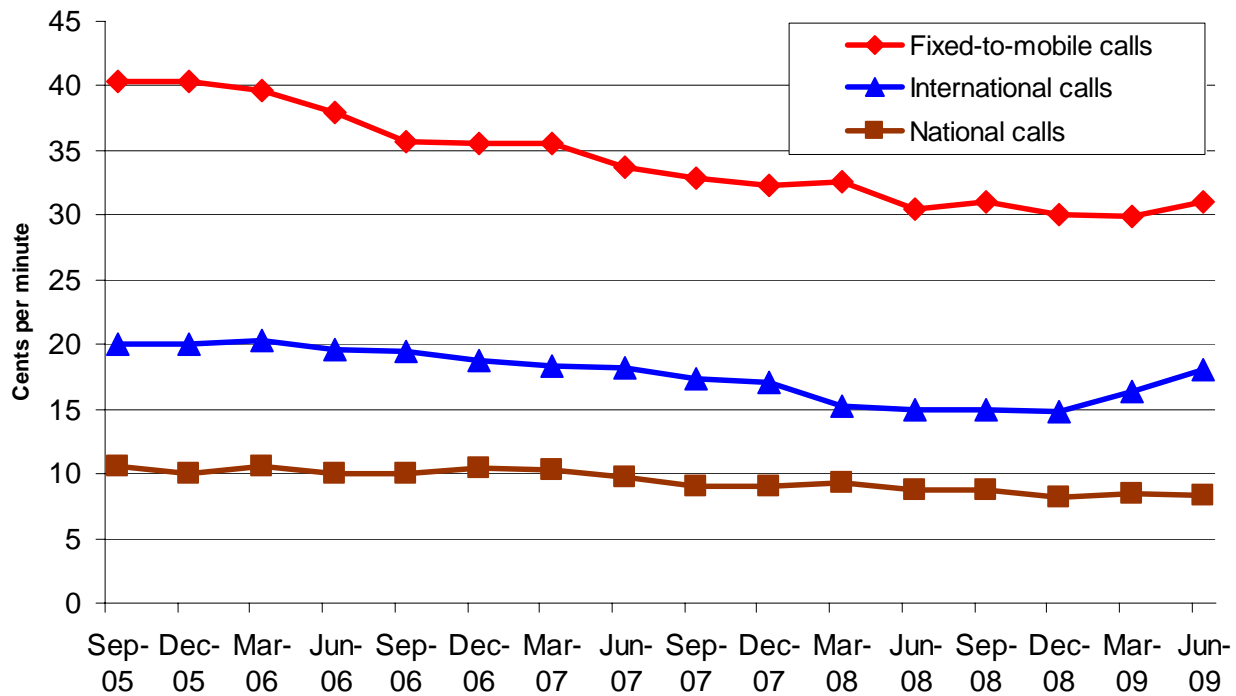
58. The most recent OECD statistics on how many broadband subscribers (excluding mobile broadband) each country has per head of the population are for December 2008.⁷ The OECD estimated there to be 21.9 broadband subscribers per 100 population in New Zealand (97 per cent of the OECD average) to give New Zealand a rank of 18 out of 30 in the OECD, an improvement of one place since June 2008. This was on the basis of 915,000 broadband connections.
59. The OECD stated that the strongest per-capita subscriber growth over the 2008 year was in the Slovak Republic, Greece, New Zealand, Norway, Germany, France and the United States. Each country added more than 3 subscribers per 100 inhabitants during the year. On average, OECD countries increased broadband subscribers by 2.5 subscribers per 100 inhabitants over the 2008 year.
60. Data collected by the Commission shows the total number of fixed broadband connections in New Zealand as at 30 June 2009 had increased to 981,000. This translates to a broadband penetration rate of greater than 23 subscribers per 100 of population and a growth rate of 7.2

⁷ <http://www.oecd.org/dataoecd/21/35/39574709.xls>

per cent for the six months, which is almost identical to the growth rate for the previous six months. OECD figures for 30 June 2009 are expected to be released shortly.

