

SUMMARY AND ANALYSIS OF TELECOM CORPORATION OF NEW ZEALAND LIMITED'S REGULATORY FINANCIAL REPORT

May 2011



COMMERCE COMMISSION

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EXECUTIVE SUMMARY

Intended audience

The intended audience of this Summary and Analysis document are industry stakeholders such as Telecom’s wholesale customers, other telecommunications providers, consumer advocacy bodies, investors, analysts, policy makers and the broader public. This summary and analysis assumes that the reader has some general industry knowledge, but does not assume that the reader has specialist financial knowledge.

Purpose of regulatory accounting

Regulatory accounts disclose financial information for regulatory purposes. As a form of information disclosure, regulatory accounting – or accounting separation where an incumbent is vertically integrated – provides financial transparency over the operation and behaviour of the incumbent on an operationally separated basis.

The Commission’s role in accounting separation

Part 2B of the amended Telecommunications Act 2001 (the Act) requires the Commission to implement accounting separation for Telecom New Zealand, but grants the Commission the discretion to specify requirements for:

- the standards and methodologies used to prepare regulatory accounts, and
- the form and manner in which information is disclosed

In addition, the Act requires the Commission to publish a summary and analysis of Telecom’s disclosed information for the purpose of

*“promoting greater understanding of the operation and behaviour of the business units of Telecom and changes in operation and behaviour over time”.*¹

Accounting separation enables the Commission to analyse and report on the performance of Telecom’s operationally separated services groups². In addition, for the first time in financial year 2009/2010³, Telecom has been required to publish a limited number of ‘Product Statements’, which are intended to provide detailed information about key access and wholesale products provided to Telecom’s competitors.

¹ s69ZG of Part 2B of the Telecommunications Act 2001.

² Access Services, Wholesale Services, Retail Services and Other Services (which includes Telecom’s international activities)

³ below referred to as 2010

Compliance with regulatory accounting Requirements

In 2009, the Commission identified a number of issues concerning the reliability of Telecom's published regulatory financial statements. In particular, it was noted that the difference between Current Cost Accounting (CCA) and Historic Cost Accounting (HCA) fixed asset valuations was significant and had a material impact throughout the regulatory financial statements. The net replacement CCA asset valuation of \$8.7 billion, applied by Telecom, was more than twice the HCA net book value for the same fixed assets of \$4.2 billion. Telecom's total valuation uplift was considered high in comparison to telecommunications companies such as BT in the United Kingdom where the equivalent uplift is approximately 10%.

In 2010, the Commission introduced a set of Regulatory Accounting Principles, to be used as overarching guidelines for the preparation of Telecom's Regulatory Financial Report and the Regulatory Reporting Manual. The principles were introduced to improve the reliability, transparency and robustness of Telecom's disclosed information in the absence of other specific instructions or requirements⁴.

To specifically address the large difference between CCA and HCA valuations, Telecom was required to remove any assets from the CCA valuation which were fully depreciated under HCA and to make efficiency adjustments to take into account the additional functionality or capability associated with modern equipment being valued under CCA.

In response to the new Regulatory Accounting Principles, the transparency of internal transfer charges and the reliability of cost attribution have improved. However, the percentage difference between the 2010 CCA valuation of \$7.7 billion⁵ and the HCA valuation of \$4.4 billion remains much larger than observed for overseas telecommunications companies such as BT.

Objectivity of the 2010 CCA asset valuation

One of the key Regulatory Accounting Principles introduced as a Requirement for 2010 was the principle of 'objectivity', which required Telecom to "*apply regulatory accounting processes and procedures which are objectively justifiable and reasonable.*" The objectivity requirement applied both to the valuation of assets and to the attribution of revenues and costs to the operationally separated services groups and the products listed in the published product statements.

The Commission's 2010 analysis of CCA valuation identifies that the bulk of the difference between HCA and CCA valuations for the Telecom Group is the cost of the Access Services Group's passive

⁴These principles are defined and discussed in the Requirements and the relevant decision paper respectively. The later can be found at <http://www.comcom.govt.nz/assets/Telecommunications/Telecom-Separation/Accounting/Decision-on-Changes-to-the-Telecom-Regulatory-Financial-Statements-Information-Disclosure-Requirements-17-May-2010.pdf>

⁵This figure includes the reduction to account for assets which are fully depreciated under HCA.

copper and fibre network (i.e. trenches, cables, ducts, manholes, and joints). Telecom's overall net CCA valuation for its passive access network in 2010 is \$4.6 billion⁶, compared with a net valuation of \$1.4 billion for the same assets under the HCA methodology.

Trenching and cable jointing are major contributors to access network costs and the CCA valuation is particularly sensitive to the cost assumptions used for these inputs. For 2010, Telecom has based these cost inputs on the average prices it pays its Field Services companies to perform minor works (such as trenching jobs of less than 150m). A small discount, 4% for in town and 11% for out of town routes, was applied to reflect the economies of scale that would apply if major works (such as significant amounts of trenching work in a particular area) were required.

Telecom has not satisfied the Commission that its 2010 trenching discount factors are objectively justifiable and, in particular, that they provide recognition of appropriate economies of scale for the CCA valuation.

In light of its own assessment, the Commission considers that a more appropriate discount would be around 40%. Applying this discount could lead to a reduction of the net CCA valuation of the passive access network by up to \$1.3 billion. The Commission proposes to consult on changes to the Requirements to address this issue for the 2011 regulatory accounts.

The Commission considers that Telecom's current approach to CCA significantly over-values the assets allocated to the Access Services Group, resulting in greater depreciation charges and lower profitability reported for the group and its products. Therefore, the affected group and product financial statements are unreliable for regulatory purposes. The Commission proposes to consult on whether Telecom should be required to re-publish its 2010 regulatory accounts to reflect changes to the Requirements for the 2011 regulatory accounts.

Product Statements

The 2010 Regulatory Financial Report was considered a transition year for product statements, with a limited number of these required to be published. The gradual introduction of product statements was intended to lessen the financial burden on Telecom and allow time to develop methodologies for accurate reporting. As a result of the high CCA valuation, and the subsequent increased depreciation charge, many of the CCA product statements are unreliable for regulatory purposes.

The effects of the high valuation are seen predominately in those products which utilise passive network assets such as the copper line MPF/UCLL products. The Commission has estimated the effect on the MPF product of applying a 40% discount to the valuation of the main passive network elements. The table below summarises these results:

⁶ Telecom has valued the passive network at \$13.2 billion under CCA, which, under HCA, is valued at \$3.4 billion.

	Original MPF EBIT per line		Estimated EBIT per line with 40% discount applied	
	MPF Service Urban	MPF Service Non Urban	MPF Service Urban	MPF Service Non Urban
HCA EBIT per lines per month	11.84	20.45	11.84	20.45
CCA EBIT per lines per month	4.29	- 0.24	7.21	7.84

While the effect of the higher discount rate on urban lines is an increased EBIT of 68%, the principal impact is on non-urban lines, which show a substantial turnaround in EBIT, from a monthly loss of \$0.2, to a \$7.84 monthly profit. The Commission will consult on an appropriate discount rate to prescribe for inclusion in the 2011 regulatory accounting requirements.

