Public
13.3/10147
798132_1

2008 Telecommunications Market Monitoring Report

14 April 2009

Annual report of the Commerce Commission's monitoring of competition in New Zealand telecommunications markets and the performance and development of those markets under section 9A of the Telecommunications Act 2001.

ISBN 978-1-869452-74-2

CONTENTS

LIST OF DEFINED TERMS AND ABBREVIATIONS....4
EXECUTIVE SUMMARY....6
INTRODUCTION....8
INDUSTRY OVERVIEW....9
Retail Activities....9
Investment....11
Number Portability....12
MOBILE MARKET....14
Conclusion....19
FIXED LINE MARKET....20
Calling Charges....22
Cost of Calling Plans....24
Broadband....28
Backhaul....31
Broadband quality....32
Conclusion....32
THE YEAR IN REVIEW....33

LIST OF FIGURES

Figure 1: Mobile Connections versus Fixed Line Connections 10
Figure 2: Total Retail Telecommunications Revenues 10
Figure 3: Calling Volumes (Minutes) 11
Figure 4: Industry Capital Expenditure 12
Figure 5: Local and Mobile Ported Number Volumes 13
Figure 6: Mobile Phone Connections 14
Figure 7: Mobile Market Shares of Customer Connections 15
Figure 8: Outbound Mobile Minutes Index 16
Figure 9: Historical NZ Performance in OECD Mobile Calling Baskets 17
Figure 10: Nov 2008 NZ Performance in OECD Mobile Calling Baskets 18
Figure 11: Fixed Line Retail Revenues 20
Figure 12: Calling Revenue Indices 21
Figure 13: Access and Data Revenue Indices 21
Figure 14: Fixed Line Retail Calling Minutes 22
Figure 15: Telecom Fixed Line Average Calling Charges 23
Figure 16: Fixed Line Average Calling Charges 24
Figure 17: NZ Ranking in OECD Fixed Line Residential Baskets 25
Figure 18: $NZ Cost of OECD Fixed Line Residential Baskets 25
Figure 19: Residential Medium User Basket NZ Plan Cost – Nov 2008 26
Figure 20: Non-Telecom Voice Customers 27
Figure 21: Fixed Broadband Connections by Technology 29
Figure 22: Telecom DSL Connections 30
Figure 23: Telecom Share of Quarterly Net Growth in Retail DSL Connections 30

LIST OF DEFINED TERMS AND ABBREVIATIONS

CPI	Consumer Price Index – an index used to measure inflation.
cpm	cents per minute
DSL	Digital subscriber line – method of transmitting high speed data and voice simultaneously over a copper phone line.
GSM	Global System for Mobile communications – a widely used digital, second generation mobile phone standard.
IP	Internet Protocol – method that computers use to communicate over the internet
ISP	Internet Services Provider
ITU	International Telecommunication Union
MTAS	Mobile termination access services, which for the purposes of the Commission's current MTAS investigation are mobile-to-mobile termination, fixed-to-mobile termination and termination of SMS messages.
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing Power Parity – exchange rate designed to equalise standard of living differences between countries, and is therefore generally accepted as an appropriate conversion method for non-tradable goods and services.
TCF	Telecommunications Carriers' Forum
SIM	Subscriber Identity Module – commonly known as a SIM card that contains a microchip that stores data that identifies the user, for use in GSM and compatible 3G mobile phones.
SMS	Short Message Service – commonly known as a text messaging, is a service for sending short messages between mobile devices.
STD	Standard Terms Determination – the terms on which a designated access or specified service must be supplied by access providers to all access seekers requesting the service.
Telecom	Telecom Corporation of New Zealand Limited and Telecom New Zealand Limited
TSO	Telecommunications service obligations – an obligation to supply certain telecommunications services to groups of end-users who may not otherwise be supplied on a commercial basis or at a price that is considered to be affordable.
UCLL	Unbundled Copper Local Loop – wholesale access to the copper line connecting a phone user to the local exchange.

WCDMA Wideband Code Division Multiple Access – a third generation mobile phone standard often provided as a progression from the GSM standard.

EXECUTIVE SUMMARY

1. 2008 was another year of positive change for New Zealand telecommunications markets with the successful introduction of local loop unbundling and strong growth in some existing regulated services like the resale of Telecom lines.

2. There were signs of increasing competition in fixed line markets during 2008. However, despite some positive developments in the mobile services market, the competitive environment remains largely unchanged from previous years. While mobile calling volumes continue to grow at a strong rate, they are low by international standards making up only one quarter of total calling minutes compared to at least one third to one half in comparable countries. The growth in mobile usage has likely been driven by restricted on-net calling offers like BestMates given that mobile revenues and list prices have remained largely unchanged.

3. The expected entry of a third operator into the market and Telecom's completion of its new 3G network, that uses the same WCDMA technology as Vodafone, later in 2009 should help to increase competition for the benefit of end-users. However, a number of other factors may limit the competitive impact of these developments, including the level of mobile termination rates (which are currently the subject of a separate investigation by the Commission) and the cost of national roaming. The Commission has deferred its decision on whether to investigate extending the regulation of national mobile roaming to include price.

4. Vodafone's Base plans, formerly excluded from the benchmarking used in the Commission's monitoring reports, are now clearly available to mobile users. Consequently these plans have now been included in the OECD benchmarking of New Zealand's mobile calling plans. Their inclusion significantly improves the average New Zealand performance across all baskets from 127 percent of the OECD average cost to 84 percent.

5. In the fixed line market, average calling prices continued to fall in 2008 although list prices have not shown much movement. This is illustrated by the fact that New Zealand residential plans continue to rank relatively poorly in OECD benchmarking (based on standard Telecom plans), with high line rental and high fixed-to-mobile calling charges largely responsible.

6. However, there are a range of better priced fixed line voice plans from alternative providers, some of which have a lower line rental. Telecom continues to raise its standard residential line rental by the CPI each year as allowed for under the TSO.

7. Better deals for consumers have largely shown up as new bundled offers, often incorporating calling, line rental and broadband. These offers are most competitively priced in Auckland where exchanges have been unbundled, and in Wellington and Christchurch where TelstraClear has its own infrastructure. This suggests consumer gains are being driven by the competition provided by unbundling in Auckland and the full facilities based competition provided by TelstraClear's cable network in Wellington and Christchurch.

8. The number of consumers taking service over unbundled lines showed strong growth in the second half of 2008. Whether that growth can be sustained in 2009 will depend on a variety

of factors, but may be reduced if few exchanges are unbundled outside of Auckland. A halt in the unbundling of exchanges could see competitive pressures ease.

9. The broadband market continued to grow strongly in the first half of 2008 but showed some signs of slowing down in the second half. This could be a natural slowing of the market as the pool of potential new customers shrinks with increasing broadband penetration rather than the impact of the recession in New Zealand. Telecom's share of the retail broadband market has continued to decline and now sits at 57 percent of total broadband connections compared to 61 percent at the end of 2007.

10. The general quality of broadband services as tested from central sites improved over 2008, with major ISPs investing in extra network capacity. Nearly 60 percent of DSL lines have now been upgraded to ADSL2+ which can improve broadband performance for consumers with compatible modems. Early indications from end-user testing are that higher priced residential broadband plans perform better and the best quality broadband services are those obtained via UCLL connections.

11. The latest statistics comparing the total number of broadband connections in New Zealand with the rest of the OECD are for 30 June 2008.[1] The OECD estimated there to be 20.4 broadband subscribers per 100 population in New Zealand, which is 96 percent of the OECD average, giving New Zealand a ranking of 19 out of 30 in the OECD.

12. Backhaul is an important component in the supply of broadband, and competition in its provision is growing. In particular, FX Networks continued to expand its North Island fibre network and Vector Communications recently expanded its Auckland fibre network to enable it provide Vodafone with backhaul services to 41 exchanges. The Commission determined in its UCLL backhaul STD that Telecom faced competition in 37 out of 57 primary UCLL backhaul links from local exchanges that were assessed. It was also determined that Telecom faced competition in 22 out of 38 secondary UCLL national backhaul links.

13. With international backhaul, significant reductions in price were noted, possibly in response to the proposed development by Kordia and Pipe Networks of a second international backhaul link, which will be reported on further in next year's report.

14. Approximately $1.5 billion was spent on telecommunications related capital investment in 2007/08 financial year, much of it by Telecom to replace existing assets, but also significant capital expenditure by NZ Communications in rolling out the first stage of their mobile network.

15. In conclusion, the 2006 legislative reforms continue to have a positive effect on the fixed line telecommunications markets and are likely to show further gains in 2009, with significant developments also expected in the mobile market in 2009. Despite the poor economic climate, continued capital expenditure is expected to further Telecom's cabinetisation plans and the roll-out of Telecom's and NZ Communication's new mobile networks.

[1] http://www.oecd.org/dataoecd/21/35/39574709.xls

INTRODUCTION

16. This report is made under section 9A, which requires the Commission to make available reports, summaries, and information regarding its sector monitoring activities. The Commission's sector monitoring duties include monitoring competition in, and the performance and development of, telecommunications markets, as well as inquiries, reviews, and studies relating to the telecommunications industry or the long-term benefit of end-users of telecommunications services in New Zealand.

17. The report is the Commission's second annual telecommunications market monitoring report, and looks at the state of telecommunications markets in New Zealand and developments that occurred largely during the 2008 calendar year. The Commission has issued less comprehensive quarterly monitoring reports throughout 2008.

18. The Commission seeks information from a variety of sources and is limited in its use of some of this data because it has been designated 'commercially sensitive'.

19. Much of the data reported here comes from the results of the 2007/08 TCF telecommunications industry questionnaire which is administered by the Commission. The data from the industry questionnaire is for the 2007/08 financial year, but more recent industry data is also used where available. This is mostly Telecom data taken from public documents reporting Telecom's financial results. The OECD benchmarking data is supplied by Teligen on a subscription basis and has been supplemented by the Commission from its own research.

20. The Commission has also been undertaking more specialised inquiries and studies as part of its sector monitoring role. These include its NGN study and number management study. These studies are not discussed in this report.

INDUSTRY OVERVIEW

Retail Activities

21. As at September 2008 retail fixed line connections totalled about 1.9 million compared to retail mobile connections of 4.6 million. Figure 1 shows how the number of mobile connections compared to fixed line connections has changed over the last 13 years. There are now more than twice as many mobile connections as fixed line connections.

22. Data has now been collected on the retail telecommunications activities of the main New Zealand carriers for the 2005/06, 2006/07 and 2007/08 financial years.[2] Total retail telecommunications revenue for 2007/08 and its major components are shown in Figure 2. Total revenue was little changed at $5.34 billion in the 2007/08 year compared to $5.37 billion in 2006/07 and $5.34 billion in 2005/06.

23. The trends in the major categories of telecommunications retail revenue over the last three financial years are also shown in Figure 2. In percentage terms, most categories have showed little change over the last three financial years. After rising by 2.5 percent in 2006/07 mobile revenue rose only marginally in 2007/08 to reach $1.98 billion. Internet and data revenue from fixed networks fell marginally in 2006/07 before climbing 2 percent in 2007/08 to reach $914 million. Fixed telephone service revenue (fixed network voice services) fell nearly 3 percent in 2006/07 before falling a further 2.4 percent in 2007/08 to $1.98 billion, while revenue from other telecommunications services rose by nearly 11 percent in 2006/07 before falling around 2 percent to $465 million in 2007/08.

24. The volumes of the different types of retail outbound calls made over the voice networks of those surveyed are shown in Figure 3. The size of the pie for the 2007/08 year is nearly 16 billion minutes. This does not include voice calls carried purely over data networks or the internet. The unavailability of volume data for TelstraClear for prior years means few year-on-year comparisons can be made. It is known that the outbound mobile minutes billed by Telecom and Vodafone have grown by a third since 2005/06.

25. For the first time, the volume of non-chargeable (or 'free') local calls has been reported. These make up around one third of total calling minutes compared to 13 percent for chargeable local calls. Calls made on mobile phones account for approximately one quarter of all call minutes[3], while national calls account for 18 percent. Fixed-to-mobile calls are approximately six percent of the total while international calls are approximately five percent.