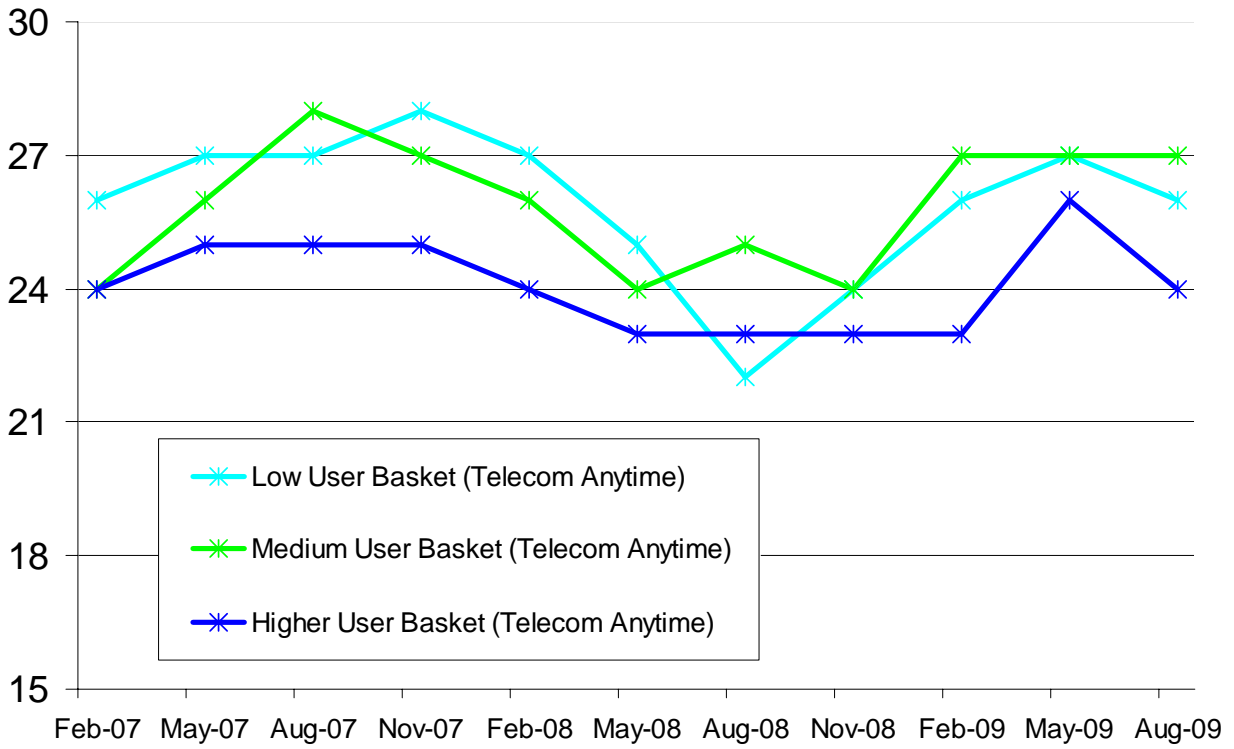
Retail Prices

61. One indicator of how retail prices are changing is the movement in the average price of different telecommunications services. However, it is difficult to accurately measure how average prices for individual services used by telecommunications end-users are moving over time because of the increased uptake of bundled services, a changing product suite, and complex tariffs like capped calling and on-net/off-net pricing.
62. Telecom publishes average calling charges and the Commission tracks these as one indicator of change in the nominal price of various telecommunications services. Although these averages have tended to decline over time, Figure 15 indicates they have been flat or rising over the last three quarters.
63. Telecom advised that the fluctuation in average charges for international, national and fixed-to-mobile calls over the last three quarters was primarily due to the influence of calling products that offer unlimited calls for a flat rate. Changes in customer behaviour and seasonality caused variations in the volume of traffic generated by these products which meant the effective price per minute varied from month to month.
64. The Commission considers it is unlikely consumers are paying a higher average price overall for their telecommunications services so it is likely consumers are sourcing more telecommunications services from cheaper providers, including using the internet for voice services.
65. Telecom's reductions in fixed-to-mobile prices by one or two cents a minute annually to meet the pass through requirements of its undertaking with the government have maintained a high margin for headline prices and calling volumes have decreased. The standard residential fixed-to-mobile price is 58 cents per minute (excluding GST) compared to the wholesale termination charge of 15 cents per minute.
66. The Commission also calculates the average access revenue per line as a proxy for the average fixed line rental charged by Telecom. This average has remained relatively static for three years at around \$43 per month (excluding GST). Although residential line rentals increase every year, it is likely this increase has largely been offset by the movement of Telecom customers to purchasing the Telecom line from another retailer (who buys the line from Telecom at a five per cent discount) and Telecom's discounting of some business lines. In addition, offers that bundle broadband and calling together also effectively discount the line rental.