Other issues relating to the 2010 product statements are summarised below:

1. Revenue affected by operational events, such as non-commercial trials and discounts or credits issued for poor service, is not transparently accounted for. This makes it difficult for the Commission to match revenues with appropriate revenue generating service volumes. Telecom informed the Commission that this problem is due to revenues and service volumes being recorded in separate systems which are not generally reconciled. The Commission expects the systems issues to be corrected for the 2011 regulatory accounts and product statements.
2. Telecom has applied 'year-end' service volumes to allocate costs to the quickly growing UBA product. This had the effect of over-stating the costs allocated to the regulated products and understating the costs to unregulated products. The Commission will provide detailed guidelines for service volume reporting for cost allocation purposes in the 2011 regulatory accounts.
3. The bundling of product volumes and revenues with associated services contrary to the product specification in Telecom's Regulatory Reporting Manual. This was highlighted in the reporting of the line rental resale product. The Commission will provide guidance for the 2011 regulatory accounts.
4. Telecom has chosen a trench cost allocation methodology which allocates a higher portion of trenching costs to copper based access products and a lower portion to backhaul products. This can be seen in the high EBIT recorded by UCLL backhaul and 2Mbps services.

Summary of compliance with 2010 requirements

The following table summarises the Commission's findings with respect to Telecom's compliance with regulatory accounting principles stipulated for the 2009/2010 financial year.

	2010 Requirements	Applied to 2010 statements
Asset Valuation	Value fully depreciated assets at zero.	✓
	Use the straight-line depreciation method.	✓
	Exclude any additional functionality provided by modem equivalent assets used in CCA valuation.	Telecom has provided information to demonstrate that the effect on asset valuation is difficult to quantify, but likely to be small.
	Exclude any excess capacity.	Telecom has excluded 'dead' and unusable assets from the valuation. Spare capacity for growth and other contingencies is included.
	Consistently apply regulatory accounting principles, in particular objectivity, when valuing assets.	Telecom has not demonstrated compliance with regulatory accounting principles.
Attribution	Employ a record keeping process for internal transfer charges.	✓
	Revise the presentation and wording of the attribution approach.	✓
	Apply regulatory accounting principles when attributing costs.	Accounting principles are generally applied when attributing costs. Process not transparent when reliant on volume data for some products.
Product List	Published the required products.	✓
	Product statement data is sourced from regularly updated operational systems, surveys or samples.	Telecom's systems were not updated adequately to provide sufficiently accurate information.
	Apply regulatory accounting principles to volume data.	Telecom has not demonstrated compliance with regulatory accounting principles.
Change Management Process	A documentation process to track the implementation of any changes.	✓
	Disclose material changes which effect the regulatory financial statements.	✓

As a consequence of poorly applied accounting principles in the valuation of assets and the reporting of product statements, the Commission considers that Telecom's 2009/2010 regulatory financial statements are unreliable for regulatory accounting purposes. The Commission will address the identified shortcomings by consulting with industry on proposed changes for 2010/2011, and whether Telecom should be required to republish the 2010 regulatory financial statements incorporating the resulting changes.

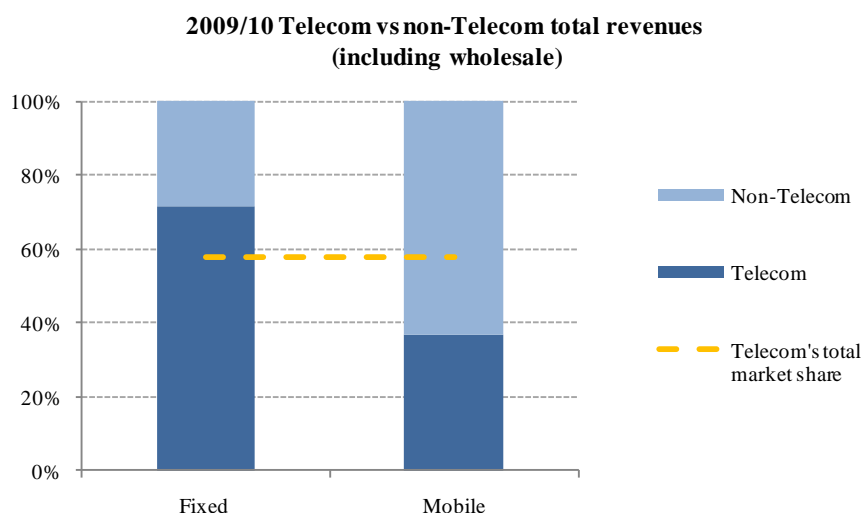
DETAILED ANALYSIS

Telecom Group

Telecom provides internet, mobile, data and voice services to retail and wholesale markets in New Zealand and overseas.⁷ It is a vertically and horizontally integrated telecommunications service provider with a range of both network infrastructure and retail activities.

In 2010, Telecom reported revenues in excess of \$5.2b and net earnings of \$380m. It is listed on the NZX, ASX and NYSE and has a market capitalisation of around \$4.4b comprising approximately 8% of the total New Zealand stock market capitalisation of \$56.6b.⁸

The graph below compares Telecom's market share against other service providers across the fixed and mobile markets⁹; it has 72% of fixed line market revenues and 37% of mobile market revenues.



As a result of regulation, Telecom is obliged to provide physical access to certain bottleneck components of its network and wholesale services to other telecommunications service providers that compete with Telecom's wholesale and retail business units.

The diagram below shows Telecom's business operations before and after the Telecommunications Amendment Act 2006¹⁰, which introduced operational separation (Part 2A) and accounting separation

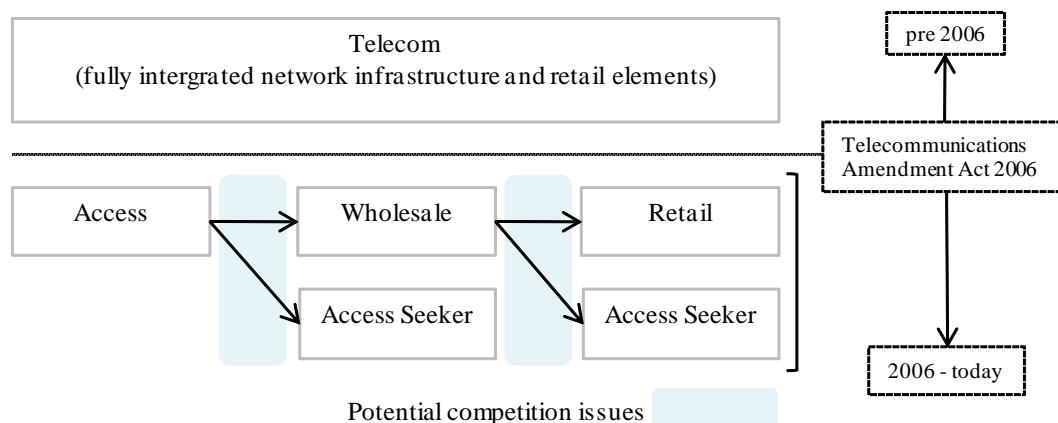
⁷ Telecom International has a customer base of more than 200 wholesale and retail providers from across the world. Source: Telecom's 2010 Annual Report, Page 22.

⁸ Source: <http://www.nzx.com/markets/nzxx> (27 January 2010).

⁹ Information sourced from the Commission's market monitoring information.

¹⁰ The New Zealand government undertook a telecommunications sector stock take to address the observed gap between leading OECD countries and New Zealand particularly in the area of broadband. The Telecommunications Amendment Act 2006 was enacted specifically to add include: sector monitoring, reviews of sector performance and information dissemination; STDs; monitoring and enforcement of Telecom's operational separation; information disclosure by Telecom and other access providers to increase transparency of costs and pricing.