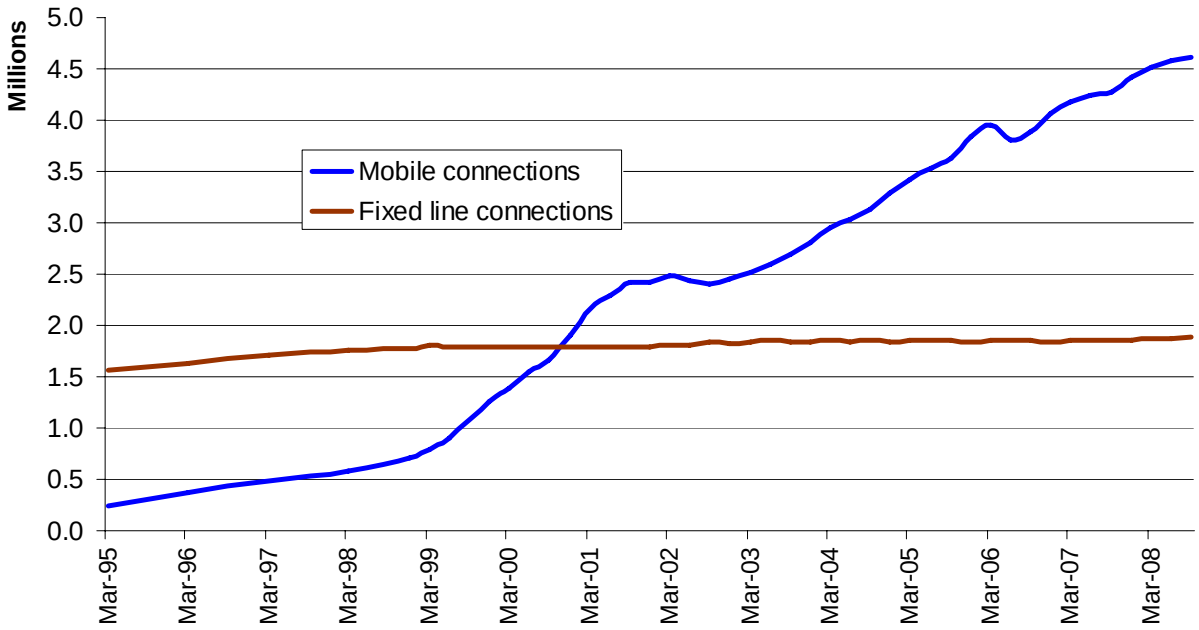
26. Fixed telephone services revenues are about equal with mobile revenues despite mobile voice minutes making up only about a quarter of total minutes.

---

[2] The Commission used a questionnaire largely developed by a TCF working party to collect data from TCF members with retail telecommunications businesses. All respondents apart from Telecom indicated that they wanted most of their individual responses kept confidential. Most of Telecom's responses were already publicly available. The aggregated results of the questionnaire will be posted on the Commission's website shortly after the release of this report. Respondents were Telecom, Vodafone, TelstraClear, CallPlus, Orcon, Compass, WorldxChange and Woosh.

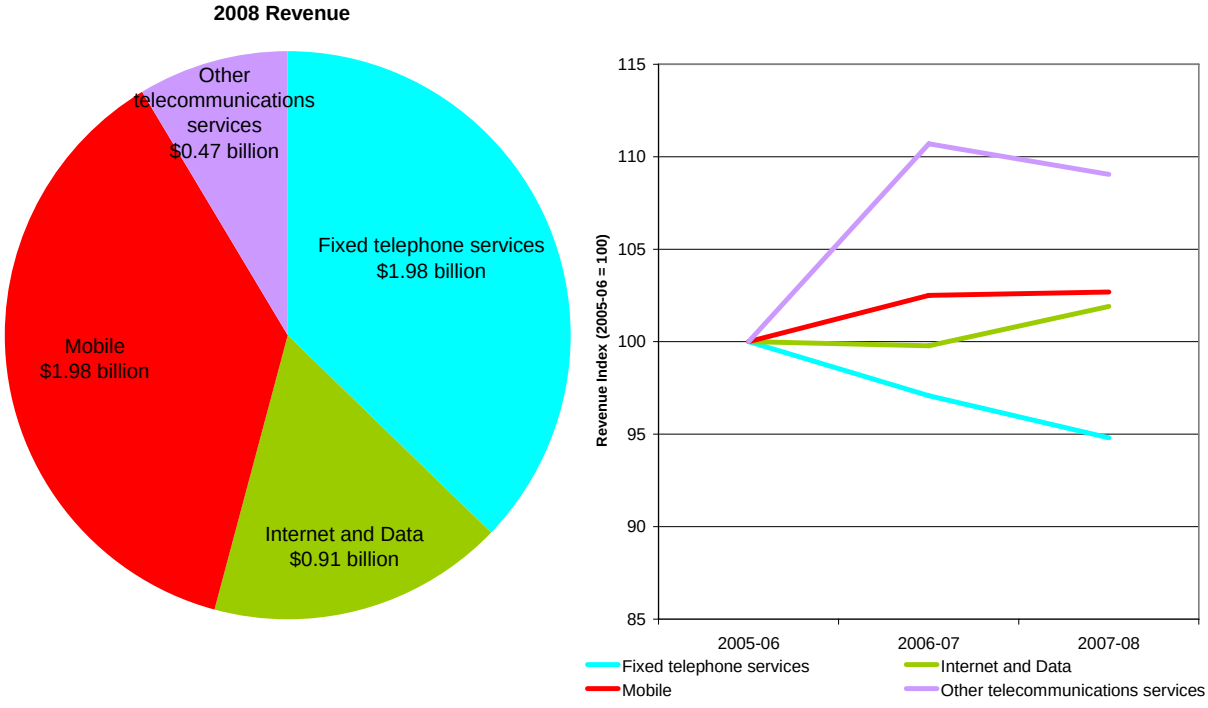
[3] The exact figure cannot be disclosed because Vodafone's considers it outbound mobile calling minutes to be commercially sensitive.

Figure 1: Mobile Connections versus Fixed Line Connections



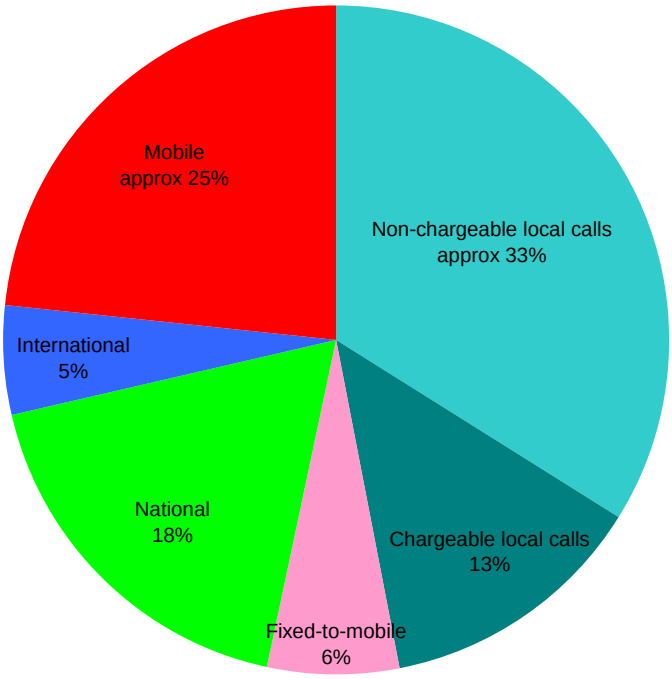
Source: Telecom, Vodafone, Commerce Commission

Figure 2: Total Retail Telecommunications Revenues



Source: Commerce Commission

Figure 3: Calling Volumes (Minutes)



Source: Commerce Commission

Investment

27. As shown in Figure 4, surveyed retail carriers reported total capital expenditure of $918 million in 2005/06, $1,069 million in 2006/07 and $1,184 million in 2007/08. Capital expenditure across the whole telecommunications industry is likely to be significantly higher than this because of investment by firms who were not surveyed because they were not TCF members with a retail business. This would include investment by telecommunications wholesalers like Kordia, FX Networks, CityLink (now owned by TeamTalk) and Vector, as well as likely new mobile entrant NZ Communications.

28. NZ Communications has stated it is spending around $200 million in the first stage of its network build and currently has RMA approval for 395 cell sites.[4] Kordia has reported that in 2007/08 it spent $38 million on the acquisition of property, plant and equipment[5]. This is up from $27 million in 2006/07 and $17 million in 2005/06. Vector reported capital expenditure on its communications business of $18 million in 2006/07, up from $13 million in 2005/06. For 2007/08, Vector reported a combined capital expenditure on communications and metering of $28 million.[6]

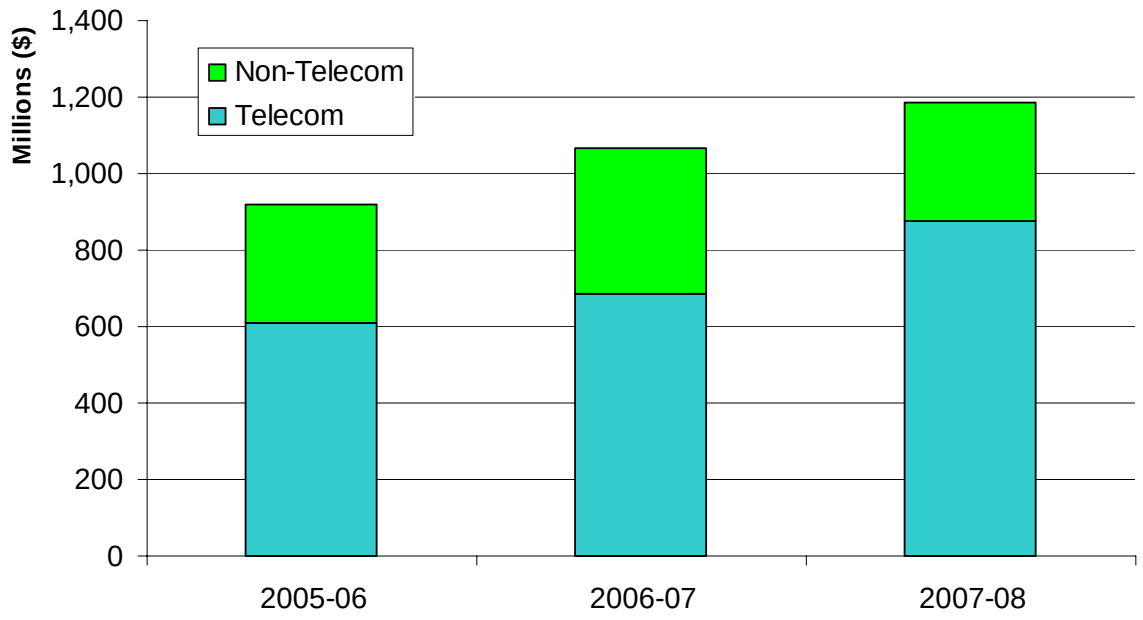
[4] Presentation to Commerce Commission by Tex Edwards, March 2009
[5] Kordia Group Limited Consolidated Financial Statements for year ended 30 June 2008.
[6] Vector Limited Shareholder Review 2008.

29. In total, in the 2007/08 financial year the telecommunications industry made capital expenditure of approximately $1.5 billion.

30. However, much of the reported investment, particularly in the case of Telecom, would not have added to the net stock of telecommunications infrastructure because it would have been spent on replacing existing capital assets at the end of their economic lives. For example, Telecom reported depreciation and amortisation totalling $529 million in 2005/06, $570 million in 2006/07 and $617 million in 2007/08.[7]

31. The total capital spending by non-Telecom retail carriers is significant, particularly when considering NZ Communication's spend on the third mobile network.

Figure 4: Industry Capital Expenditure



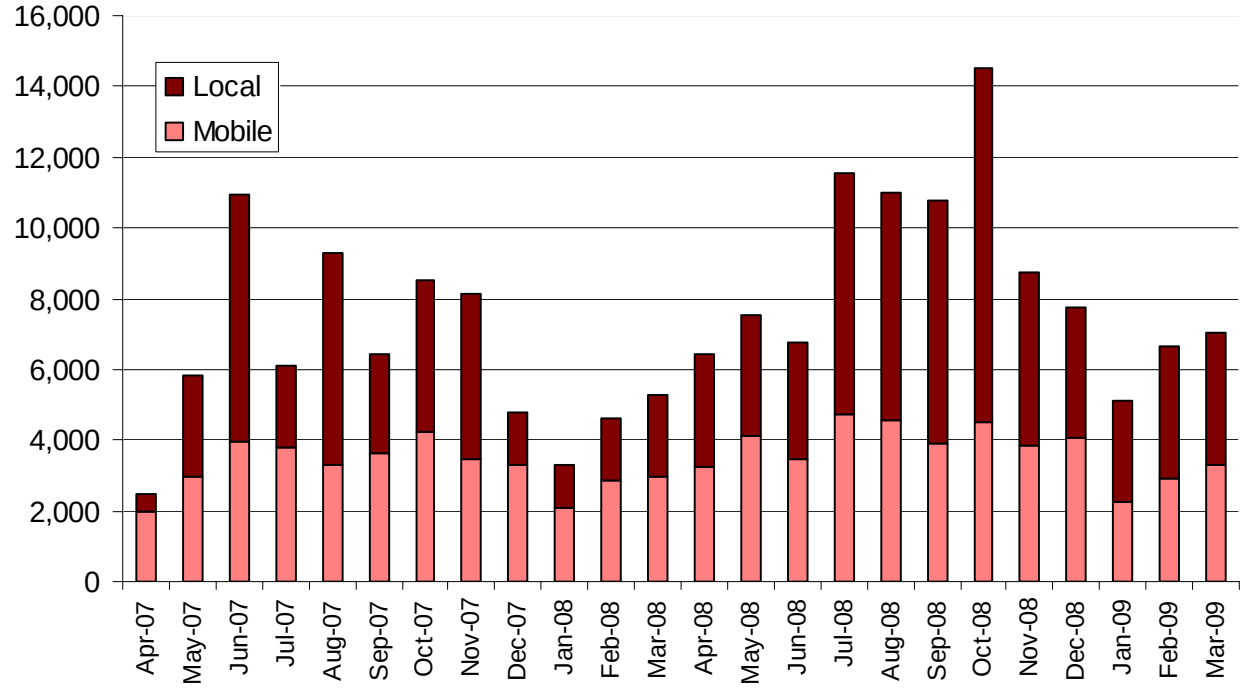
Source: Commerce Commission

Number Portability

32. Mobile and local (fixed line) number portability was introduced on 1 April 2007 Figure 5 shows the quantity of local numbers ported significantly increased from July 2008 when unbundled copper local loops (UCLL) started becoming readily available in Auckland. Households changing to providers utilising UCLL had to request their local number be ported if they wanted to retain it. In the mobile market, customer mobility continues to be hindered by the fact that customers still have to change handsets to change providers.