Figure 15: Telecom Fixed Line Average Calling Charges

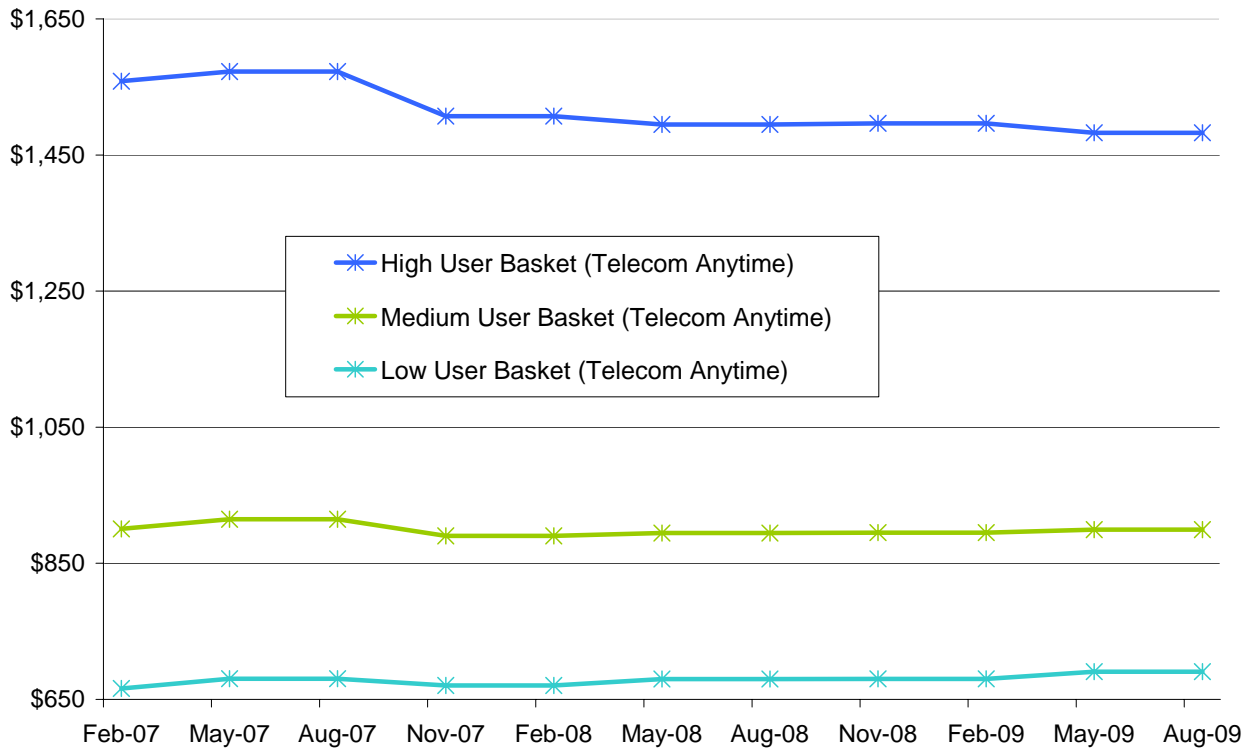
67. Figure 16 shows how the best New Zealand residential fixed line voice plan surveyed for OECD benchmarking (the Telecom Anytime plan at the price for Auckland, Wellington and Christchurch) ranked each quarter against other OECD countries in all the residential baskets. Prices are compared using a hybrid PPP (purchasing power parity) exchange rate which is influenced by exchange fluctuations. New Zealand's rankings have worsened in the last year but are around the average seen over the last two and a half years at 24 to 27 out of 30 (30 being the most expensive plan).
68. The \$NZ price of the New Zealand plans over the same period is shown in Figure 17 and shows much less fluctuation. The price of the low and medium user baskets rose marginally in the May 2009 benchmarking because Telecom raised its residential line rental in April 2009 by the amount allowed under the TSO Deed. However, the price of the high user basket fell a little because the rise in the line rental was more than offset by the 2 cents per minute reduction in the price of Telecom's fixed-to-mobile calls that took place at the same time. There is a large volume of fixed-to-mobile calls in the high user basket.
69. The two major factors contributing to the relatively high price of purchasing a fixed line residential voice service from Telecom in New Zealand are the line rental being one of the highest in the OECD, particularly for low users (although it includes an allowance for non-chargeable local calls), and Telecom's residential fixed-to-mobile calling prices being among the highest in the OECD.

Figure 16: NZ Ranking in OECD Fixed Line Residential Baskets



Source: Teligen T-Basket.

Figure 17: \$NZ Cost of OECD Fixed Line Residential Baskets



Source: Teligen T-Basket.

70. The Commission has used T-Connect, a broadband price benchmarking software package developed by Teligen to undertake broadband price benchmarking in a similar fashion to the OECD benchmarking of mobile and fixed line services. T-Connect uses details of publicly available fixed-line broadband plans⁸ to calculate the cheapest cost of filling a number of usage baskets in each of the 30 European countries covered by the EU, plus five additional Commission-specified countries (Australia, New Zealand, Japan, Canada and the USA).⁹ The Commission has used the June 2009 version of T-Connect to compare the prices of New Zealand broadband plans against those of the other countries.
71. T-Connect incorporates six standard consumption baskets reflecting different end-user profiles. In performing its broadband price benchmarking, the Commission has utilised three of these consumption baskets to model three end-user profiles. The key characteristics of each profile adopted by the Commission are outlined in Table 1 below.

Table 1: Broadband End-User Profiles

| User Type | Usage Basket | Minimum downstream speed ¹⁰ |
|-------------|---------------------------|--|
| Low User | Basket 1 (1GB per month) | No minimum |
| Medium User | Basket 4 (5GB per month) | 4Mbps |
| High User | Basket 6 (20GB per month) | 10Mbps |

72. Although the Commission has attempted to ensure that it is comparing “like-for-like” broadband plans in the benchmarking process, broadband price benchmarking is problematic for a number of reasons. For example, the Commission notes that it is difficult to divorce price and service quality when making comparisons of broadband plans. Although upstream and downstream speeds are provided for each of the plans included in T-Connect, these speeds generally appear to be theoretical maximums, and so will not necessarily reflect the actual end-user experience. Issues relating to design of the access network (such as the length of the copper local loop) and decisions made by the service provider in relation to contention ratios¹¹ can significantly impact on the quality of service received by the end user.¹²
73. In addition, bundled discounts that apply where an end-user is purchasing multiple services from a telecommunications provider present a further complication. Teligen has previously informed the Commission that as a “guiding principle” it assumes that the customer is taking

⁸ Including cable and DSL.

⁹ Unlike Teligen’s “T-Basket”, T-Connect does not have price and service information for providers in all 30 OECD countries, so OECD rankings are not available.

¹⁰ Compliance with the downstream speed requirement is assessed based on the maximum speeds listed for each plan. Actual speeds may differ from speeds listed for a number of reasons, such as customer premises wiring and distance from the local telephone exchange.

¹¹ Most broadband access services share a single connection path between many customers - this is referred to as contention. The contention ratio is the ratio of the potential maximum demand to the actual bandwidth. The higher the contention ratio, the greater the number of users that may be trying to use the actual bandwidth at any one time and, therefore, the lower the effective bandwidth offered.