(Part 2B) to the New Zealand regulatory framework in order to promote competition for the long-term benefit of end-users in New Zealand.¹¹



The table below summarises Telecom’s regulatory results over the last two financial years; 2008/09 and 2009/10.

Telecom Group								
\$million	HCA				CCA			
	30-Jun-09	30-Jun-10	Variance	%	30-Jun-09	30-Jun-10	Variance	%
Revenues	7,157	6,824	(333)	-5%	7,157	6,824	(333)	-5%
EBIT	737	676	(61)	-8%	669	292	(377)	-56%
MCE	5,242	5,233	(9)	0%	9,095	8,851	(244)	-3%
<i>EBIT Margin %</i>	10%	10%			9%	4%		
<i>EBIT/MCE %</i>	14%	13%			7%	3%		

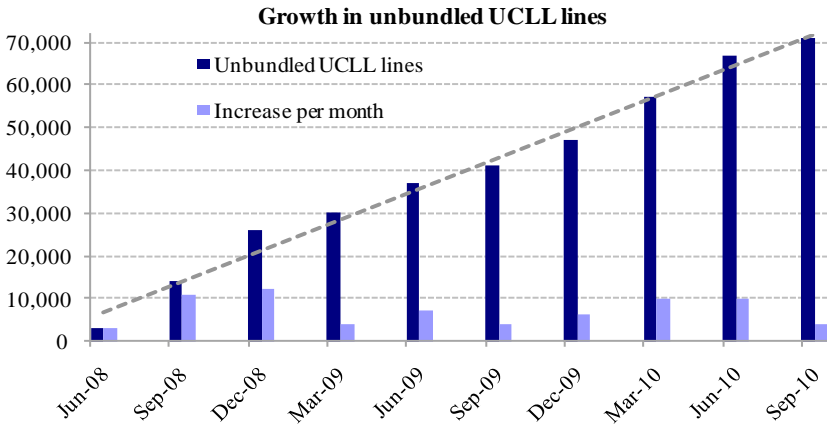
Telecom experienced a decrease in revenue of \$333m in the 2010 financial year. The bulk of this decrease (\$296m) was due to a combination of the loss of AAPT (Australia) and other international revenues. The reduction in domestic revenue of \$37m corresponds to an overall decrease of around 0.7% which is close to the industry average of 0.5%¹² for the financial year. The effects of increasing competition, including the growth of UCLL and UBA services, have resulted in increasing revenues for the Access and Wholesale service groups. The combined growth of Access and Wholesale revenues of \$89m was offset by the reduction of Retail revenue by \$126m.

The significant reduction in CCA EBIT for 2010 is due to changes in Telecom’s depreciation methodology, such as re-classification of long lived assets to equivalent assets with significantly shorter lives. This has the effect of increasing annual depreciation charges and lowering CCA EBIT.

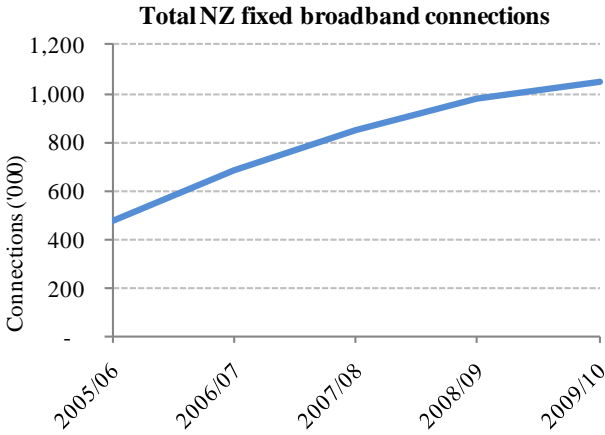
¹¹ Source: <http://www.beehive.govt.nz/node/25636>

¹² Sourced from Commission telecommunications sector monitoring information for the 2010 financial year.

The impact of increased competition is observed in the increase in the number of unbundled exchanges with over 67,000 lines unbundled¹³, as shown in the graph below.



Broadband penetration continued to grow, increasing demand for both retail and wholesale product offerings, while increased retail competition (such as uptake of UCLL in the residential market) and constrained consumer spending appear to have negatively impacted retail revenues.



In 2010, Telecom’s capital investment of over \$1.1b decreased by approximately 10% from 2009 levels. The reduction is due to there having been significant one-off investments in establishing the XT mobile network in 2009.

Investment in the fixed network cabinetisation program continued and is set for completion in 2011. Other major investments were in the equipment necessary to support increased wholesale voice and broadband uptake.

¹³ Commerce Commission, *New Zealand Retail Prices for Fixed Lines and Mobile Services: A Benchmark Comparison*, November 2010, Appendix 1

Services Groups

Telecom's Regulatory Financial Report includes reporting for the following Services Groups:

- The **Access Services Group**, including the activities of Chorus.
- The **Wholesale Services Group**, including the activities of Telecom Wholesale but excluding International activities.
- The **Retail Services Group**, including the activities of Telecom Retail and Gen-I.
- The **Other Services Group**, including the activities of the international business group and overseas operations.¹⁴

Each of the Services Groups owns a part of Telecom's fixed asset base, and regularly trade with each other in order to create products and services for sale to Telecom's external customers, as summarised in Appendix B.

The Services Groups are each allocated a portion of Telecom's shared services activities (such as corporate overheads) and fixed assets (such as core network and shared software applications). The diagram below shows the percentage of shared services fixed assets allocated to the Access, Wholesale and Retail Services Groups.

Allocation of "Shared Services" Assets			
4%	21%	75%	
Access	Wholesale	Retail	
Chorus Assets	Telecom Wholesale Assets	Retail Assets	Geni Assets

To ensure that each Services Group is reported as if its business activities were performed by an independent entity, Telecom was required to have objective and reasonable processes and procedures in place to attribute revenues, expenses and asset costs to each of the Services Groups. To achieve this, Telecom used the operational separation internal trading arrangements and its own attribution methodology where these trades were not relevant (such as for shared services assets). This was consistent with the guiding Regulatory Accounting Principles set out in the Requirements.

Additionally, the Requirements state that Telecom must complete the Regulatory Financial Statements for both the Services Groups and Product Statements using HCA and CCA.

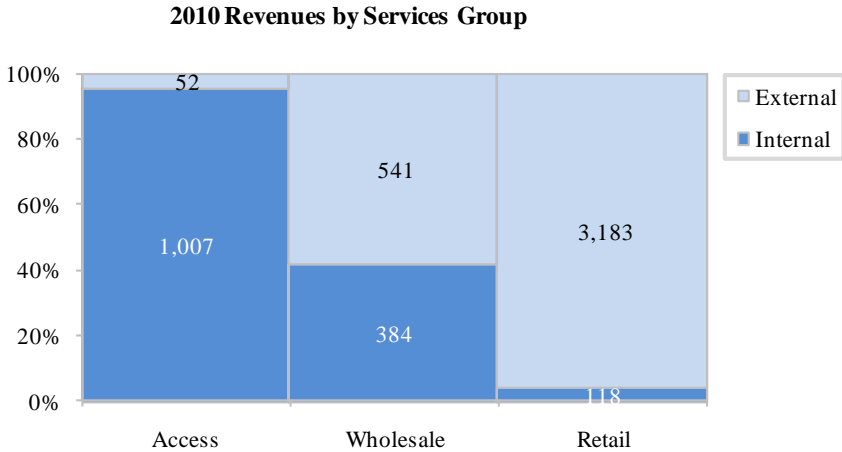
¹⁴ The Other Services Group has not been included in the Commission's analysis as it lies outside the scope of the Act since its business activities operate outside of New Zealand.