[7] Telecom Corporation of New Zealand Annual Report for Year Ended 30 June 2008

Figure 5: Local and Mobile Ported Number Volumes



Source: TCF

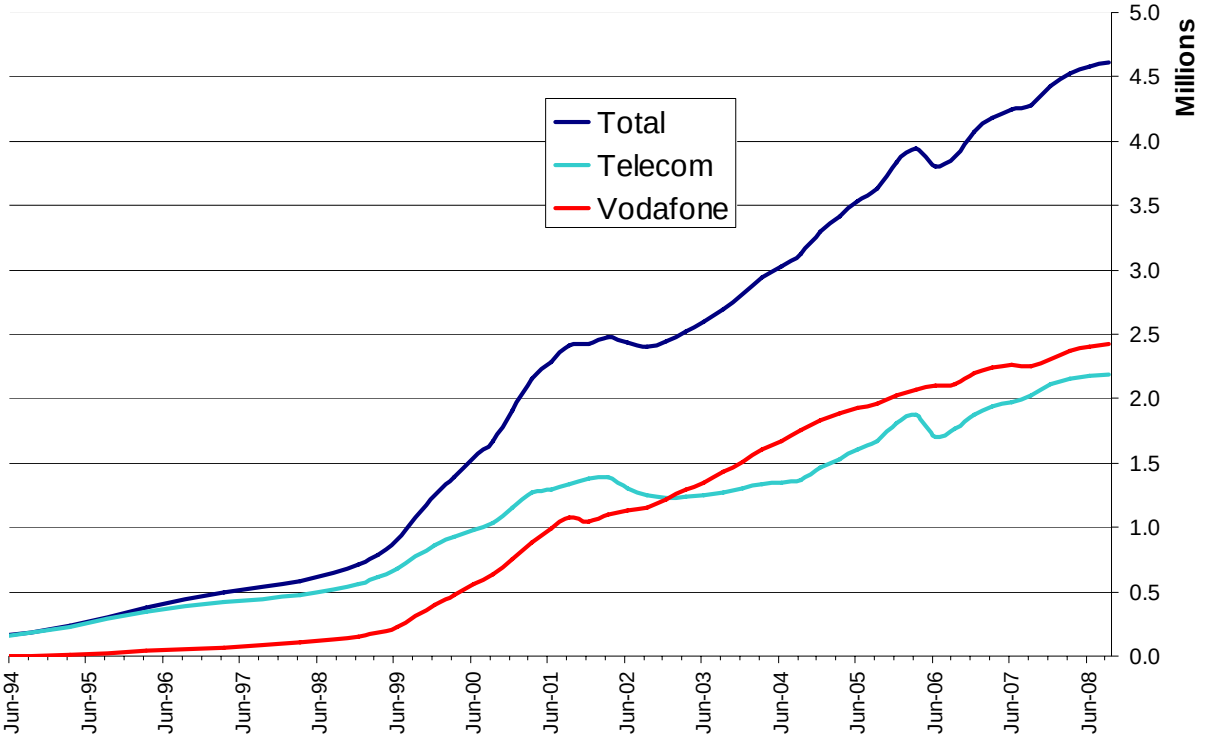
MOBILE MARKET

33. Last year's annual monitoring report expressed concerns about the competitiveness of the mobile market and stated that it appeared that consumers could obtain competitive prices only by using on-net calling offers. High mobile termination rates were also considered to be a barrier for new entrants, who have no established community of users. New entrants would find it difficult to attract customers from existing networks which offer low on-net rates.

34. Following the release of that report, further work was undertaken and the Commission released a Mobile Termination Issues Paper. The Commission then announced in November 2008 that it would commence an investigation into whether mobile termination access services (MTAS) should be regulated. The investigation, under Schedule 3 of the Telecommunications Act 2001, is looking at whether mobile-to-mobile voice termination, fixed-to-mobile voice termination and short-message-service termination (together known as mobile termination access services) should become regulated services under Schedule 1 of the Act.

35. Mobile termination rates dropped from 17 cents per minute to 16 cents per minute in April 2008, in line with the undertakings of Telecom and Vodafone accepted by the government. Mobile phone connections grew by 8 percent in the year to 30 September 2008, reaching 4.62 million as shown in Figure 6. This equates to a penetration rate of 108 percent of the population.[8] This means a large number of people have more than one mobile phone.

Figure 6: Mobile Phone Connections



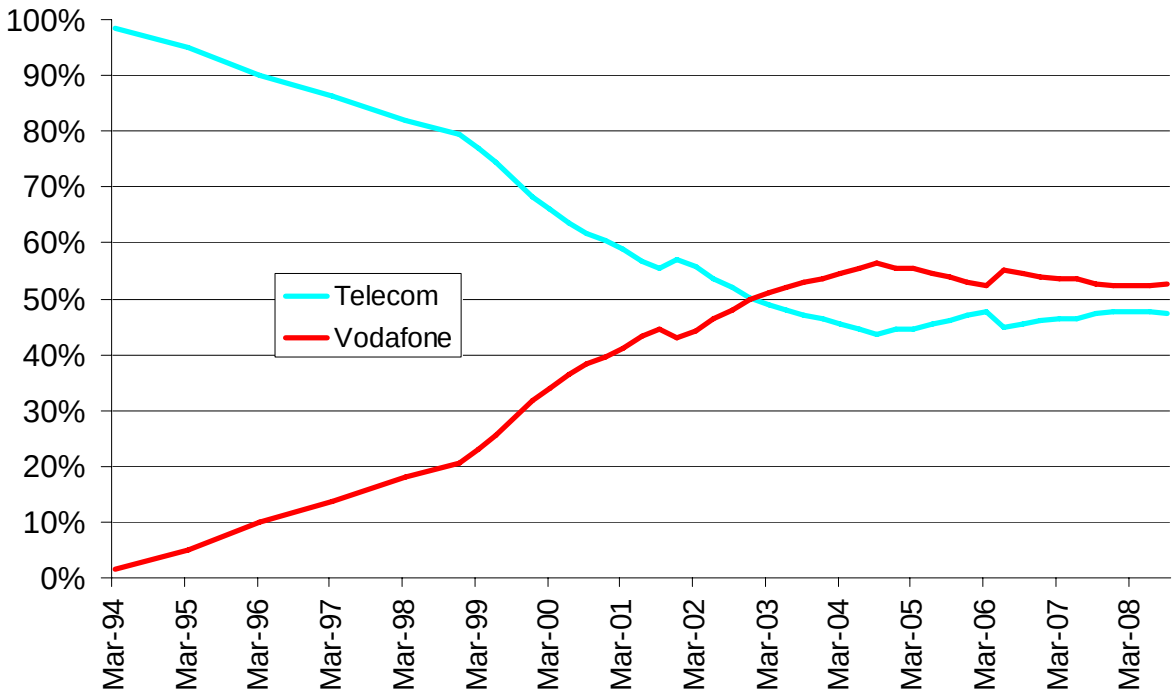
Source: Telecom, Vodafone

[8] Population estimated from extrapolating Statistics NZ figures.

36. Overseas it is often possible to have two different mobile connections but only one handset by having two SIM cards. However, in New Zealand Telecom and Vodafone continue to use different technologies so two handsets are required to use both networks. Some people have two mobile phones because one has been provided by their employer and the other is for personal use. Other people carry two phones to make best use of the on-net calling and texting offers and also to ensure that they are easily contactable by customers of both mobile phone networks. For example, a study of Auckland High School students undertaken by Phoenix Research for NZ Communications showed nearly all students with Telecom phones also had a Vodafone phone.[9]

37. The use of different technologies by Telecom and Vodafone also means customers using only one handset have to change handsets to change providers. However, Telecom has been building a new 3G network using the more common WCDMA 3G technology used by Vodafone, which will become operational around mid 2009. Many 3G handsets currently using the Vodafone network, e.g. iPhones, will be able to use the new Telecom network by merely changing the SIM card. Making switching easier and less costly should enhance competition. NZ Communications has been building a GSM/WCDMA network which is also expected to become operational later in the year.

Figure 7: Mobile Market Shares of Customer Connections



Source: Telecom, Vodafone

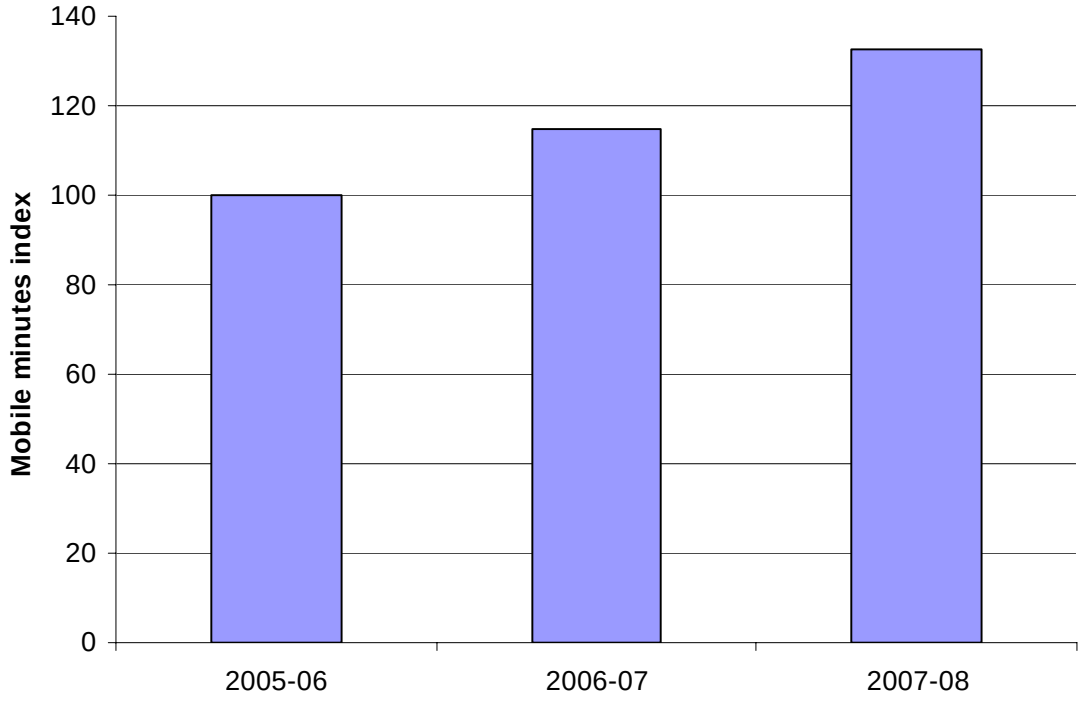
38. Figure 7 shows how Telecom and Vodafone's share of total customer connections has changed since BellSouth, which was later purchased by Vodafone, entered the market around 1994. In recent years, the market share of Telecom has been just below 50 percent and

[9] http://www.nzcomms.co.nz/wa2b31.html?idWebPage=35835&idDetails=174

Vodafone just above 50 percent. However, Vodafone's average revenue per customer is greater than Telecom's so its share of industry revenue is somewhat higher than its share of customers.

39. An index of outbound mobile calling minutes is shown in Figure 8 (the 2005/06 base is set at 100).[10] The volume of mobile calling minutes for outwards calls increased by 16 percent in 2007/08 and is up by one third since 2005/06. Given that mobile revenues have increased only marginally and there has been little change to mobile price plans, the main driver behind the significant increase in minutes is likely to be the popularity of restricted on-net calling offers like Vodafone's BestMates and Telecom's My Favourites offers. These offers allow unlimited calling and texting between nominated persons on the same network for a flat monthly fee.