¹² Similarly, cable broadband services rely on shared bandwidth.

the line rental and phone service from the same provider as the broadband service.¹³ The same approach seems to have been adopted in the June 2009 version of T-Connect.¹⁴

74. New Zealand's ranking for each of the three user baskets is summarised in Table 2 below. Figure 18 to Figure 20 illustrates how New Zealand's cheapest plan for each basket ranks against those of other countries.¹⁵ Given the limitations outlined above, the Commission considers that the results should be treated as indicative only.
75. New Zealand is generally ranked near the middle of the 35 countries included in the dataset. The cheapest plan for New Zealand is slightly below average for the low user basket (one per cent below the average) and slightly above the average for the medium and high user baskets (six and three per cent above the average respectively).
76. In calculating the monthly cost of each plan, the ongoing monthly rental and any additional usage charges (that are incurred when the data cap is exceeded) are included. An allowance is made for non-recurring costs, such as installation and modem charges.¹⁶ The results exclude GST/VAT.

Table 2: New Zealand ranking by user type

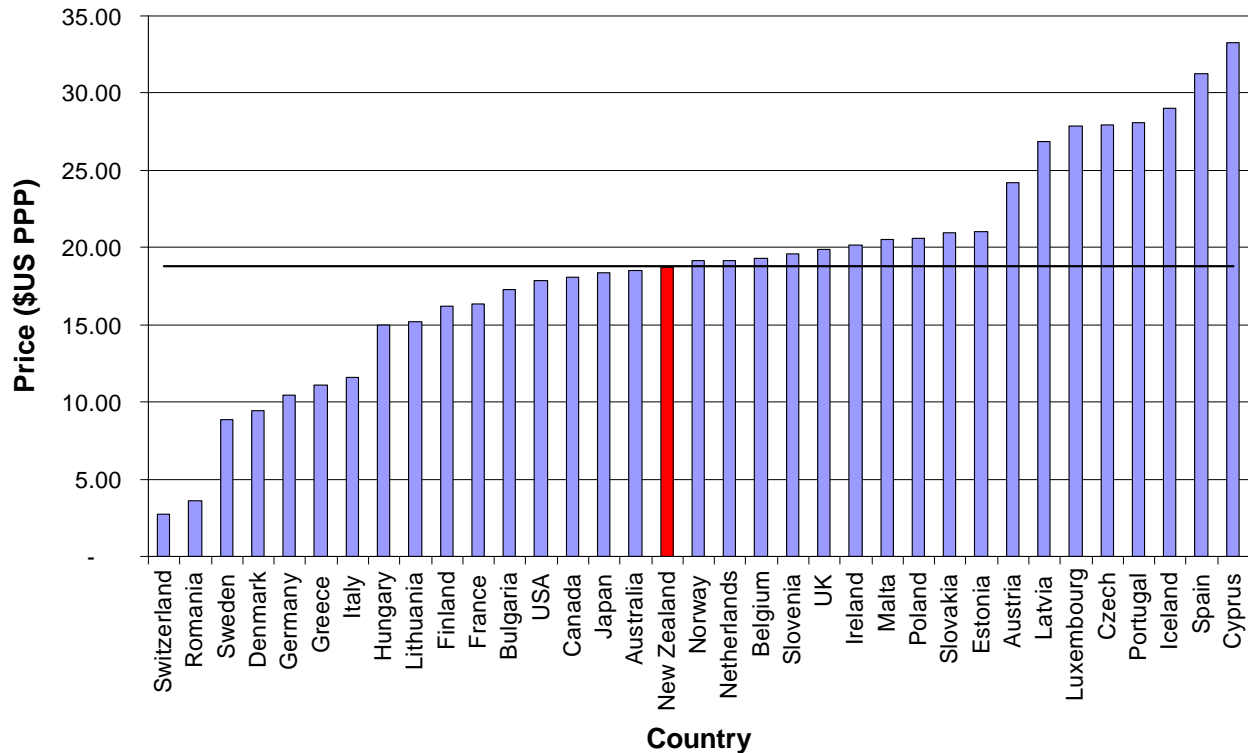
| User Type | Minimum downstream speed | New Zealand ranking | Variation from average |
|-----------------------------|--------------------------|---------------------|------------------------|
| Low user (1GB per month) | No minimum | 17 out of 35 | -1% |
| Medium user (5GB per month) | 4Mbps | 25 out of 35 | +6% |
| High user (20GB per month) | 10Mbps | 19 out of 33 | +3% |

¹³ For example, Telecom New Zealand's broadband plans include a \$10 per month discount if the customer also purchases landline calling services through Telecom.

¹⁴ The Commission notes that the discounted broadband prices have been included for Telecom NZ in the June 2009 version of T-Connect. Both the standalone and discounted prices have been included for Optus in Australia, however, given that T-Connect selects the cheapest plan for each country, the discounted prices are used for Optus.

¹⁵ T-Connect contains data on broadband plans for at least two providers in each of the 35 countries included by Teligen. Telecom and TelstraClear are the operators listed for New Zealand.

¹⁶ These non-recurring costs are recovered over a period of three years (36 months).