Internal trading arrangements

Telecom’s internal trading arrangements record the supply of services between the Services Groups, which is recorded as internal revenue to the Services Group providing the service and as internal expenditure to the receiving Services Group. This replicates the revenues and expenses that would occur if the Services Groups were acting separately, and is consistent with the operational separation requirement that Telecom’s business units act independently and at arms-length from one another.

The prices at which internal trades are set can affect the ability of access seekers, who rely on wholesale services, to compete with Telecom’s customer facing retail services. Analysis of internal trades can assist in understanding Telecom’s financial trades and hence it’s compliance with the operational separation undertakings. It can also assist in the detection of anti-competitive behavior, such as price discrimination.

Consistent with 2009, most internal trades originate in the Access Services Group (receiving 62% of the total internal revenues) and terminate with the Retail Services Group (incurring 68% of the corresponding total internal expenses). The graph below compares internal and external revenues for 2010 by Services Group. These results appear to be consistent with the vertically integrated nature of Telecom’s business.



Compared to 2009, internal expenditure for the Retail Services Group decreased, whereas internal expenditure increased for the Wholesale Services Group. While the shift of expenditure between Wholesale and Retail is consistent with the changing market environment (such as the increase in unbundled copper local loop backhaul links), the Wholesale Group’s revenue increase of \$62m is not consistent with the increase in cost of sales of \$98m. Information provided by Telecom under compliance monitoring uncovered an inconsistent handing of UCLL backhaul costs between years. In 2010, all of these costs were shown in Wholesale, whereas in 2009 the majority of these costs were

allocated to the Retail Services Group. Regulatory accounts from 2009 have not been restated to reflect this change.

The Commission's review of Telecom's internal trades through compliance monitoring information found no high level indicators of price discrimination in favour of internal sales to any of the other Services Groups.¹⁵

Cost attribution

In 2009, the Commission and KPMG¹⁶ identified that the reliability of Telecom's cost attribution process was in question as both parties identified issues concerning the completeness and accuracy of network inventory data.¹⁷ This data is a key input to cost drivers in the attribution process. The Commission was also concerned with the level of transparency of some steps in Telecom's attribution process.

The inventory and transparency issues described above resulted in the Commission revising the Requirements for 2010 to be more explicit in the principles Telecom should follow in application of its attribution methodology. These revisions included requiring that the attribution process:

- be more causal and minimise intermediate steps
- be documented so that an informed reader can judge its reasonableness
- ensure that product statements are prepared using data that meets specified reliability criteria.

In preparing its Regulatory Financial Report, Telecom applied an attribution methodology using its activity-based costing model (ABC).¹⁸ Telecom's ABC model took revenues, expenses and depreciation from its operationally separated business units and either attributed or allocated them to products and services.

Telecom is required to apply a fully allocated cost standard and attribute costs in a causal manner in accordance with the activities that cause the costs to be incurred. Similarly, revenues are required to be attributed in accordance with the activities that caused the revenues to be earned, and assets and short-term liabilities to be incurred.

Revenues and cost of sales

Telecom's attribution process for revenues is essentially causal. Telecom records its revenues to the specific accounting code for the type of product or service and then attributes it directly to the product

¹⁵ High level reviews, by nature, do not provide a comprehensive review of all facets of an issue.

¹⁶ KPMG Auditor's Report on pages 8 of Telecom's Regulatory Financial Report for the year ended 30 June 2009.

¹⁷ This is non-financial data sourced from Telecom's operational systems.

¹⁸ Based on cost drivers, costs are traced and allocated through Telecom's activities establishing a cause-and-effect relationship with the resulting outputs (e.g. product statements).

that the revenues relate to for regulatory reporting purposes. Product cost of sales follow the same causal path.

With the introduction of product statements in 2010, it has become apparent that, although gross revenue attribution is causal, this attribution does not take account of revenue affecting operational events, such as non-commercial trials and discounts or credits issued for poor service. This lack of accounting makes it difficult for the Commission to match revenues with appropriate revenue generating service volumes for the purposes of calculating the normal price charged per service (in the absence of unusual events such as trials and faults).

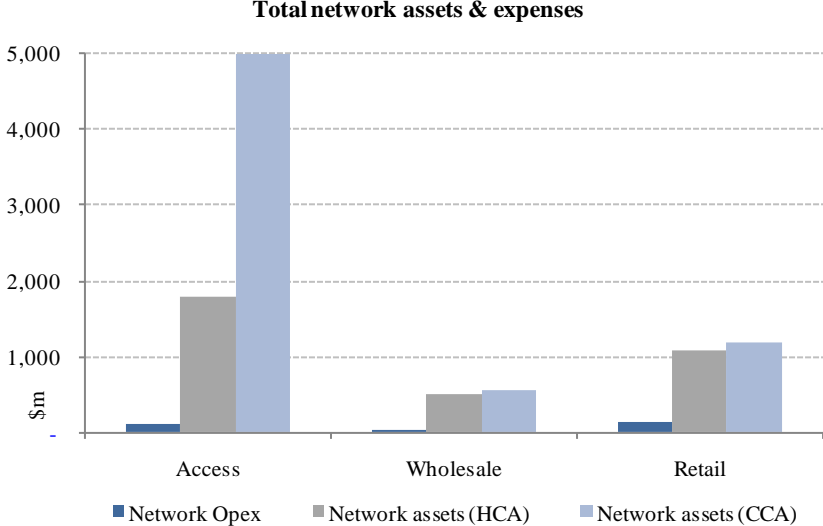
Telecom has informed the Commission that this problem is due to revenues and service volumes being recorded in separate systems which are not generally reconciled. The Commission expects the systems issues to be corrected for the 2011 regulatory accounts and product statements.

Expenses

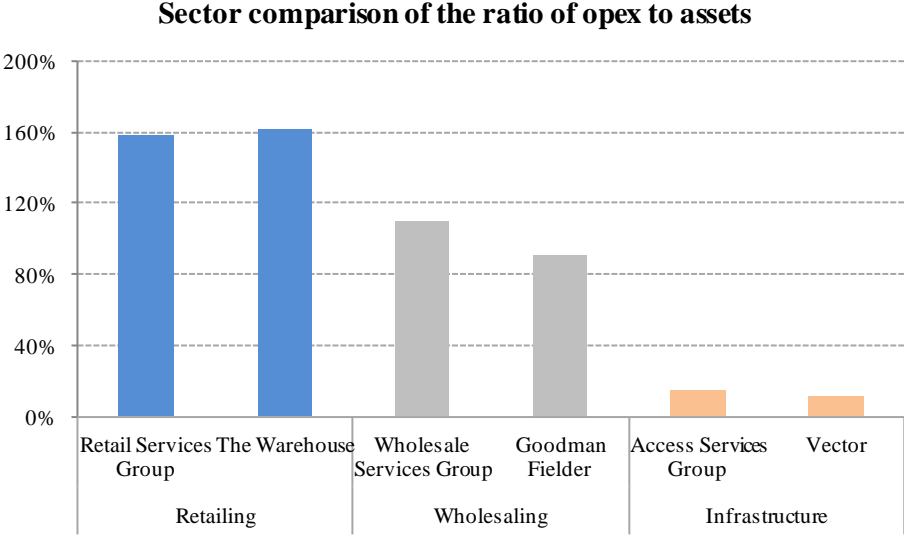
The Commission’s analysis of Telecom’s expenses show that 18% of Telecom’s total expenditure is shared costs and 82% is directly incurred by the respective Services Groups.