Figure 8: Outbound Mobile Minutes Index



Source: Commerce Commission

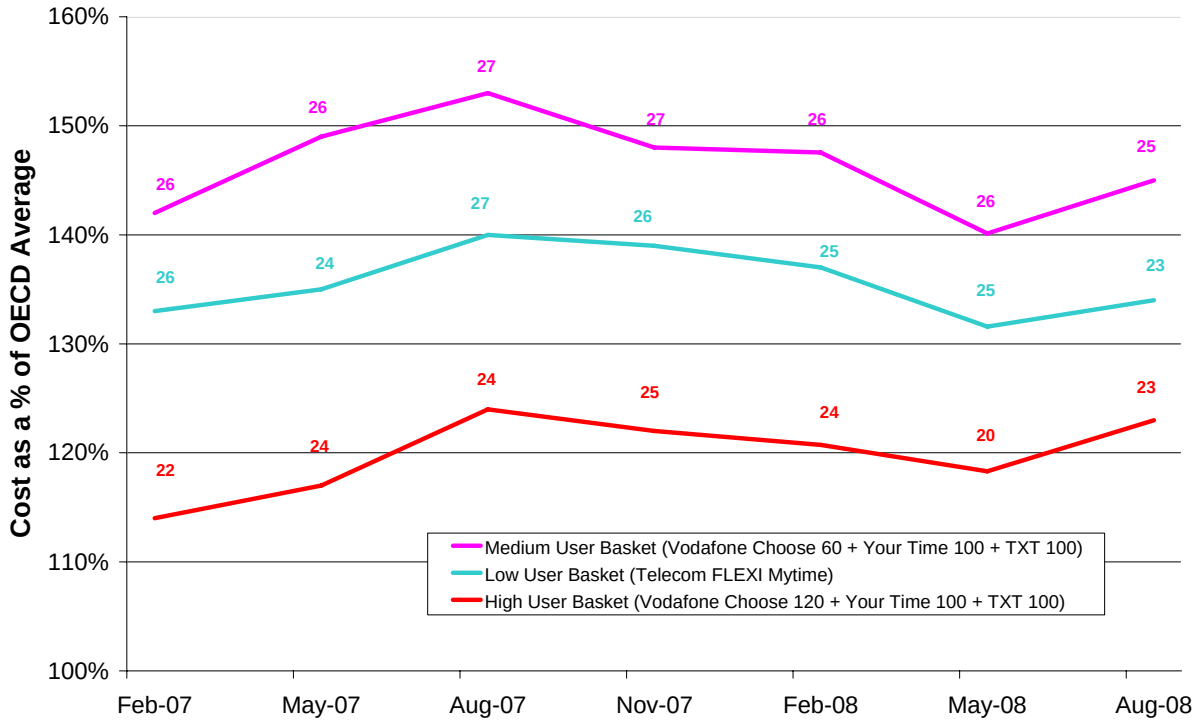
40. One indicator of the competitiveness of the mobile market is New Zealand's rank against other countries in terms of cost, using the various OECD benchmarking baskets. In graphing how New Zealand mobile plans have rated in the OECD mobile benchmarking process, the Commission has previously excluded Vodafone's You Choose Base plans. Although the plans have had their restrictive conditions eased since 2007, until recently the Commission had been concerned that the plans still were not being promoted in Vodafone stores.

[10] The index was developed so growth in outbound mobile minutes could be shown without having to disclose actual outbound minutes considered commercially sensitive by Vodafone.

41. However, the Commission is satisfied that changes were implemented in late 2008 to promote Base plans in-store like other similar Vodafone plans. Consequently, the Commission has now included the Base plans in its reported OECD benchmarking.

42. Figure 9 shows the historical series of OECD benchmarks for New Zealand with the Base plans excluded. The New Zealand plans included had not changed in price over the 18 months to August 2008, so their margin above the OECD average remained roughly the same with variations being mainly due to exchange rate fluctuations feeding into the $US PPP rate used in the benchmarking

Figure 9: Historical NZ Performance in OECD Mobile Calling Baskets

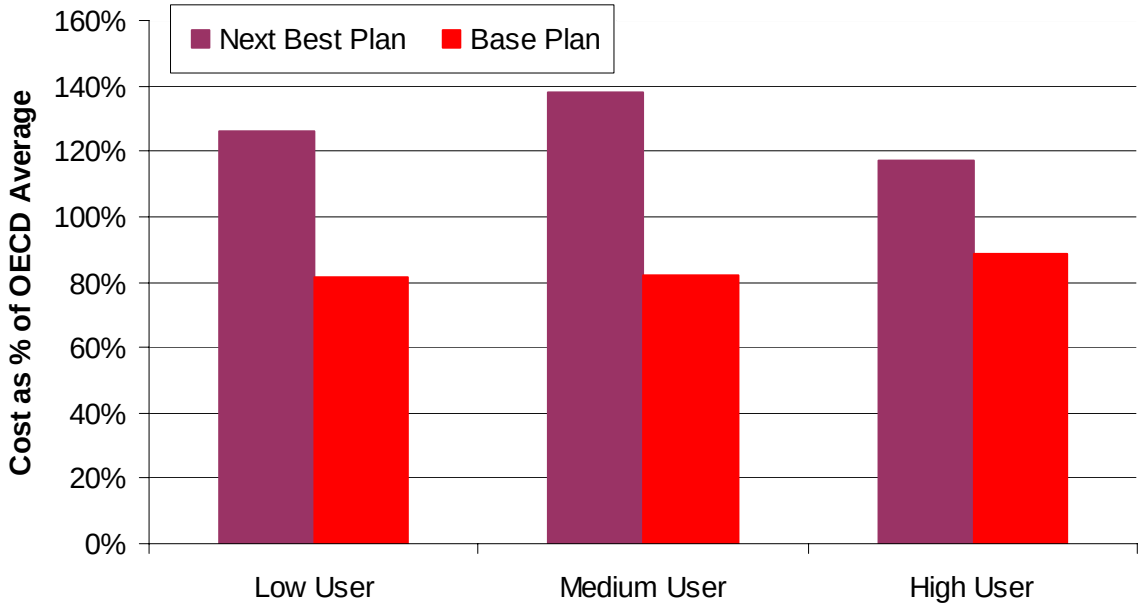


Source: Teligen T-Basket

43. Figure 10 shows the results of OECD benchmarking for November 2008 for New Zealand with the Base plans included, and compares that result to the next best New Zealand plan benchmarked. New Zealand's results improve significantly by including the Vodafone Base plans with New Zealand ranking 11, 12 and 15 out 30 in the low, medium and high-user baskets respectively. The inclusion of these plans significantly improves the average New Zealand performance across all the baskets from 127 percent of the OECD average cost to 84 percent.

44. Mobile plans that include the restricted on-net calling offers like BestMates described above cannot be benchmarked because the OECD calling baskets use only unrestricted on-net minutes and off-net minutes. Internationally, on-net offers typically supply minutes that can be used to call anyone on the same network rather than being restricted to a small number of nominated numbers.

Figure 10: Nov 2008 NZ Performance in OECD Mobile Calling Baskets



Source: Teligen T-Basket

45. Mobile calls now make up around one quarter of all retail calling minutes on voice networks, as was shown in Figure 3. While this is a substantial portion, mobile connections now far exceed fixed line connections as shown in Figure 1 so mobile calling volumes could be expected to higher. The proportion of total call minutes generated by mobile phones is much less than other comparable countries. For example, the Australian Communications and Media Authority (ACMA) report that in Australia nearly half of all voice minutes are mobile minutes.[11] While the requirement in New Zealand to provide non-chargeable local calls probably plays some part in the comparatively low use of mobile phones, the relatively high price of mobile calls, particularly off-net calls, is also likely to be a cause. Given the experience in comparable countries, it would be reasonable to expect mobile calling in New Zealand to make up at least one third to one half of calling minutes.

46. An area of concern internationally is high charges for international mobile roaming. Interest from national regulators in international roaming rates has increased recently with the European Union (EU) and Australia investigating, and in the EU's case regulating, international roaming rates.

47. An inquiry into international mobile roaming by the Australian House of Representatives Standing Committee on Communications has just been completed.[12] The Committee found that international roaming is expensive for a number of reasons, including the lack of bargaining power of Australian telecommunications providers. The Committee has recommended a policy of regulating the framework for the wholesale cost of roaming through

[11] ACMA, *Convergence and Communications Report 1: Australian household consumers' take up and use of voice communications services*, March 2009
[12] House of Representatives Standing Committee on Communications, *Phoning home: Inquiry into international roaming*, March 2009.

bilateral and multilateral negotiations with other countries including NZ. It also recommended better provision of information to customers on roaming and the alternatives to roaming.

48. The Commission has been in discussions with the Australian Competition and Consumer Commission (ACCC) about the possibility of a joint inquiry into trans-Tasman mobile roaming rates. The Commission has not commenced a formal investigation into international roaming rates but is monitoring developments in global markets. The Commission would like operators to pay more attention to consumer awareness of international roaming. A number of studies conducted on international roaming highlight the issue of "bill shock", which is primarily associated with a lack of consumer clarity around roaming plans and charges.

Conclusion

49. Despite some positive developments in the mobile services market, the competitive environment remains relatively unchanged from previous years. However, this is expected to change in 2009 as Telecom and NZ Communications deploy their new networks. While mobile calling volumes continue to grow at a strong rate, they are low by international standards and likely to be driven by restricted on-net calling offers such as BestMates.

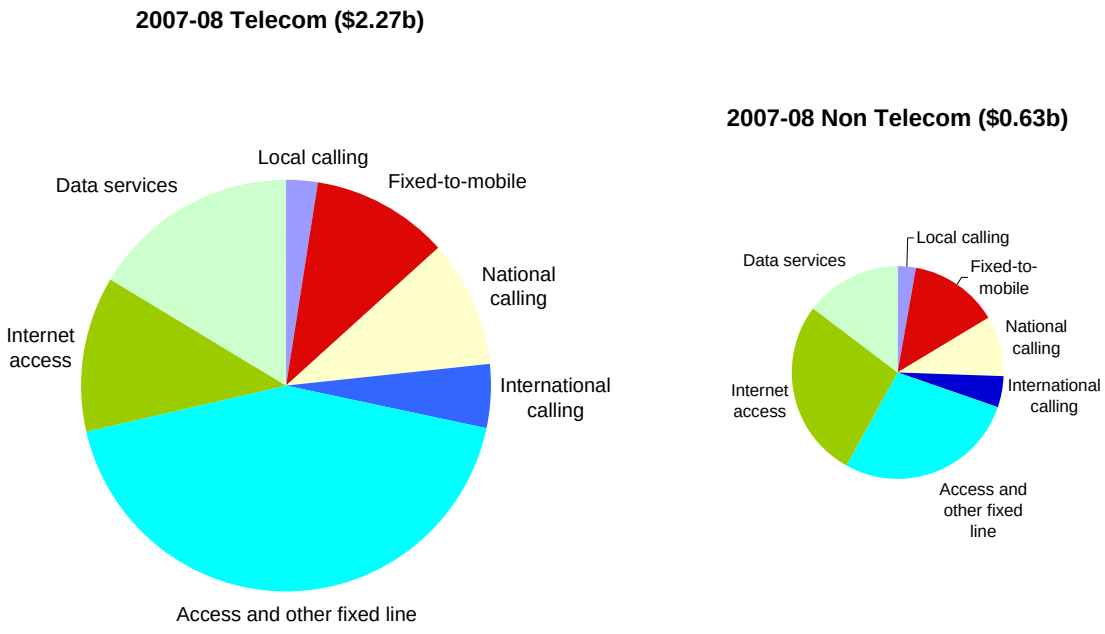
FIXED LINE MARKET

50. The number of fixed telephone connections supplied by Telecom fell marginally from 1.76 million as at 31 December 2007 to 1.75 million[13] as at 31 December 2008. By comparison, fixed telephone connections supplied using access infrastructure not owned by Telecom remained very small in number, but continued to grow from around 85,000 in 2006/07 to 114,000 in 2007/08.

51. Total fixed network retail revenues have continued to decline in 2007/08 to $2.90 billion, after falling slightly to $2.93 billion in 2006/07 from $2.99 billion in 2005/06. Figure 11 shows how the share of the different types of fixed network revenue varies between Telecom and non-Telecom providers. The main differences are that compared to its competitors Telecom earns a greater share of its revenue from access and other fixed line services (line rental and valued added services) and a lesser share from internet access.

52. Figure 12 shows the trend in fixed network calling revenues, with most categories of calling revenue falling over the last three financial years. The only exception is Telecom's international calling revenue.