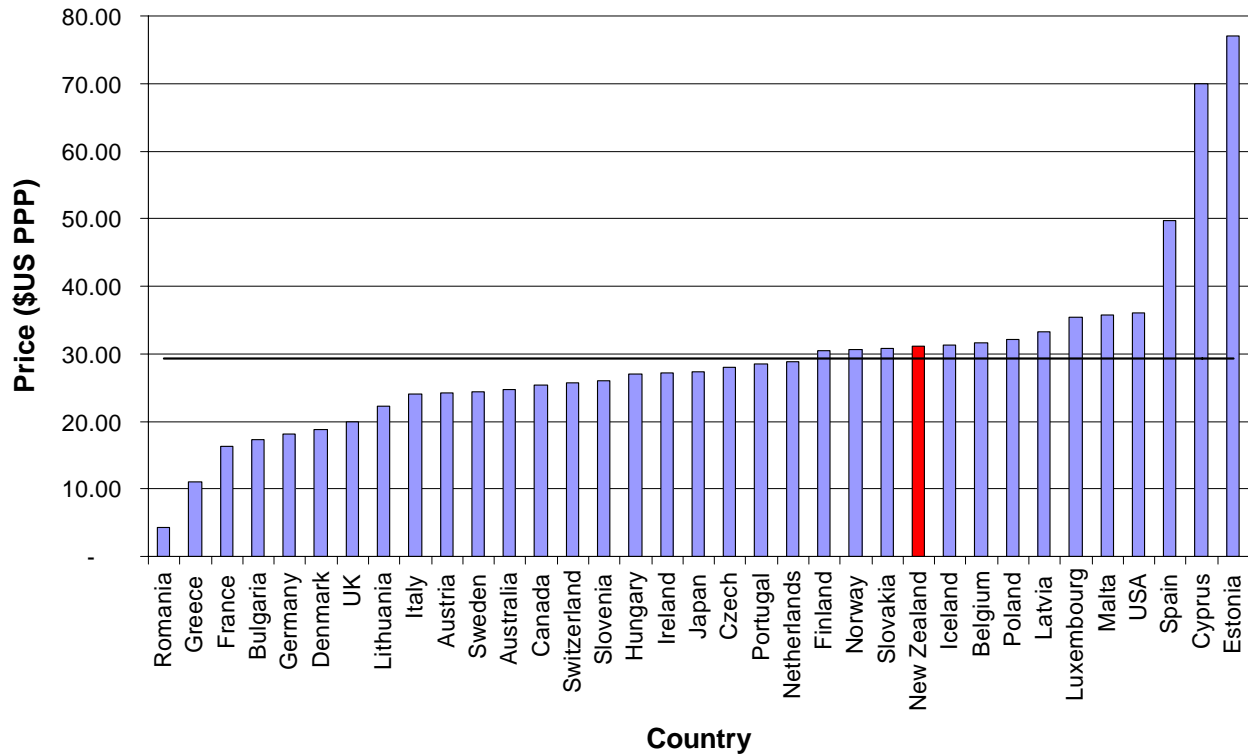
*Low User Basket***Figure 18: Broadband Low User Basket Results¹⁷**

Source: Teligen T-Connect, June 2009

77. The Commission has modelled the low user basket with data usage of up to 1 GB per month. In benchmarking the low user profile, the Commission has catered for “entry level” plans and, consequently, has not imposed any minimum speed requirements.
78. For the low user basket, New Zealand is ranked 17 out of the 35 countries included in T-Connect. The plan selected as the cheapest for New Zealand is TelstraClear PDQ Launch 1G, at a price of \$18.70 USD/PPP (NZ\$28.13¹⁸). The average price for this basket was \$18.80 USD/PPP.
79. In general, New Zealand broadband plans tend to perform more competitively at lower levels of data usage (relative to higher levels of data usage), which is likely to be due to the fact that many European providers do not employ data caps.

¹⁷ The version of T-Connect supplied by Teligen contained PPP rates sourced from Eurostat, so PPP rates for non-European countries were not included. The Commission has used PPP rates for 2009 (estimates) sourced from the International Monetary Fund, which covers all 35 countries included in the benchmarking process.