In 2010, the Commission required Telecom to split expenses and depreciation into network and non-network categories to provide an understanding of which expenditure is directly related to the network or is network support related.

The following graph shows a comparison between network expenses and network assets for both HCA and CCA. The Access Services Group, being an infrastructure business, has little in the way of expenditure (or customers) while holding a large asset base. The Retail Services Group, on the other hand, has higher operating expenditure due to servicing a larger customer base with fewer network assets.



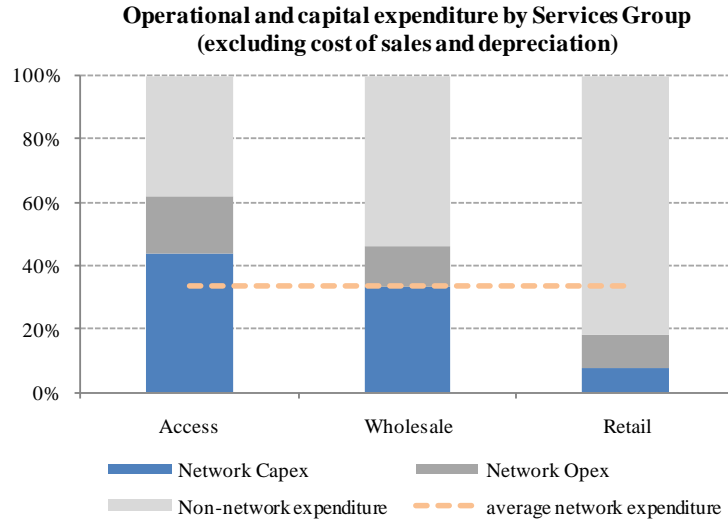
When compared to other companies with similar operational structures, the Services Groups have comparable operating expenditure to asset ratios as shown in the graph below, which serves as a high level cross check on the credibility of Telecom’s reported results for HCA.



An international benchmark study¹⁹ conducted by Ernst & Young in 2010 reported that, on average, network expenditure (both operational and capital) accounts for approximately 30% to 50% of total expenditure for telecommunications operators, with fixed network operators tending to be at the higher end of the range. After adjusting for internal trades, Telecom’s overall HCA network expenditure was, as shown in the chart below, 33% of total operating and capital expenditure, which would place it at the lower end of the benchmark range.

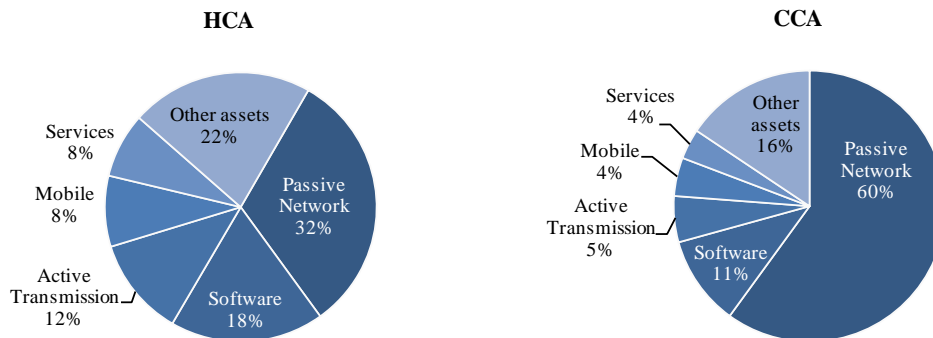
The ratios of operational and capital expenditure by Services Group is illustrated in the graph below.

¹⁹ Ernst & Young, *Measuring up – An introduction to the global telecoms network expenditure benchmarking study*, 2010, p.5



Asset valuation

The charts below provide a comparison of the makeup of the value of Telecom’s fixed asset base under HCA and CCA valuation methodologies.



In 2009, the Commission reported that Telecom’s Regulatory Financial Statements showed a CCA asset value of \$8.0b²⁰, which was close to twice the HCA asset value of \$4.2b.²¹ The Commission also noted that Telecom’s valuation uplift was high when compared to other vertically integrated telecommunications incumbents such as BT in the United Kingdom where the equivalent uplift was approximately 10%.²²

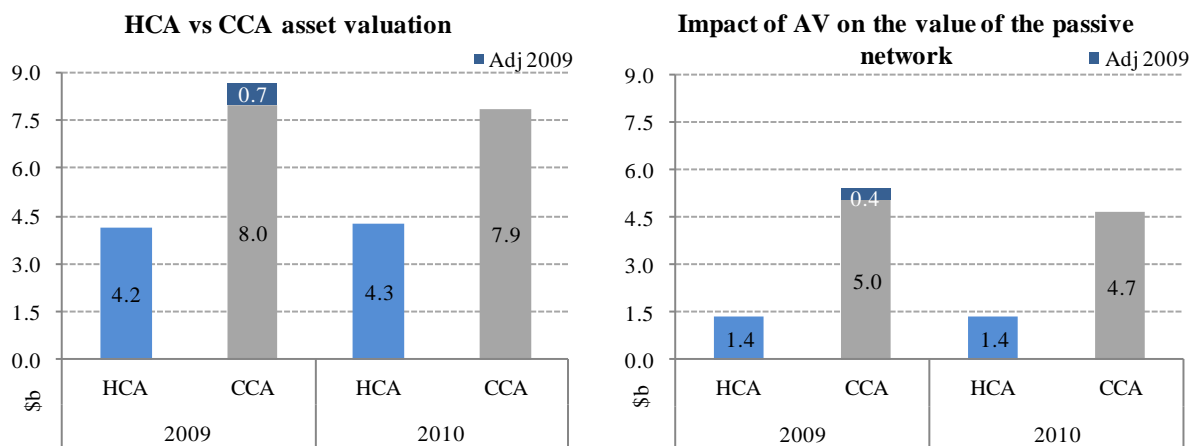
For 2010, Telecom’s numbers remain very similar showing a CCA asset value of \$7.9b, which is 184% of the HCA value of \$4.3b. The graphs below provide a comparison of the valuations for 2009

²⁰ Changes made to the 2010 Requirements state that Telecom must *state all fully depreciated assets still in use at balance date at zero for current cost accounting purposes*. The change resulted in Telecom restating the 2009 CCA net asset value by a reduction of \$711 million and lowering CCA depreciation and amortisation by \$107m.

²¹ All values at the consolidated level exclude the Other Services Group as it is outside of the Requirements and it did not implement CCA.

²² BT reported a CCA adjustment in the 2008 MCE reconciliation statement of \$1.6b compared with BT’s HCA fixed asset (property, plant and equipment) total in their annual report of \$15.3b.

and 2010, for both the full valuation and the passive access network component. The adjustment shown was the result of the change made to the 2010 requirements eliminating fully depreciated assets from the CCA valuation.