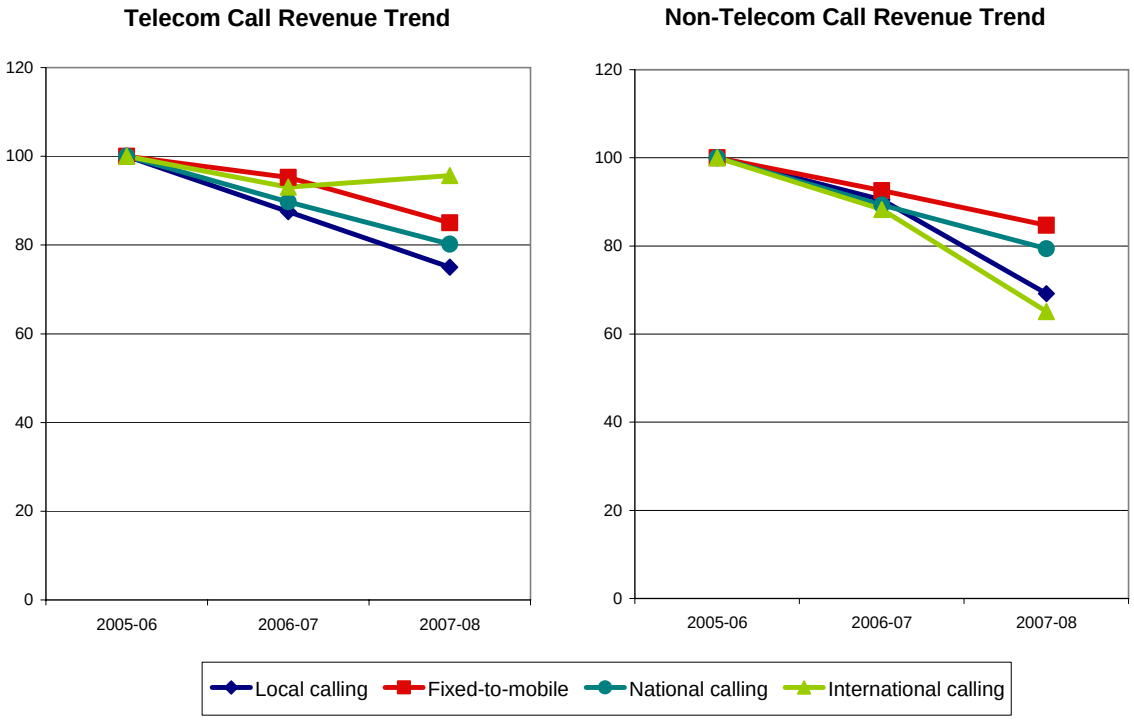
Figure 11: Fixed Line Retail Revenues



Source: Commerce Commission

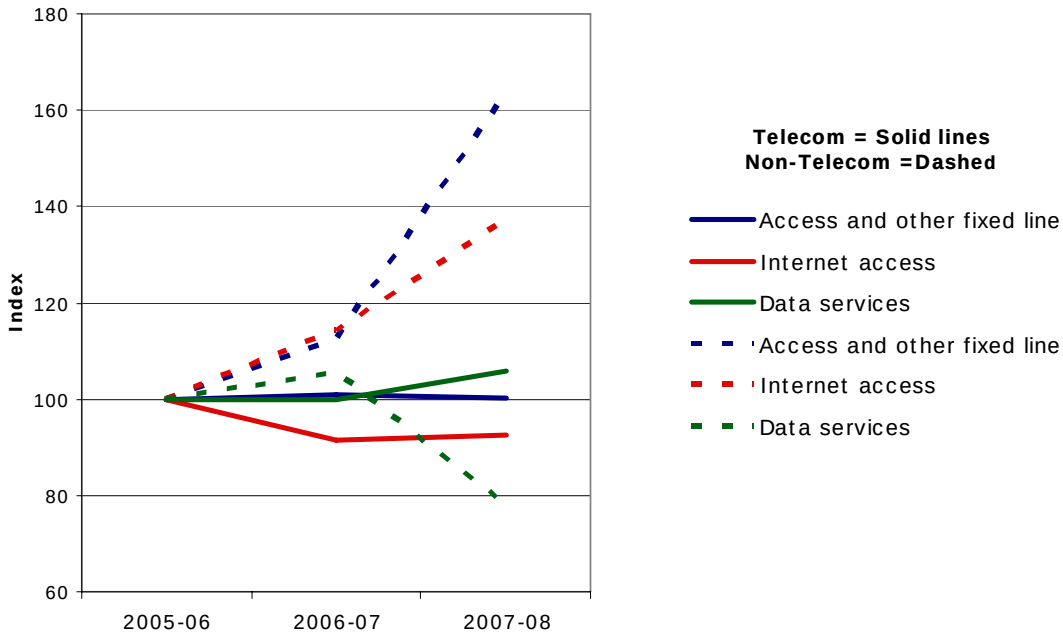
[13] Telecom changed how it reports line numbers and this is an estimate based on the methodology used in 2007 and includes LLU lines.

Figure 12: Calling Revenue Indices



Source: Commerce Commission

Figure 13: Access and Data Revenue Indices

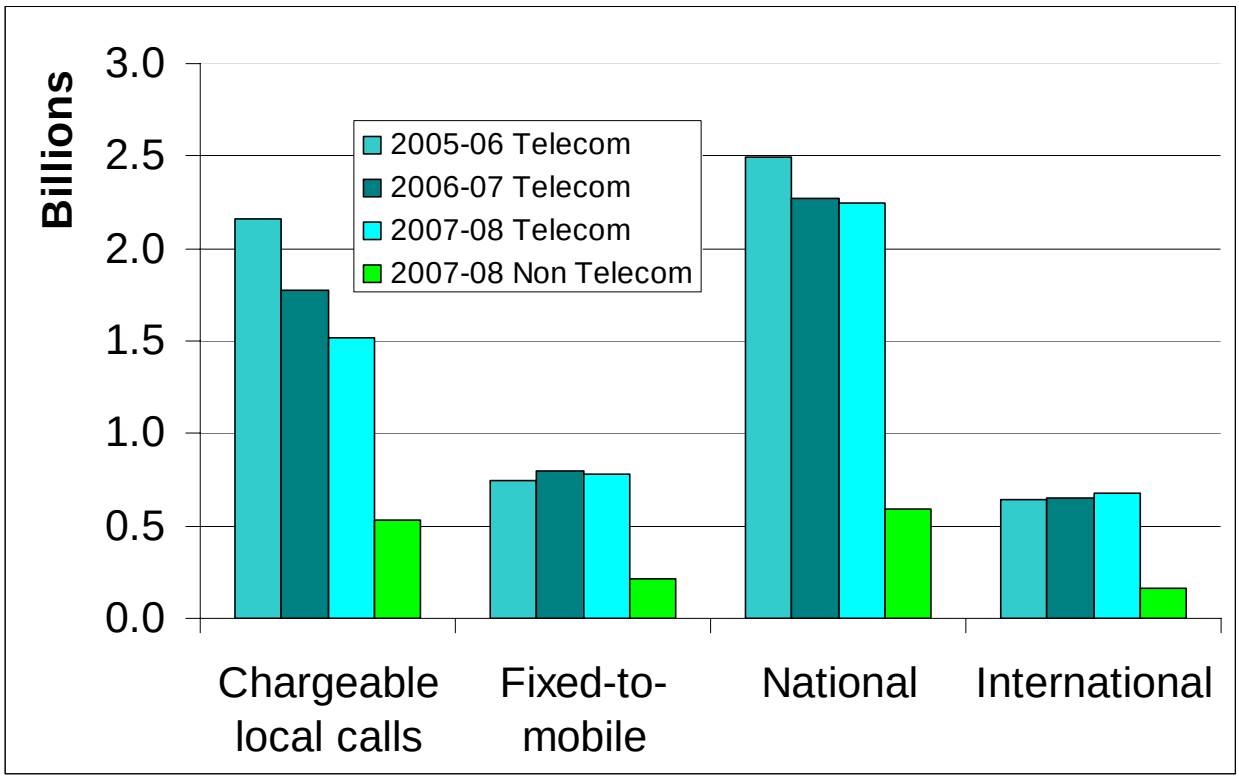


Source: Commerce Commission

53. Trends in access and data revenues are shown separately in Figure 13. There is a clear difference in trends between Telecom and non-Telecom providers. Access and other fixed line revenue showed no change at $978 million for Telecom while increasing for non-Telecom providers by 12 percent in 2006/07 and a further 45 percent in 2007/08 to reach $174 million. Revenue from internet access grew by 14 percent for non-Telecom providers in 2006/07 and a further 20 percent in 2007/08 to reach $170 million while growing only one percent for Telecom in 2007/08 to reach $279 million after falling 9 percent in 2006/07. Revenue from fixed network data services grew by 6 percent to $372 million for Telecom in 2007/08 after zero growth in 2006/07 but fell by 26 percent in 2007/08 to $93 million for non-Telecom providers after growing by 6 percent in 2006/07.

54. The lack of data from TelstraClear in prior years means that the trend in calling volumes for the whole industry cannot be seen. However, where the rest of the industry is facing similar market pressures to Telecom the trends may be similar to those shown in Figure 14. Apart from chargeable local calling, volumes have largely been maintained.

Figure 14: Fixed Line Retail Calling Minutes



Source: Commerce Commission

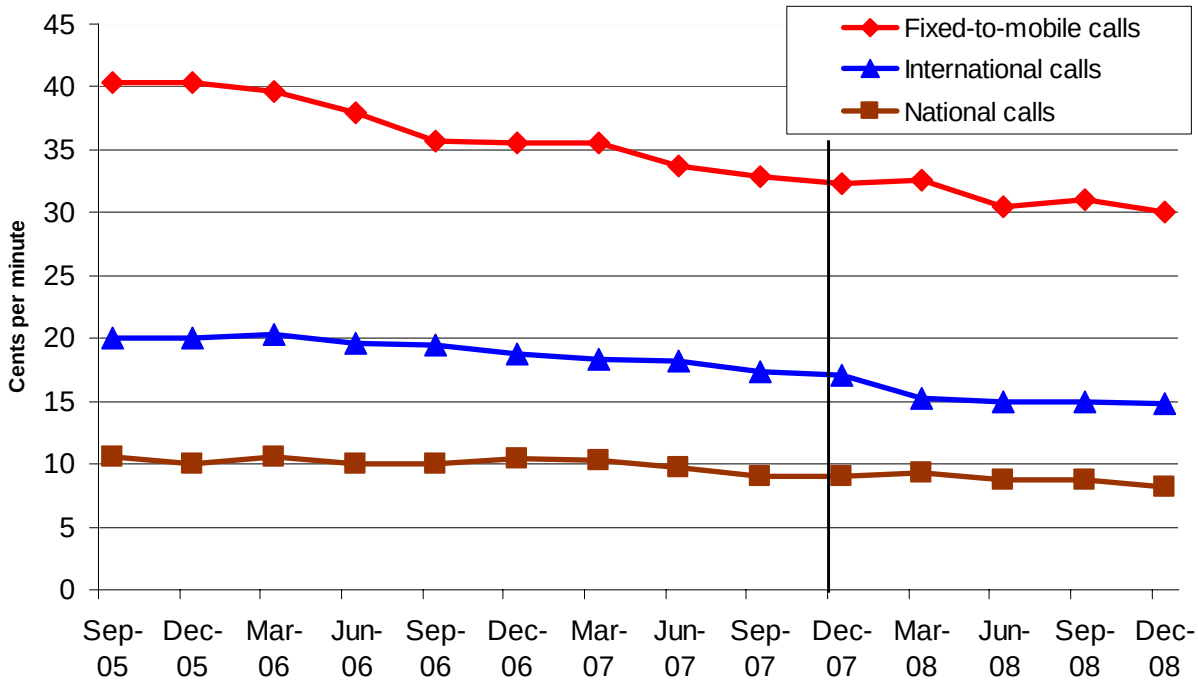
Calling Charges

55. The trend in average calling charges can also only be shown for Telecom. Naturally, with revenues falling and volumes holding up, average prices have been falling. Figure 15 tracks how Telecom's nominal average calling charges (excluding GST) have moved each quarter since September 2005.

56. In an undertaking with the government, Telecom committed to progressively reduce the wholesale cost of terminating fixed-to-mobile calls and pass through the reductions to retail fixed-to-mobile calling rates. The first decrease in retail fixed-to-mobile calling rates under Telecom's undertaking occurred on 1 September 2007. The decrease would therefore have first affected Telecom's average fixed-to-mobile calling charge in the December 2007 quarter. A vertical line has been drawn at this point in Figure 15 to make it easier to observe the effect of the undertaking. Although all Telecom's standard retail fixed-to-mobile rates did get adjusted downwards as per the undertaking, there was no noticeable impact on the general downwards trend in the fixed-to-mobile average calling charge. A further decrease in standard fixed-to-mobile rates occurred on 1 April 2008.

57. The lack of a noticeable impact on Telecom's average fixed-to-mobile calling charges from the undertaking is not surprising because the average charge is also affected by the unlisted fixed-to-mobile rates charged to larger business customers, other calling plan deals and restricted on-net calling plans, like the Freedom plan, that allow essentially unlimited fixed-to-mobile calls to nominated Telecom mobile numbers for a flat monthly fee. Telecom's average fixed-to-mobile charge has been falling for years even though Telecom never lowered its standard residential fixed-to-mobile rate until 1 September 2007.

Figure 15: Telecom Fixed Line Average Calling Charges

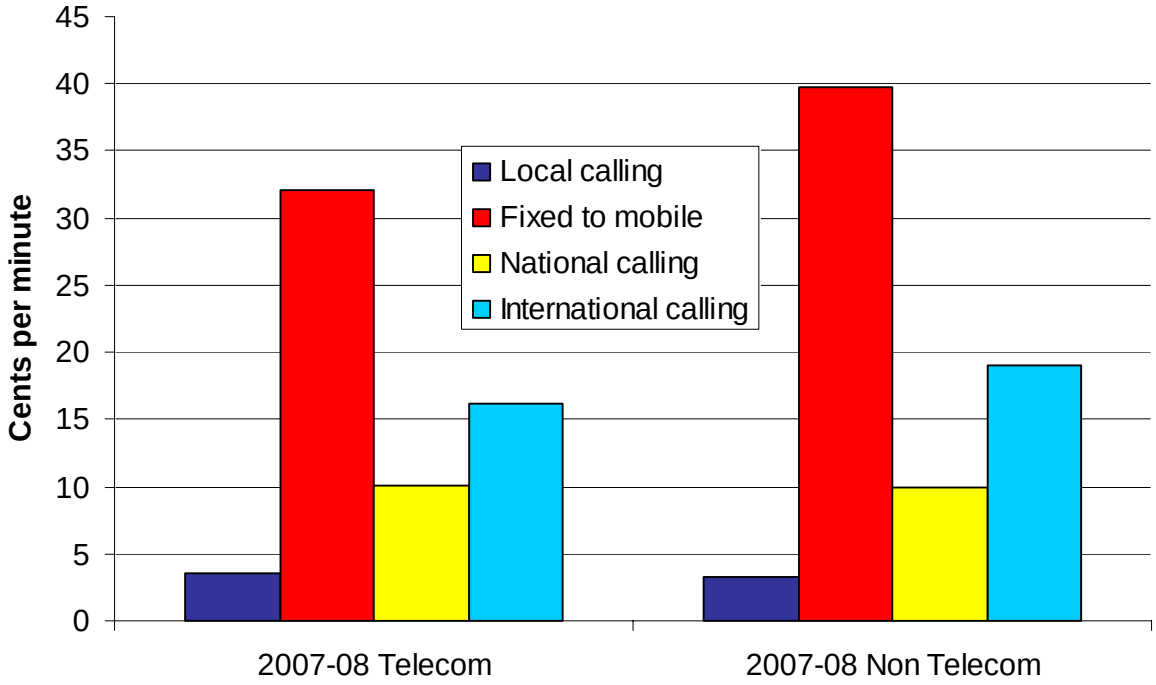


Source: Telecom

58. Telecom's average calling charges compared to the rest of the survey population are shown in Figure 16. Despite Telecom appearing to have higher standard residential rates than its competitors, its overall average charges are significantly lower for fixed-to-mobile calling and international calling. The average calling charges will have been brought down by lower rates for businesses and other special offers, which may be more prevalent in Telecom's business than its competitors. Furthermore, some of Telecom's competitors create new calling plans,

equivalent to existing default plans but with lower prices for new customers, and leave existing customers on older, higher priced, calling plans until they request to be changed.