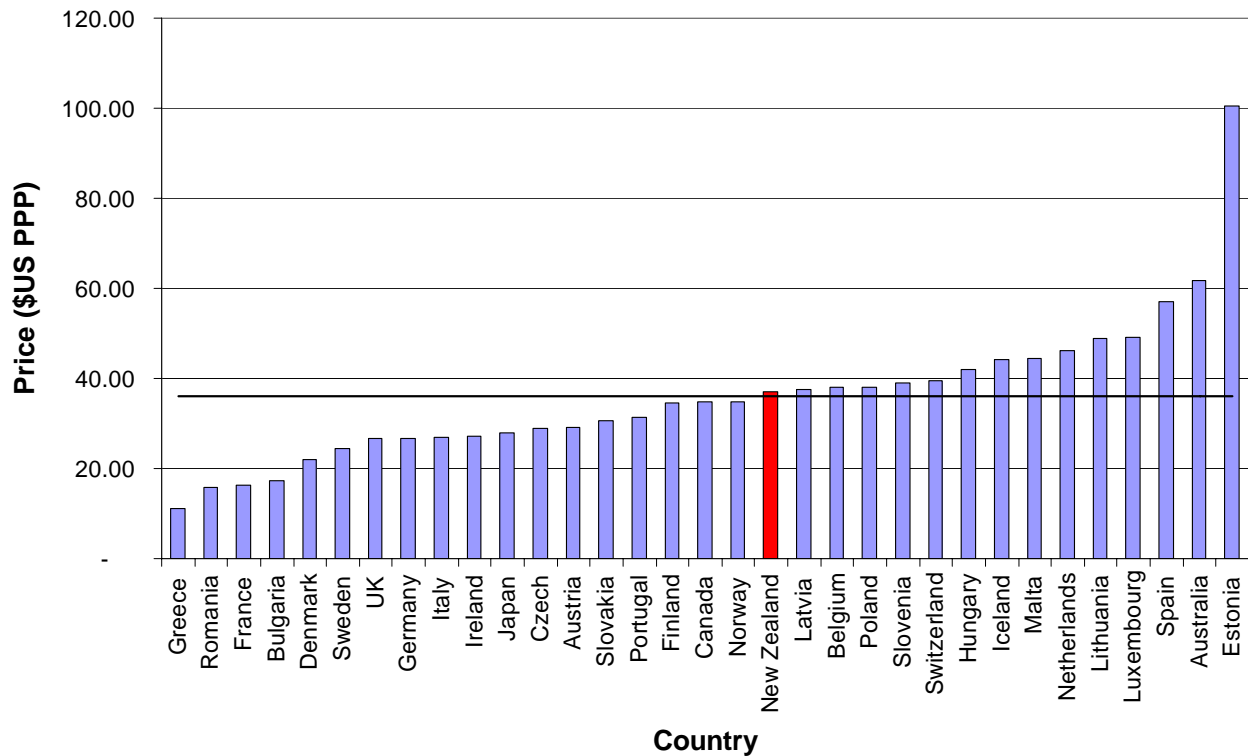
¹⁸ Excluding GST. This also includes recovery of non-recurring installation and modem costs.

*Medium User Basket***Figure 19: Broadband Medium User Basket Results¹⁹**

Source: Teligen T-Connect, June 2009

80. The medium user basket has a usage volume of 5GB per month and a minimum downstream speed of 4Mbps. For plans meeting these characteristics, New Zealand's ranking is 25 out of 35 countries. The plan selected for New Zealand is TelstraClear PDQ Turbo 10G, at a price of \$31.11 USD/PPP (NZ\$46.79). The average price for this basket was \$29.26 USD/PPP.
81. The increase in data usage from 1GB per month to 5GB appears to drive the drop in ranking for the medium user basket when compared to the low user basket.

¹⁹ Some broadband plans are structured so that they have a fixed monthly price and, if the data cap is exceeded, the connection speed is reduced for the remainder of the billing period (for example, for the Telecom Go, Explorer, and Adventure plans, the connection is reduced to dial-up speeds). For plans such as these if the data cap is insufficient for the usage volume, the Commission has selected the next cheapest plan for that country. The same applies for the High User Rankings.

*High User Basket***Figure 20: Broadband High User Basket Results**

Source: Teligen T-Connect, June 2009

82. In benchmarking the high user profile, T-Connect Basket 6 (which incorporates a usage volume of 20GB per month) has been used. In addition, the Commission has specified a minimum downstream speed requirement of 10Mbps. Therefore, the high user basket will capture higher speed broadband plans, for example, those based on technologies such as ADSL2+ and VDSL.
83. For the high user basket New Zealand is ranked 19 out of 33 countries.²⁰ The plan selected for New Zealand is Telecom Adventure, at a price of \$37.07 USD/PPP (NZ\$55.76). The average price for this basket was \$36.03 USD/PPP.
84. ADSL2+ which enables theoretical downstream speeds of up to 24 Mbps, and in practice downstream speeds of up to 15 Mbps, is widespread throughout New Zealand and is now the most common technology used to provide residential broadband services in this country. ADSL2+ based plans are generally not priced at a premium in the NZ retail market. Consequently, despite a higher data usage requirement, New Zealand's performance improves for the high user basket relative to the medium user basket.

²⁰ Two countries (Cyprus and USA) did not have any residential plans listed in T-Connect meeting the 10Mbps minimum downstream speed requirement.

Conclusions

85. The unbundling of exchanges and Chorus's cabinetisation programme continue to be the main areas of investment in the fixed line market.
86. Although a further 18 exchanges were unbundled in the first half of 2009, bringing the total to 64, the growth in unbundled lines has been subdued. Growth is likely to have been affected by Telecom's wholesale loyalty offers encouraging the sale of broadband plans that rely on bitstream rather than UCLL. In addition, the exchanges unbundled were largely outside Auckland and unbundled for TelstraClear which did not launch retail services using unbundled lines until October 2009.
87. The number of wholesale services sold that allow other providers to offer retail services to end-users continues to grow, showing consumers are taking advantage of greater choice in the market. The number of Telecom's residential lines retailed by a service provider other than Telecom has doubled in the last two years to reach nearly 250,000 as at 30 June 2009.
88. The take up of broadband services has continued to grow at an annual rate of around 14 per cent, which is above the OECD average. The pricing of broadband services in New Zealand is broadly in line with that of similarly developed countries.
89. Telecom's residential fixed line services remain relatively expensive according to OECD benchmarking. Telecom's residential line rental is one of the highest in OECD and its residential fixed-to-mobile prices are among the highest in the OECD.