The Commission’s 2010 analysis of the differences between the two costing methodologies shows, as it did in 2009, that the bulk of the difference lies in the Access Services Group passive network valuation, which accounts for 87% of the uplift. The passive network contains trenches with ducts, trenches without ducts, copper cables, copper joints, fibre cables and fibre joints, and is a crucial element to delivering all fixed line products and services including voice and broadband. Both the Wholesale and Retail Services Groups use components of the passive network (e.g. UCLL) as inputs to their products and services.

For the 2010 CCA valuation, the Commission required Telecom to exclude any costs that constitute excess capacity or additional functionality²³, to prevent or limit overestimation of value. In response, Telecom concluded that there were no significant CCA costs associated with excess capacity or functionality²⁴ and the 2010 CCA and HCA values are therefore similar to those from 2009.

Telecom’s CCA valuation of the passive network is examined more closely in the following section where the Access Services Group is analysed in detail.

²³ Such as new and previously unused functionality in modern asset prices used for the CCA valuation.

²⁴ Telecom claims to have made an unquantified adjustment for unused space in exchange buildings.

Access Services Group

The Access Services Group consists of all of Telecom's activities and services provided by Chorus including all relevant Network Access Services and other services provided over Telecom's local access network. It controls most of the passive network (local loop) and some active transmission assets²⁵. Many of its products and services have regulated price caps set by the Commission's Standard Terms Determination (STD) process in order to promote competition. These include UCLL, MPF, SLU, co-location, backhaul and field services.

Of the Services Groups, the Access Services Group has the lowest business risk as it owns the bottleneck assets and competition is limited to cable operators such as TelstraClear, some wireless and satellite operators and regional companies providing fibre access.

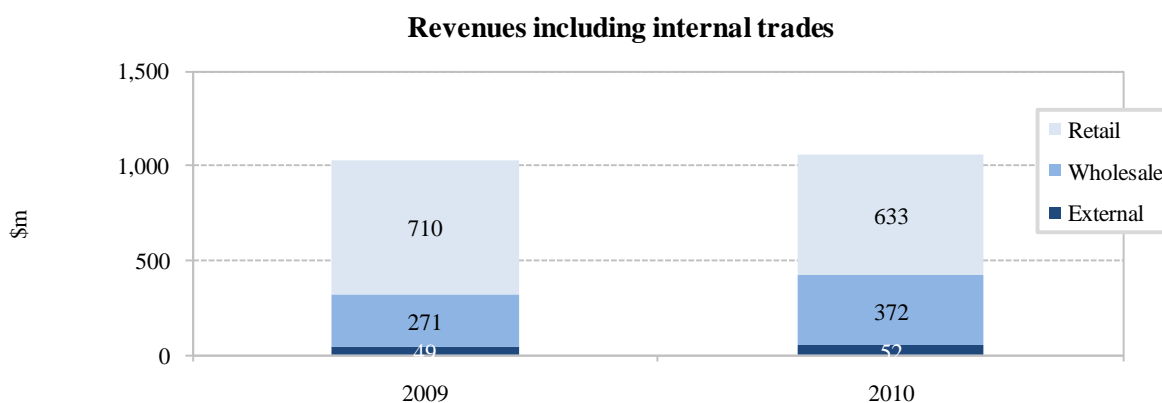
The unbundling of Telecom exchanges, while increasing competition in the retail market, still results in demand for the Access Services Groups products and in some cases the effects of competition may increase demand for access services (such as a stimulated take up of fixed broadband products).

Access Services Group								
Smillion	HCA				CCA			
	30-Jun-09	30-Jun-10	Variance	%	30-Jun-09	30-Jun-10	Variance	%
Revenues	1,032	1,059	27	3%	1,032	1,059	27	3%
EBIT	594	571	(23)	-4%	418	294	(124)	-30%
MCE	1,900	1,922	22	1%	5,544	5,359	(185)	-3%
<i>EBIT Margin %</i>	58%	54%			41%	28%		
<i>EBIT/MCE %</i>	31%	30%			8%	5%		

Revenues

With total revenues of \$1b in a market with limited competition, the Access Services Group had a slight increase in total revenues in 2010 suggesting that its revenues are relatively robust despite the global financial downturn. The revenue increase is partly due to increased demand from access seekers purchasing wholesale services which originate with the Access Services Group. This is illustrated by the 37% increased value of internal trades supplied to the Wholesale Services Group, as shown in the graph below.

²⁵ Including 780 exchanges; 1,705,185 lines; 67,000 unbundled lines; 2,601 active cabinets (as at 31 December 2010) and access transmission systems such as radio and copper pair gain.

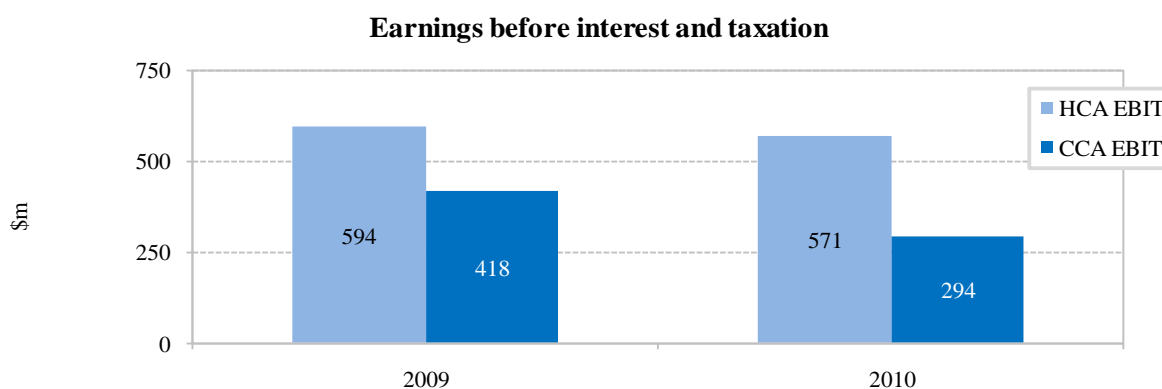


In contrast, the revenues from selling inputs to the Retail Services Group (which continues to be the Access Services Group's largest customer) decreased by 11% from 2009. This is explained by the migration of retail customers to alternative providers, which has caused a shift in the sale of provisioning and field services from the Retail to the Wholesale Services Groups.

EBIT

The Access Services Group was the most profitable of the Services Groups, with an EBIT margin of 54%, and is the main profit driver for the Telecom Group. In 2010, expenditure increased more than revenues (the main contributor being the operation and maintenance of the network), which resulted in lower earnings than in 2009.

Under the CCA valuation methodology the EBIT fell substantially, as illustrated in the graph below. This is a result of a decrease in the holding gain reported in 2009. It was not possible to meaningfully compare EBIT for the two years as Telecom made various changes to its asset valuations,²⁶ compounded by asset additions throughout the year.