Figure 16: Fixed Line Average Calling Charges



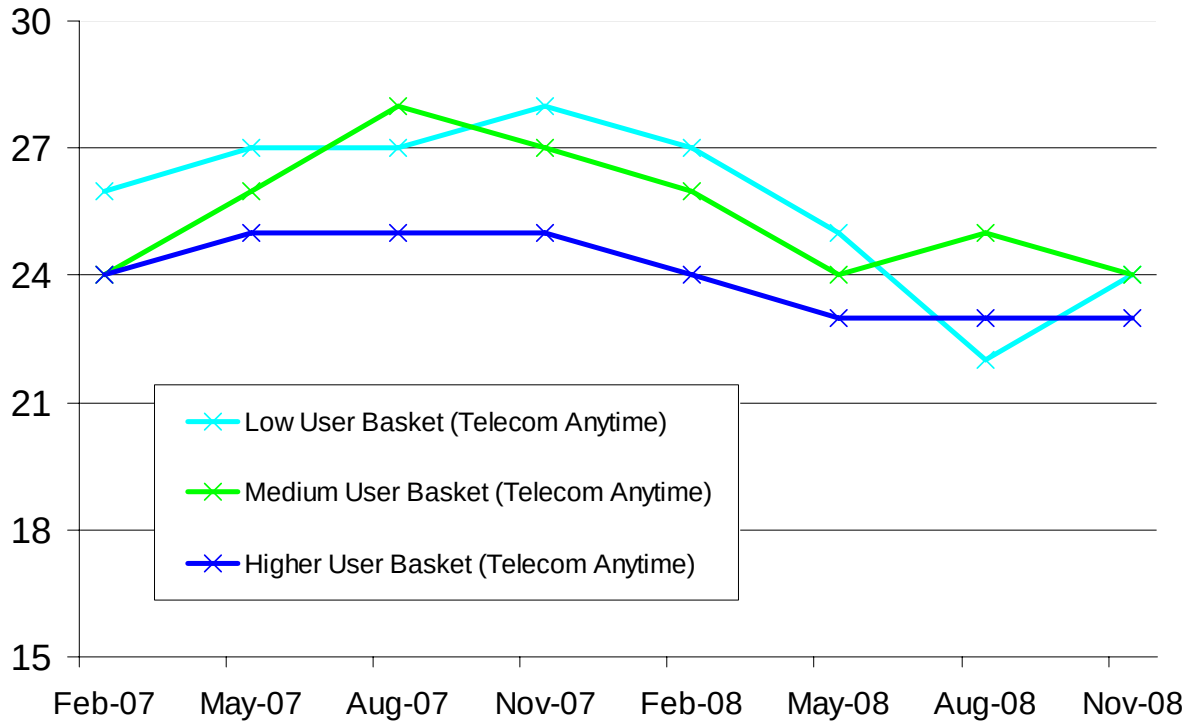
Source: Commerce Commission

Cost of Calling Plans

59. Figure 17 shows how New Zealand residential fixed line voice plans surveyed for OECD benchmarking have ranked over the last two years. Rankings have improved a little in the last year with New Zealand attracting rankings of between 22 and 27 out of 30 (30 being the most expensive product).

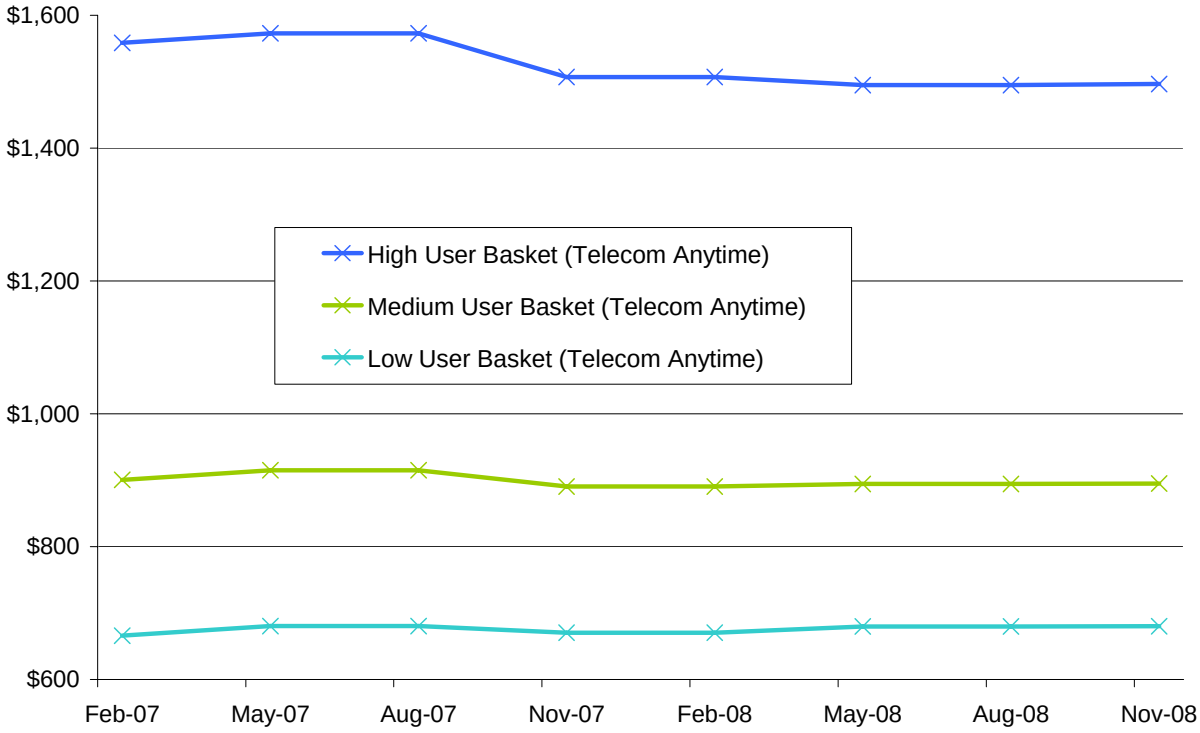
60. The $NZ cost of the New Zealand plans over the same period is shown in Figure 18. The cost of the low and medium user baskets rose marginally early in the 2008 year, when Telecom raised its residential line rentals. However, the cost of the high user basket fell a little because the rise in the line rental was more than off-set by the fall in the cost of fixed-to-mobile calls given the large volume of these calls in that basket.

Figure 17: NZ Ranking in OECD Fixed Line Residential Baskets



Source: Teligen T-Basket

Figure 18: $NZ Cost of OECD Fixed Line Residential Baskets



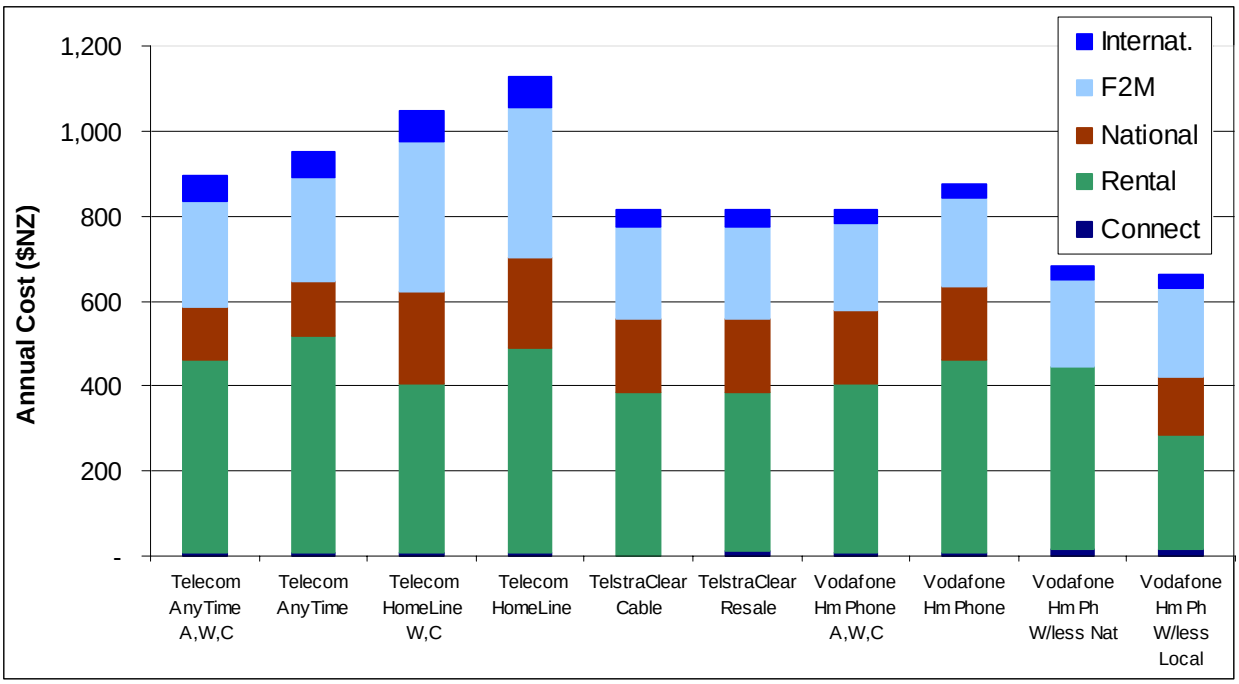
Source: Teligen T-Basket

61. In the fixed line voice market, alternative providers do offer substantially cheaper products than Telecom which would rank better, but they are not surveyed by Teligen (who usually survey only well known national carriers). On the other hand, if Telecom's default Homeline plan was used for OECD benchmarking, the resulting cost would be significantly higher than the Anytime plan used by Teligen (which Telecom customers outside of Auckland have to opt into and pay extra for).

62. To get a wider perspective, the Commission in its quarterly monitoring reports has been putting all TelstraClear's, Vodafone's and Telecom's standard fixed line residential plans into the OECD calling baskets. The Vodafone plans evaluated include its Home Phone Wireless plans that allow an ordinary fixed line phone to connect to its wireless network but retain a local number. The wireless plans will work only in areas where there is coverage from the Vodafone mobile network and may not provide the same voice quality as a fixed line. The results in $NZ from putting the plans mentioned in the fixed line residential medium user basket for November 2008 can be seen in Figure 19. The different cost components of the basket are also shown.

63. Depending on their usage patterns, consumers can potentially make substantial savings by switching plans or providers. The costs for existing customers of Telecom's competitors may be higher than that indicated by these results as they assume customers have taken up the latest calling plans.

Figure 19: Residential Medium User Basket NZ Plan Cost – Nov 2008



Source: Teligen T-Basket, Commerce Commission

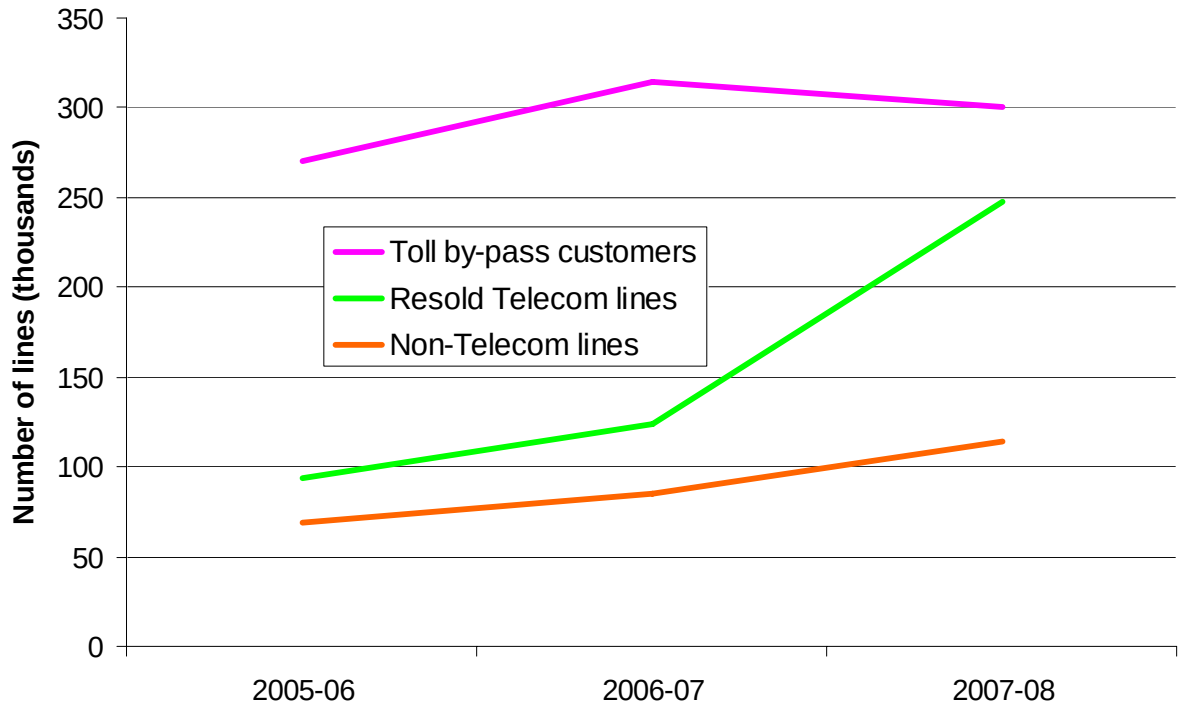
64. In addition to the extra telephone plans benchmarked by the Commission, there are other plans that offer cheaper or 'free' toll calling in return for an additional fixed monthly payment or a 12 month commitment to the provider. TelstraClear's Big Back Yard extends the free

calling area in various urban areas where it does not have its own network by reselling Telecom lines in these regions and adding the extra calling area. The plan has driven the strong growth in the resale of Telecom residential lines as shown in Figure 20. Telecom figures indicate that by December 2008 around another 30,000 of its residential and business lines were being resold.