Recent Industry Developments

90. The Commission's 2008 Annual Telecommunications Market Monitoring report was released on 14 April 2009, and included a summary of market developments through most of the first quarter of 2009. These are summarised below along with significant developments arising since the release of the annual report.
91. **February 2009**
- In apparent response to Telecom's planned launch of its new nationwide 3G mobile WCDMA 850 network in June 2009, Vodafone announced that it would have its 3G roll-out to 97 per cent of the population completed by 31 May 2009 rather than April 2010.
 - Vector announced plans to extend its fibre optic network in Auckland with Vodafone as its flagship customer. The extended network will allow Vector to supply backhaul services to 41 of Telecom's exchanges.
92. **March 2009**
- Telecom Wholesale introduced the All of New Zealand Offer, which consisted of various bundled offers that included broadband, phone line and backhaul to its wholesale customers, who use these bundles to provide services to residential end-users. This 'loyalty offer' gave effective price discounts of 20 to 30 per cent and locked customers into a two-year deal, but required the service provider to keep 90 per cent of all current and future customers on Telecom Wholesale services.
 - Telecom's retail unit started selling Total Home Lite which includes line rental and free national calls to one nominated landline number. It also includes broadband with 3 GB of data. The price is \$85 per month in Auckland, Wellington and parts of Christchurch, and \$95 per month in other areas. This product is similar to bundled offers from Vodafone and Orcon which are cheaper in areas where these service providers have unbundled Telecom exchanges under the Commission's UCLL decision.
 - FX Networks announced it had completed its fibre roll-out connecting Tauranga, Rotorua, Taupo, Napier, Hastings, Dannevirke, Masterton and Wellington, at a cost of \$17 million. The company said it had laid 680 kilometres of fibre in the previous 12 months.
 - Slingshot started offering free dial-up internet for all customers that have their Homeline and direct dial calling with Slingshot.
93. **April 2009**
- Vodafone and Kordia filed complaints with Telecom's Independent Oversight Group (IOG) and the Commission regarding Telecom Wholesale's All of New Zealand Offer, alleging that the offer breached the Commerce Act 1986 and the Telecom Separation Undertakings. The IOG is responsible for monitoring Telecom's compliance with the Separation Undertakings, which require Telecom to maintain separate access network, wholesale, and retail business units (Chorus, Telecom Wholesale, and Telecom Retail and Gen-I, respectively).

- Telecom raised the line rental for residential fixed line phones with effect from 1 April. The standard residential home line rental increased by \$1.50 to \$46.35 per month, in line with inflation, as allowed under the local calling TSO (formerly Kiwi Share). TelstraClear raised its line rental for resold Telecom lines from \$49.99 to \$51.65 per month, which is discounted depending on tolls spend.
- Telecom lowered its residential fixed-to-mobile calling rates by two cents per minute (including GST) and Vodafone lowered its single residential fixed-to-mobile calling rate by 1.2 cents per minute (including GST). The cuts in the calling rates were required under the terms of undertakings provided by Vodafone and Telecom, and accepted by the government, in lieu of regulation of fixed-to-mobile termination rates in 2007. The drops in calling rates coincide with a drop in the wholesale fixed-to-mobile termination rate by one cent per minute (excluding GST), which the undertakings require Telecom and Vodafone to pass through to end-users.
- Vodafone introduced a new data plan for mobile broadband prepaid customers that allows them to purchase half a gigabyte of data for \$40.
- Orcon entered the business fixed line market with a plan that included free local calls. The plan is only available to businesses located in the areas Orcon is offering unbundled lines by means of the UCLL regulated service (At the time, Orcon had unbundled exchanges only in Auckland.).
- TelstraClear completed a 40 gigabits per second link between Wellington and Christchurch. It follows two paths; one on land and the other by sea cable, to provide full back-up for TelstraClear's customers and for increased capacity to meet increased demand for broadband.
- TelstraClear stated that it had signed up 41 per cent of all new fixed line broadband connections in New Zealand in the six months to 31 December 2008.
- CallPlus announced it would become a mobile virtual network operator (MVNO) in August using Vodafone's network.

94. ***May 2009***

- Orcon announced it was cutting its staff numbers by 16 per cent, laying off 23 employees. CEO Scott Bartlett said although the company is on target to meet the current year profit targets, the company anticipated a challenging year ahead.
- Woosh announced a partnership with Telecom Wholesale that will allow Woosh to provide fixed-line home phone and broadband bundles with non-geographic pricing. The plans announced by Woosh include free voice mail and start at \$69 per month with one gigabyte of data.
- Vodafone and Telecom reached an out-of-court settlement in a dispute arising from interference between Telecom's new 3G mobile network and Vodafone's existing network. Telecom agreed to install filters to resolve interference issues affecting Vodafone mobile customers, delaying its XT network launch date.
- Compass Communications started offering mobile phone plans from \$15 per month with calls at 25 cents per minute for its residential customers.