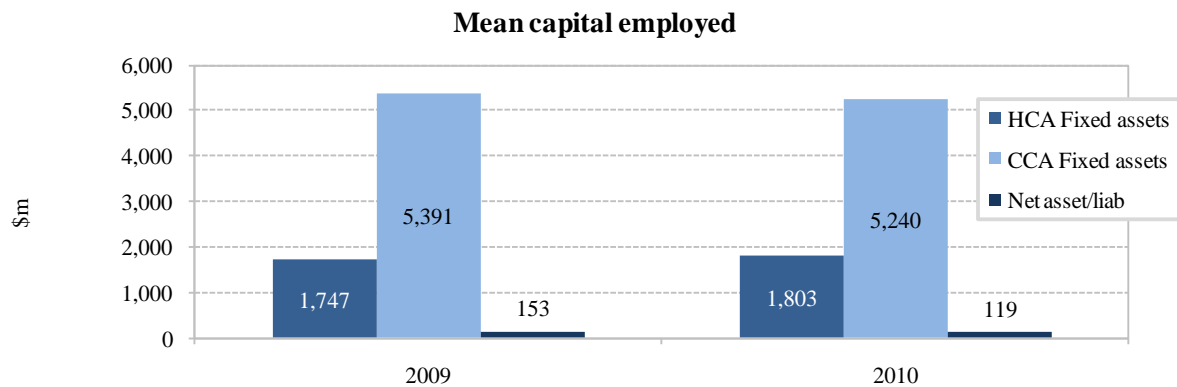


²⁶ Examples include; reclassification of small ducts (equal to and less than 25mm) from ducted routes to unducted cable routes as these are now considered to be cable protection; changes to the discount rate applied; reclassification of manholes costs from copper cables to ducts and manholes; and holding losses for parts of the active transmission network which relate to older technologies such as SDH and PDH.

MCE

The Access Services Group's MCE is almost entirely made up of fixed assets with little movement in the overall value of these assets between years. Through analysis of the depreciation profile of the main assets (passive network and active transmission equipment) the age of the network can be determined. It is estimated that 61% of the original cost of the passive network assets (by far the bulk of the access network value) and that 70% of the original cost of the active transmission equipment has been depreciated. This indicates an aging network which is still generating an EBIT/MCE %²⁷ of around 30% for the Access Services Group, under HCA.

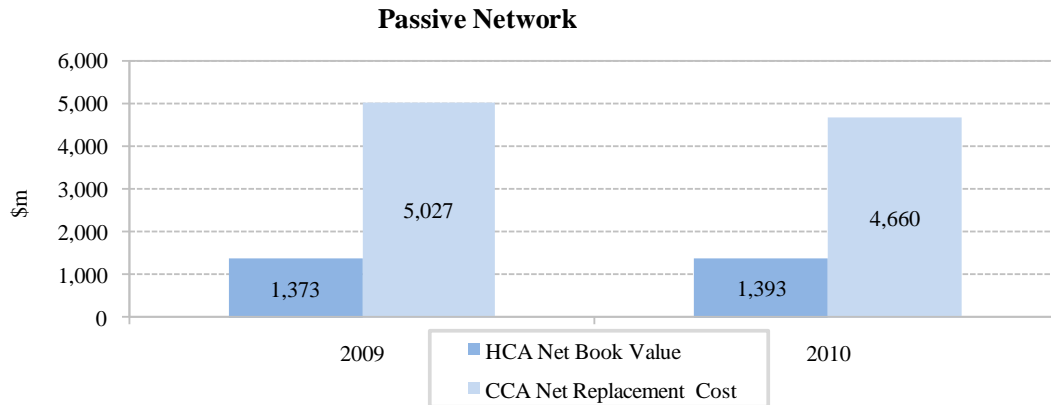
By applying its CCA methodology Telecom increased its total fixed asset value to \$5.4b thereby decreasing the EBIT/MCE % to 5%. Note that Telecom's CCA valuation and its limitations are discussed later in the following section.



Analysis of CCA asset valuation for the Access Services Group

This review has drawn on the Commission's experience in building passive network cost models, which have previously demonstrated that CCA network valuations can be highly sensitive to assumptions concerning a few key design and cost inputs. For reference, the Access Group passive network valuations for 2009 and 2010 are illustrated in the graph below.

²⁷ This value is an indication of return on assets.



To examine the extent to which key assumptions affect the valuation of Telecom’s Access Services Group’s CCA passive network valuation, the Commission performed both a ‘top down’ and a ‘bottom up’²⁸ analysis of the relevant modelling parameters.

Top-down analysis of route distances

As Telecom’s trenching costs are a substantial proportion (65%) of the total gross passive network CCA valuation, the route distance (length of trench or aerial structure with live cables or ducts) is a key cost driver in the passive network valuation.

In 2009, the Commission identified that Telecom sometimes employs multiple trenches on a single route (such as multiple parallel trenches within a footpath). Telecom’s methodology valued multiple trenches along a single route separately on the justification that multiple trenching is an unavoidable ‘fact of life’ for an efficient operator.²⁹ The Commission’s considered that this factor may have inflated the CCA valuation of trenches beyond reasonable (efficient) expectations.

For 2010, the Commission analysed Telecom’s route information to assess whether multiple trenching introduced additional inefficient costs into the CCA valuation. Using Telecom geographic route information, the Commission calculated³⁰ a copper route distance similar to Telecom’s reported results (which were sourced from Telecom’s geographic information systems). After excluding central business districts (where multiple trenches are common and justified) and long roads in sparsely populated areas,³¹ the Commission estimated that Telecom’s actual route distance was approximately twice the measured road distance. This result is consistent with a modern copper or fibre network

²⁸ Top-down modelling analyses using a firm’s actual data starting from an aggregate level. Bottom-up modelling uses detailed data to build and cost a network that can supply telecommunications services.

²⁹ This results from requirements to overlay existing routes at a later date due to need for increased capacity, and for other operational reasons.

³⁰ The Commission used its geographical information system (GIS) to perform this calculation. A measure of the extent of multiple trenching was achieved by comparing the total route distance to road distances for each exchange service area (ESA).

³¹ These sparsely populated areas are often served by a combination of wireless and copper technology.

design, which may place cable on both sides of a road or, when required, use under road drilling to service both sides of a road from a single main trench.

Bottom-up analysis of route distances & cost sensitivities

In order to confirm the top down route analysis and to investigate the sensitivity of the CCA valuation to key unit costs, the Commission implemented an updated version of the Federal Communication Commission's (FCC) Hybrid Cost Proxy Model (HCPM).³² This bottom-up model forms the basis of the Commission's local calling TSO cost model³³ and allowed for testing of the following inputs:

- Unit cost inputs including cable, trenching, placement and cabinet costs.
- Terrain information for each Exchange Service Area (ESA) indicating the percentage of easy, medium and hard cable routes for both the in-town and out of town regions.
- Engineering rules to specify network design such as the usage of aerial and underground cable placement for each terrain type and the provision of spare capacity.

Route distances

On a national basis, the updated HCPM model estimated a total passive copper distribution network route distance, which was very close to the route distance which Telecom used for its CCA valuation, and is also consistent with the Commission's top-down modelling. This further indicated that the route distances which Telecom used in its CCA valuation are consistent with a reasonably efficient modern network design.

Trenching and related unit costs

In general, Telecom's key unit costs are drawn from the prices contractors charge to Chorus for various services, which are specifically for short or 'one-off' cable installations (minor works). Recognising that average costs may be lower for major works due to economies of scale, Telecom applied a relatively small percentage discount to the trenching weighted prices. The discount applied was based on the opinion of Telecom's subject matter experts.³⁴ Telecom has been unable to provide calculation or other evidence to support the opinion of these experts. The impact of varying these discount rates on Access Services Group product EBIT is a key concern that is examined later in this report.

³² For further details and files <http://www.fcc.gov/ccb/apd/hcpm/> Link cited 9 February 2011.