65. Telecom's 'Talk It Up' plans have variations for 'free' calling to a neighbouring area, free calling to anywhere in New Zealand and Australia and a large amount of calling to ten commonly called overseas countries. However, there is a risk that consumers have to spend above average on toll calls on a regular basis to save money. The Telecom plans mentioned do not rate well if they are put into the OECD calling baskets, which assume all calls have a relatively short duration.

66. Figure 20 also shows the number of Telecom voice customers using a provider other than Telecom for their toll calls only (toll by-pass customers) and the number of customers using fixed line voice services not provided using any Telecom infrastructure, including fixed wireless connections. The number of toll by-pass customers has now started to decline a little while the number of non-Telecom lines used to provide voice services has continued to rise.

Figure 20: Non-Telecom Voice Customers



Source: Commerce Commission

67. The fixed component of fixed line voice plans, the monthly line rental, has continued to rise in nominal terms. Telecom has continued to increase its standard residential line rental by the amount of the CPI increase as allowed for under the TSO Deed. The standard line rental is cheaper in Wellington and Christchurch where TelstraClear has alternative infrastructure, although line rentals charged by both TelstraClear and Vodafone have risen in these cities too.

Telecom also effectively offers cheaper line rental in Auckland because the Anytime plan is the default residential plan there and it has been the only Auckland phone plan that has a discounted line rental. Geographic discounts for voice services are usually offered in Wellington and Christchurch only.

68. There have been further moves by most of the major providers to encourage customers to buy a bundle of voice and broadband services. While it has long been common practice to offer a $10 a month discount on broadband if a customer also takes toll services, Vodafone now will not sell broadband to fixed line customers unless they also purchase their line rental and tolls from Vodafone. In exchanges where unbundled local loops are available, Orcon customers have to purchase all their fixed line services from Orcon if they want the unbundled service. A better value package of broadband and voice services is also available from some providers if the customer is prepared to take a naked DSL service which provides all voice services over the broadband connection (VoIP).

69. In response to such bundled offers, Telecom in October 2008 launched its 'Total Home' bundled plan for residential customers. This includes line rental, free national calls, broadband with 10 gigabytes (GB) of data per month, cheaper fixed-to-mobile calls and cheaper international capped calls for a monthly price of $99 in Auckland, Wellington and parts of Christchurch, and $109 in other areas. In March 2009 Telecom has started selling 'Total Home Lite' which has free national calls to one nominated landline number only and broadband with 3 GB of data for $85 per month in Auckland, Wellington and parts of Christchurch, and $95 in other areas.

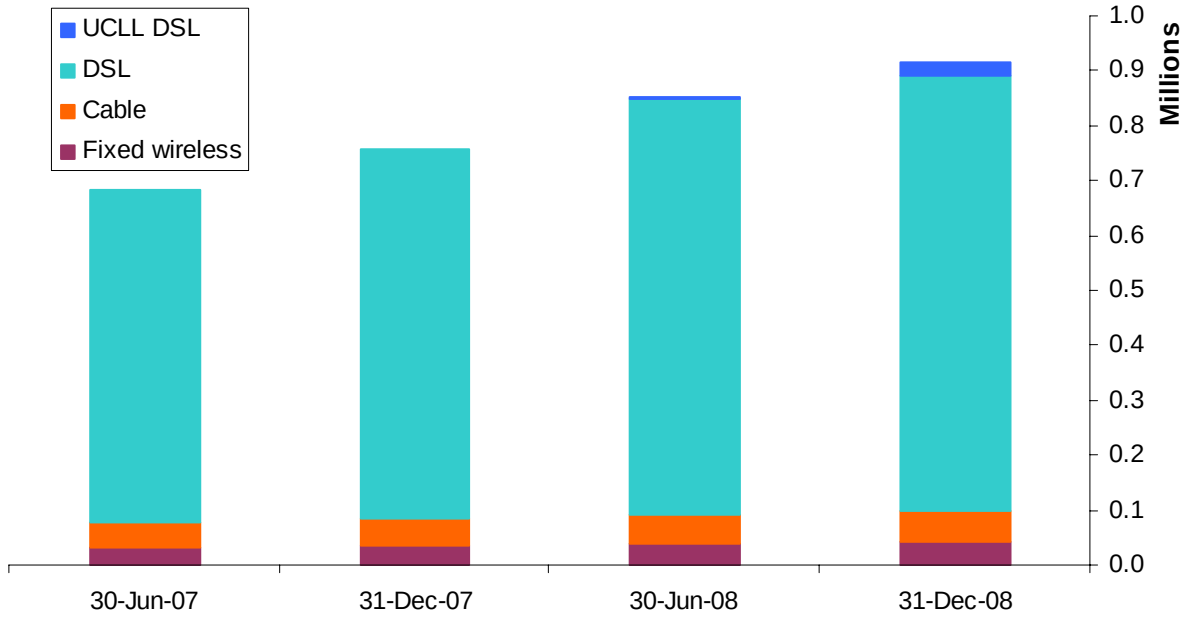
Broadband

70. Most broadband connections in New Zealand are provided over a standard copper telephone line using DSL technology. Other fixed broadband connections are supplied via co-axial cable, fixed wireless technologies and satellite. The Commission reports the total number of fixed broadband connections every six months.

71. Increasing numbers of users are now also accessing the internet from 3G mobile data cards and 3G phones. In theory, 3G mobile networks can provide internet connectivity at speeds fast enough to be considered broadband. This is generally considered to be a downstream speed of at least 256 kbps. Currently little public data is available on New Zealand mobile broadband. The Commission has not published data on broadband connections supplied by way of mobile data cards because of commercial sensitivity and the fact that they are not yet counted by the OECD in its broadband penetration statistics.

72. The total number of fixed broadband connections supplied by all technologies continued to grow strongly in the 2008 year, as shown in Figure 21 with total connections as at 31 December 2008 standing at 915,000. Broadband connections supplied by way of unbundled copper local loop (UCLL) grew rapidly from several thousand in mid 2008 to approximately 25,000 by 31 December 2008.

Figure 21: Fixed Broadband Connections by Technology



Source: Commerce Commission

73. Most of the exchanges in the Auckland urban area were unbundled during 2008. The only exchanges unbundled outside of Auckland to date are two inner city Wellington exchanges. This suggests that growth in unbundled connections may slow, although TelstraClear has yet to launch unbundled broadband services. TelstraClear has indicated it will unbundle more extensively across the country than its competitors, stating it will install equipment in 70 of Telecom's 714 exchanges and be the biggest participant in unbundling.[14]

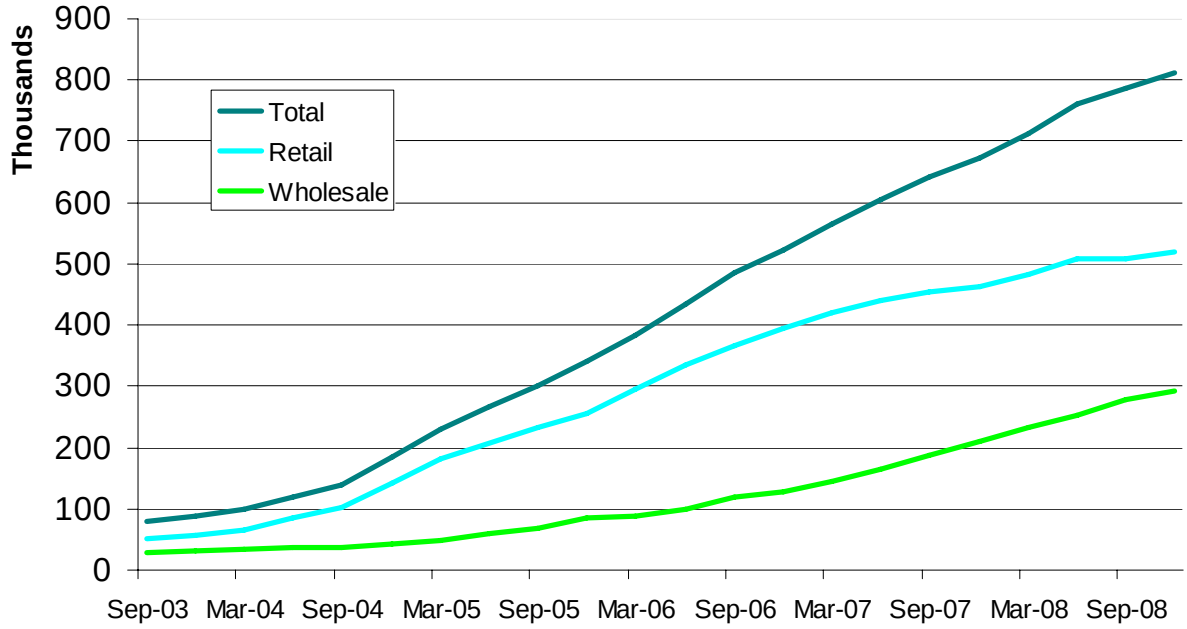
74. Telecom has been proceeding with its plans to bring broadband equipment closer to customers who do not live near exchanges by installing street side cabinets as the distribution point for copper local loops. This cabinetisation of the access network is likely to reduce the number of lines in exchanges that can be accessed via UCLL by Telecom's competitors. If access to lines originating in cabinets is desired then this will be able to be obtained via sub loop unbundling. The sub loop is the copper line that runs between the cabinet and the home, and sub loop unbundling allows Telecom's competitors to put their equipment in (or close to) Telecom cabinets in order to access sub loops. Reselling Telecom's services will be the only other way for competitors to serve cabinetised customers using existing infrastructure. The Commission released a draft standard terms determination on sub-loop unbundling in September 2008, and a final determination is expected to be released in the next few months.

75. Telecom is the retailer for 57 percent of all fixed broadband connections and 64 percent of all DSL connections. This compares to 61 percent and 69 percent at the end of 2007 respectively. The growth of Telecom's retail DSL customers slowed in last half of 2008 as shown by Figure 22. Telecom's share of the net growth in the retail DSL market has tended to decline since it first started reselling its DSL services although it has fluctuated markedly, as shown by Figure 23. The general decline in Telecom's share of the net growth in DSL

[14] http://www.stuff.co.nz/archived-stuff-sections/archived-business-sections/business/1762304/TelstraClear-steady

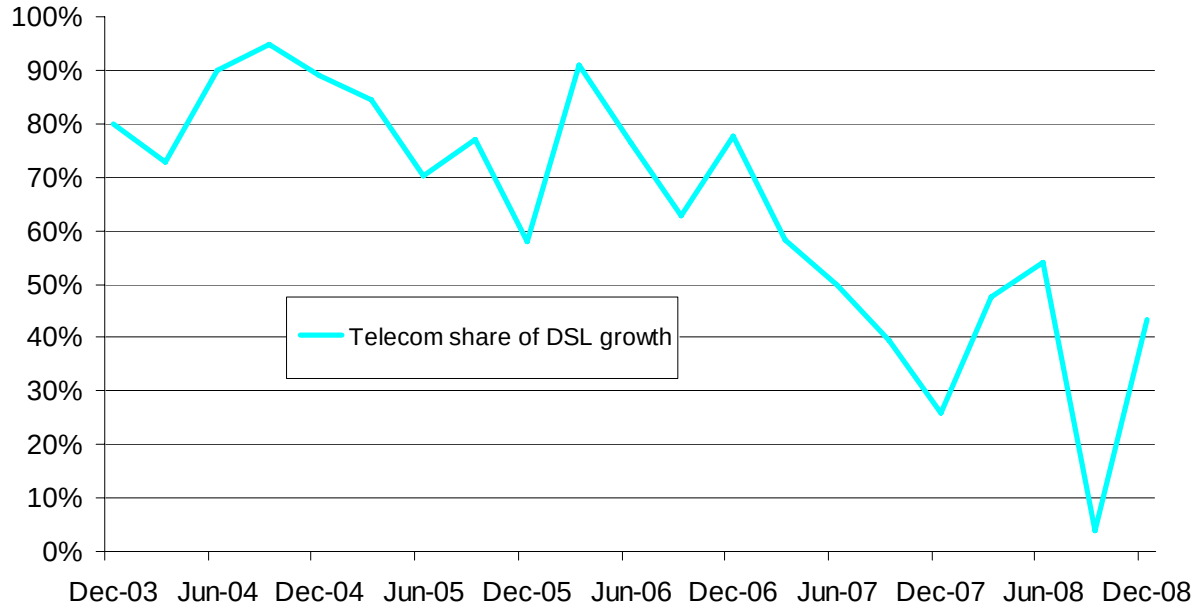
connections could be caused by Telecom signing up a smaller share of new customers and/or Telecom losing existing customers to its competitors. Given Telecom's highly visible broadband marketing campaigns, the latter is probably more likely.