- NZ Communications Limited rebranded itself as 2degrees and announced it would launch its mobile network in August 2009. 2degrees stated that it will ultimately provide a mixture of 2G and 3G services running on 900MHz, 1800MHz and 2100MHz frequencies.
- Vodafone, on 28 May, completed its 3G mobile network extension to cover 97 per cent of the population. It appears the extensive roll-out was speeded up from the originally proposed April 2010 completion date to ensure it was completed before the launch of Telecom's XT network.
- Vodafone reported that it had 500,000 customers using 3G handsets, which are capable of downloading music, pictures, and making use of other high-speed data services through the mobile handset.
- It was disclosed that Vodafone offers 3G services outside the major populated areas using its 900 MHz frequencies. The 2100 MHz frequencies are used in more populated areas and reach 70 per cent of population. 3G devices that work only at 2100 MHz on Vodafone's network such as the popular Apple iPhone do not, therefore, receive 3G service in all areas.
- Telecom's new XT mobile network went live on 29 May. The XT network has a new range of one-rate pricing plans that charge a flat fee for all off-network calls, any time of day and to any other mobile network.
 - The effective one-rate calling charge varies by postpaid plan, ranging from 60 cents per minute for the \$29.95 a month plan to 32 cents per minute under the \$799.95 per month plan.
 - On-net offers remain with "My Favourites", an add-on service that allows unlimited calls to nominated Telecom numbers, and the "Business Share" plans, which allow (for a fixed monthly fee) unlimited calls between users that share the plan.
 - Telecom's \$10 text offer is not available on the XT network, although other text bundles are available.
 - Regular prepaid plan calls are charged at the same flat rate as Vodafone's Supa Prepaid plan (89 cents per minute) but are billed per second after the first minute rather than rounding up to the nearest minute like Supa Prepaid.
 - In addition, XT prepaid top-ups earn bonus credits of 25 to 33 per cent. However, XT prepaid balances expire after six months rather than the usual 12.
 - Customers are likely to need to buy a new phone to use the XT network, but may port their existing telephone numbers under the LMNP Deed.
- The Commission finalised its first review of backhaul services. The review concluded that four routes that the Commission had previously expected to be subject to competition were not competitive, so regulated backhaul services were made available on those routes. The Commission also concluded that three routes that the Commission had not previously expected to be subject to competition were in fact competitive. In addition, unbundling of additional local exchanges by Telecom's competitors meant that new backhaul routes, which were not considered as part of the Commission's June 2008 backhaul decision, were assessed. The Commission concluded that 13 of the 41 new routes are competitive.

95. *June 2009*

- TelstraClear and Vodafone raised their residential line rental. TelstraClear's line rental for its cable customers rose by \$1 to \$36.95 per month. Vodafone's line rental for resold Telecom lines rose to \$50 per month while the line rental for lines in its so called Red Zone rose to \$40 per month.
- Telecom reported customers using Facebook on their mobile phones had increased by 700 per cent since January 2009.
- Vodafone started offering Sky TV to its fixed line customers. The price is the same retail price charged by Sky with the only attraction being that everything is on one bill. Telecom ceased offering discounted Sky bundles in May 2008 and existing customers of those bundles had them grandfathered.
- The Commission released its decision on the price and non-price terms on which Telecom must make the unbundled sub-loop services available to other telecommunications providers. The monthly rental charge set for access to the sub-loop unbundled copper local loop service was \$11.99 per line in urban areas and \$22.14 per line in non-urban areas. In addition, there are other charges for sub-loop co-location and sub-loop backhaul services. The combined cost per customer for the unbundled sub-loop services is approximately 26 per cent higher than the corresponding costs for local loop unbundling but service providers will be able to provide customers with higher-value services over the sub-loop services.
- The Commission released its draft report recommending that mobile termination prices be regulated. A final report to the Minister of Communications will be issued after consultation with interested parties on the report and undertakings put forward by the mobile operators as a substitute to regulation.

96. *July 2009*

- Telecom Wholesale announced its follow-up to the All of NZ Offer, the Regions Offer, which made available discounted wholesale broadband and phone line bundles in specific regions (Hamilton, Palmerston North, Rotorua, Tauranga and Hibiscus Coast). To accept the offer, wholesale customers had to agree to use Telecom Wholesale services to provide retail services to 90 per cent of all current and future end-users outside of Auckland.
- TelstraClear signed a three-year MVNO agreement with Vodafone, but it will retain its Telecom CDMA agreement until Telecom closes down that network. TelstraClear plans to start offering mobile services on Vodafone's network to business customers in the last quarter of the year.
- Telecom started offering a \$600 credit to entice Vodafone's iPhone customers to switch to Telecom. The offer gave 240MB of free data each month for 24 months to any user who signed up for the \$79.95 a month One Rate 180 plan or higher on a 24-month contract.

97. *August 2009*

- 2degrees launched its GSM (2G) and EDGE mobile network with one simple prepaid plan.
 - Phone calls are charged at a flat rate of 44 cents per minute (rounded up to the nearest minute) regardless of time of day or destination network.
 - Texts cost 9 cents each.

- Top-ups are a minimum of \$20 which gives 100 free texts and 22 cents per minute calling to other 2degrees customers and any landline for 30 days. Any unused balance expires after 12 months.
- Data is charged at 50 cents per MB.
- SIM cards generally cost \$2 (with \$2 credit).
- Customers can bring existing mobile numbers and get a credit of \$5 for doing this.
- Southern Cross announced a price reduction of 15 per cent for circuits to the US.
- CallPlus and its residential arm Slingshot launched mobile services that use Vodafone's network.
- The Independent Oversight Group (IOG) reached the view that Telecom Wholesale's loyalty offers (the All of NZ Offer and the Regions Offer) constituted a breach of Telecom's Separation Undertakings.
- Following the announcement of the IOG and the receipt of complaints from Vodafone (and later Orcon), the Commission launched an investigation into the alleged breach.

98. *September 2009*

- It was announced that Vector would be providing high speed fibre optic broadband connections to all the new houses and buildings to be constructed at the Government's Hobsonville project in Auckland .
- Kordia announced it was pleased with the progress being made on the development of its project to deploy a trans-Tasman submarine cable.