Figure 22: Telecom DSL Connections



Source: Telecom

Figure 23: Telecom Share of Quarterly Net Growth in Retail DSL Connections



Source: Telecom

76. The total broadband market showed some signs of slowing in the second half of 2008. While this could be the impact of the recession, it could be a natural slowing of the market as the potential pool of new broadband customers shrinks with increasing broadband penetration. The rate of growth of Telecom DSL connections has been slowing for several years.

77. The latest statistics comparing the total number of broadband connections in New Zealand with the rest of the OECD are for 30 June 2008.[15] The OECD estimated there to be 20.4 broadband subscribers per 100 population in New Zealand (96 percent of the OECD average) to give New Zealand a rank of 19 out of 30 in the OECD. The 31 December 2008 broadband figures raise New Zealand's broadband penetration to over 21 broadband subscribers per 100 of population.

78. Benchmarking prices for broadband in New Zealand is a complex task. The Commission is currently undertaking some work on this and will present its findings in a quarterly monitoring report later in the year.

Backhaul

79. Backhaul services are an important component in the supply of broadband services. Backhaul includes providing Telecom's competitors with access to transmission capacity on specific routes between Telecom's local exchanges and the competitors' networks. Increasing backhaul capacity can improve the quality of broadband service.

80. While in some areas Telecom is the only provider of backhaul services, in many areas there is now competition for the provision of backhaul as new backhaul capacity has been installed by Telecom's competitors. In particular, FX Networks continued to expand its North Island fibre network[16] and Vector Communications recently expanded its Auckland fibre network to enable it provide Vodafone with backhaul services to 41 exchanges[17].

81. The Commission in June 2008 determined that Telecom faced limited competition in 20 out of 57 primary links for UCLL backhaul from local exchanges that were assessed.[18] This means that for the remaining 37 links the Commission considered that there was either actual or potential competition. The regulated UCLL backhaul service is therefore not available on those links, which are mostly in Auckland, with the remainder in Hamilton, Wellington and Nelson where competitive regional networks are present. It was also determined that Telecom faced competition in 22 out of 38 secondary UCLL national backhaul links. Of these, the majority (20 out of 27) of the North Island secondary links are competitive, while only two of the South Island secondary links are competitive. The Commission made a draft determination on the competitiveness of further backhaul links in March 2009.

82. International backhaul is another important component needed to provide a broadband service and is a significant cost for Internet Service Providers (ISPs). The Southern Cross cable (50 percent owned by Telecom) is the main provider of international backhaul and it reported reductions in its pricing structure in November 2008 of at least 44 percent. Kordia reported in

[15] http://www.oecd.org/dataoecd/21/35/39574709.xls
[16] http://computerworld.co.nz/news.nsf/netw/A96E24A511479705CC257569007CE12F
[17] http://www.vector.co.nz/news/vector-announces-fibre-optic-network-extension-140208
[18] Standard Terms Determination for the designated service Telecom's unbundled copper local loop network backhaul (telephone exchange to interconnection point), Decision 626, 27 June 2008.

September 2008 that it was making progress with the development of its business case to build a new fibre optic submarine cable that will link Australia and New Zealand. Construction of the cable would be a joint venture with Pipe Networks. Kordia's stated aim is to make sure that New Zealanders have an alternative second cable.[19]

Broadband quality

83. Broadband quality continues to be an important issue with download speeds and response times for the services accessed via a broadband connection varying greatly and bearing little relation to the theoretical maximums. Consumers still have little way of knowing what the quality of service will be like when contemplating purchasing a broadband service.

84. The Commission commissioned Epitiro and IDC to publish quarterly summaries of broadband performance commencing for the quarter ended 31 March 2008. To date these quarterly reports have only included measures of broadband quality as measured from 11 central sites in the four main centres using the highest speed residential plans (ISP-I service). Broadband services provided via UCLL are not yet being tested by ISP-I, but this is planned for 2009.

85. These quarterly reports indicate that the quality of broadband delivered by the major ISPs improved throughout 2008. Reasons for the improvement in quality include the purchase of extra international capacity, extra backhaul capacity and caching solutions to store more content locally. Nearly 60 percent of DSL lines have now been upgraded to ADSL2+ which can also improve broadband performance for consumers with compatible modems.

86. Epitiro has also made available to end users from around mid 2008 its Isposure agent which is a small piece of test software able to be downloaded to user PCs free of charge. This provides measurements of the actual broadband speeds being experienced by end users, although not in as robust a fashion as the ISP-I service. Work is still being undertaken on how best to use the Isposure results. However, early indications are that more expensive broadband plans tend to perform better and that broadband plans provided via UCLL also tend to perform better.

Conclusion

87. There have been some signs of increasing competition in the fixed line market in the 2008 year. There are a range of better priced plans for consumers including new bundled offers incorporating calling, line rental and broadband. Such offers are most competitively priced in Auckland where competition has been driven by quasi facilities based competition through unbundling, and in Wellington and Christchurch where there is full facilities based competition from TelstraClear. A halt in unbundling could ease competitive pressures.

[19] http://www.kordia.co.nz/media-centre?q=node/1268&media=News

THE YEAR IN REVIEW

88. There have been a number of developments during 2008 and early 2009 that have had an impact on telecommunications markets in New Zealand. Some of the more important developments are noted below:

February 2008

- The Minister declined to approve Telecom's amended separation plan and issued Telecom with a notice indicating the parts of the plan requiring amendment.

March 2008

- Orcon became the first New Zealand telecommunications company to offer unbundled broadband and telephony services via Telecom access lines. The unbundled services were available to customers connected to five Auckland telephone exchanges - Glenfield, Browns Bay, Ellerslie, Mt Albert and Ponsonby. The cheapest package of broadband and phone services, which also includes free national calling and valued added services, costs $99.95 a month.

- Telecom submitted a revised separation plan to the Minister, which he accepted.

April 2008

- Telecom lowered most of its retail fixed-to-mobile rates by two cents per minute after wholesale mobile termination rates reduced by one cent per minute. Telecom's standard residential fixed-to-mobile rate is 65 cents per minute compared to the wholesale mobile termination rate of 16 cents per minute.

- TelstraClear launched a range of mobile voice and data business plans aimed mainly at small to medium-sized businesses.

May 2008

- Telecom increased its residential line rentals. The standard residential home line rental was raised by $1.25 to $44.85. This was in line with inflation, as allowed under the local calling TSO (formerly the Kiwi Share).

- The Minister for Communications and Information Technology accepted the Commission's recommendation to amend the terms of the mobile national roaming service to ease some of the conditions, but reserved his decision on the Commission's view that the service should not be subject to price regulation.

- Vodafone started to SIM lock the mobile handsets it supplied to customers, and was going to charge a $50 fee for unlocking.

- Telecom announced that it would not be SIM locking the mobile handsets it will supply for use with its new WCDMA mobile network due to become operational in 2009.

- After encouragement from the Commission, Vodafone stopped locking its mobile handsets.

June 2008

- Vodafone launched its $25 a month Home Phone Wireless Local Plan. This plan allows a fixed line phone to be connected to the mobile network with calls charged for in the same way as a traditional fixed line phone but with a considerably cheaper line rental. However, the plan is not suitable for accessing the internet.

- BayCity launched a new range of cheaper satellite broadband plans called Rocket Broadband, with prices starting at $56.20 a month (for 256 kbps download speed and 500 MB datacap) and $167.63 for installation.

- Vodafone launched its Local Zone service where a mobile phone can adopt a fixed line number and have all calls treated like fixed line calls while the phone is in a customer's home. Home Zone is an add-on to a You Choose plan and costs $20 a month, including free local calls while in the home zone. Calls to the home number while the phone is outside the home zone can be diverted to the mobile phone for a flat rate of $30 a month.

- The Commission released its final determination on the price and non-price terms for the backhaul services that support the unbundled copper local loop (UCLL) and unbundled bitstream access (UBA) broadband services.

July 2008

- On 1 July, both Vodafone and TelstraClear raised residential line rentals by between $1 and $1.50 a month.

- Vodafone announced it would continue building out its 3G mobile network, after saying in 2007 it had suspended its build because of regulatory uncertainty. Vodafone was planning for its 3G broadband network to reach 97 per cent of places where the population lives and works by April 2010.

- The V8 phone card for use with Vodafone mobile phones was launched, allowing international calls from a mobile to be made at much cheaper rates than if dialled direct. Each mobile call incurs a 19 cent 'flagfall' at the start, and then costs 5 cents per minute to more than 30 countries.

September 2008

- Having previously accepted the Commission's recommendation to amend the terms of the mobile national roaming service, the Minister for Communications and Information Technology announced he had initially accepted the Commission's view that the service should not be subject to price regulation. However, after making his decision, further potentially material evidence was brought to his attention that he believed needed to be

tested. He therefore asked the Commission to consider whether there are grounds to commence a fresh investigation into whether price regulation of national roaming is warranted.

- TelstraClear launched a mobile phone plan for its residential customers, which utilises the Telecom CDMA network. The plan was available only to existing TelstraClear residential customers, cost $20 a month and had a minimum term of 24 months. The plan included a free Nokia 6275i handset, 500 texts to any network, and a flat 29c per minute rate for all national calling.

- Telecom commenced offering enhanced unbundled bitstream access (enhanced UBA) wholesale services. Enhanced UBA provides a quality of service that allows telecommunications companies to provide good quality VoIP and other real-time services over broadband.

- TelstraClear announced that its residential broadband customers will no longer be metered for the data used when browsing the Trade Me website and viewing new video content on its website clearnet.co.nz.

- Vodafone NZ posted a record profit of $191 million for the year to March 2008. This was up 18 percent from the previous year and on the back of a 10 percent increase in revenue to $1.5 billion. Vodafone NZ also reported that it had made a special dividend of $742 million to its UK parent, following the payment of a similar dividend of $500 million in 2006.

October 2008

- Telecom launched its new Total Home bundled plan for residential customers which includes line rental, free national calls, broadband with 10 gigabytes (GB) of data per month, cheaper fixed-to-mobile calls and cheaper international capped calls. The monthly price is $99 in Auckland, Wellington and parts of Christchurch, and $109 in other areas.

- Telecom announced that it was changing the plans for the roll out of its new mobile network to make it a 3G only WCDMA network operating on the 850 MHz frequency. The roll-out is costing $574 million over two years and will reach about 97 percent of the population.

- TelstraClear started offering VDSL2 services to businesses in those areas of the main centres where it has its own infrastructure.

- Black + White, a virtual mobile network operator using Vodafone's network, commenced operations.

November 2008

- The Commerce Commission announced it was commencing an investigation into whether mobile termination access services should be regulated. The investigation, under Schedule 3 of the Telecommunications Act 2001, is looking at whether mobile termination access services (MTAS) (incorporating mobile-to-mobile voice termination, fixed-to-mobile voice termination and short-message-service termination) should become regulated services under Schedule 1 of the Act. The Commission has previously investigated fixed-to-mobile

termination services, but after consultation considered that developments in the mobile market meant a fresh investigation was required.

- The Southern Cross Cable network announced that it had reduced its pricing structure by at least 44 per cent as a result of the company's recent network upgrade.

- Slingshot launched its retail unbundled voice and broadband service, called “The Next Big Thing”. The service is available from unbundled exchanges where the wholesaler, Vodafone, has installed its equipment. Prices start at $69.95 per month for line rental and a 512kbps broadband service with 5GB of data.

December 2008

- The Commission released its final standard terms determination (STD) on the non-price terms on which access providers must make co-location on cellular mobile transmission sites (the Mobile Co-location Service) available to other mobile network operators.

February 2009

- Telecom announced that as at 31 December 2008, around 25,000 lines had been unbundled and that unbundled lines were available from 46 exchanges, nearly all located in Auckland.

- In response to Telecom’s planned launch of its new 3G mobile WCDMA 850 network in June 2009, Vodafone announced that it would have its 3G roll-out to 97 percent of the population completed by 31 May 2009.

- 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.

March 2009

- Telecom Wholesale commenced selling bundled offers including broadband, phone line and backhaul. These ‘loyalty' offers give effective price discounts of 20 to 30 per cent and lock customers in to a two-year deal, as indicated to the industry late in 2008.

- Telecom started selling Total Home Lite which includes line rental, free national calls to one nominated landline number and broadband with 3 GB of data for $85 per month in Auckland, Wellington and parts of Christchurch, and $95 per month in other areas.

- 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 last 12 months.