³³ The Commission developed the TSO cost model to calculate the cost to Telecom of providing the local calling TSO. The model is based on the HCPM model used by the USA federal communications regulator (FCC) and has been customised for New Zealand to calculate the wired and wireless access costs. New Zealand specific inputs include unit costs and geographic terrain data.

³⁴ Telecom's Regulatory Reporting Manual (paragraph 460) states that Telecom discounted the trench pricing to reflect a bulk discount that would be obtained if a significant amount of trenching work was required. The code based rates used were discounted by 4% for in town Exchange Service Areas (ESAs) and 11% for out of town ESAs (excluding the very significant mole-plough category).

In 2002/2003, the Commission consulted with industry to determine trenching rates that would reflect the major works costs faced by a network provider deploying a nation-wide network. The resulting per metre trenching costs adopted by the Commission were typically significantly lower than those for minor works projects. At the time, Telecom made the following statement in its submission:

“The Commission’s costs are more typical of those that might be possible in very large projects, rather than the costs Telecom faces in the day-to-day delivery of the TSO.”³⁵

For use in the HCPM, the Telecom 2010 CCA unit costs for cable jointing and handling were converted into an average per metre cost for each cable type. In performing this conversion, it became clear that Telecom’s CCA approach values a high number of copper and fibre network joints at minor works or ‘one-off’ contractor prices. These prices include a relatively high fixed cost which is independent of the size of cable being jointed. The pricing structure suggests a likely overstatement of the unit cost per joint for a major works project. Copper joints alone make up around 12% of Telecom’s gross CCA passive network valuation. The Commission considers that Telecom’s CCA valuation does not represent a passive network valuation based on major works prices.

Modeled capital costs and cost sensitivity

The following table lists CCA valuations of the Telecom passive access network using Telecom’s unit costs and network design³⁶ rules that prevent the HCPM from highly optimising its network design.³⁷ The variation of the HCPM capital cost results (over \$5b) illustrates the sensitivity of passive network valuations to terrain data.

Methodology	Gross CCA Valuation (\$b)	Variance
Telecom	13.2	
HCPM - hard terrain	13.4	+2%
HCPM - expected terrain	11.2	-15%
HCPM - easy terrain	8.0	-39%

Telecom’s CCA valuation falls at the high end of the range predicted by the HCPM model. The likely explanation for the HCPM ‘expected terrain’³⁸ estimate falling below the Telecom estimate is that the Telecom terrain data cannot be applied in exactly the same manner in the HCPM as it is in the CCA valuation.

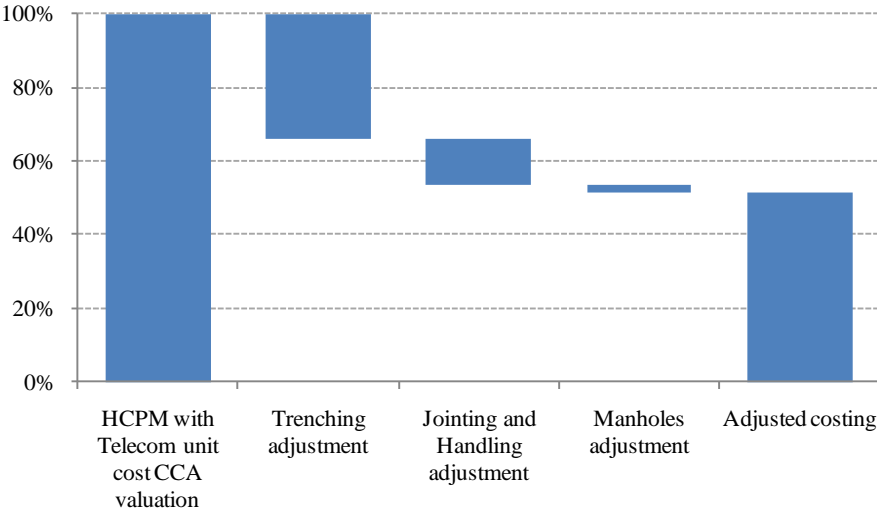
³⁵ Telecom, *Telecom New Zealand Submission on the TSO 02-03 Draft Determination*, 13 August 2004, paragraph 31. A copy can be found at <http://www.comcom.govt.nz/assets/Telecommunications/TSO/2002-2003-TSO/SubsDD-Telecom-Submission-on-02-03-TSO-Draft-Determination-13-August-2004.pdf>

³⁶ These rules, for example, prevent the extensive use of aerial cables, assume realistic distances between nodes and do not make extensive use wireless or radio links.

³⁷ Such as making extensive use of aerial cables.

³⁸ The ‘expected terrain’ calculation uses terrain information from Telecom’s 2010 CCA valuation.

The Commission also examined the effects of varying the key unit cost inputs; the results of which are illustrated below.



A reduction of 34% in the passive network valuation results through adjusting unit costs for trenching from Telecom’s discounted minor works estimates to costs that the Commission considers may be more representative of major works. A jointing and handling cost adjustment accounts for a further 12% reduction and, additionally, manhole costs a further 2%. Other unit cost adjustments had a small effect in comparison to these three. If all three adjustments were applied, the gross valuation decreases to \$5.77bn, which is a total reduction of 48% using a bottom up modelling approach.

The Commission’s analysis indicates that the passive network’s CCA valuation is highly sensitive to the input values used for trenching rates and cable joints. If higher discounts were applied in adjusting key minor works costs down to those of major works, the CCA valuation could be considerably lower.

Commission’s findings

The Commission notes that the asset valuation methodologies that Telecom has adopted can materially affect regulatory financial statements for its Services Groups and products.

The Commission considers that Telecom’s CCA valuation of its passive network appears to be substantially overstated. Further work is necessary before the valuation will be useful for understanding the operations of Telecom’s Access Services Group and before it can be used to assess Telecom’s behaviour with regard to these services.

The valuation methodologies that the Commission has used to test Telecom’s CCA valuation identify areas for future revision of the Commission’s Requirements. This does not imply that the Commission endorses the exact costs identified in these high level valuations.

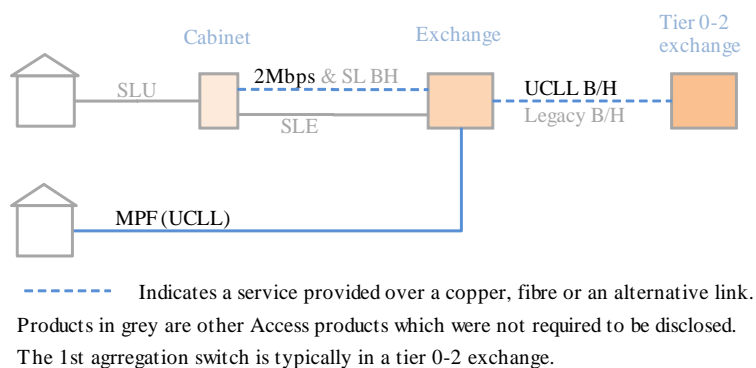
Access Services Group Products

A summary of the Access Services product information is presented in the table below

Access Services Group Product Summary									
\$million	MPF service monthly charge urban	MPF service monthly charge non-urban	MPF new connection - individual with site visit	MPF new connection - individual without site visit	MPF transfer - individual	UCLL backhaul service - 100 Mbps	UCLL backhaul service - 1 Gbps	2 Mbps backhaul	Non-disclosed products
Revenues	228.2	153.7	17.9	2.8	1.6	2.6	34.5	52.6	564.5
EBIT HCA	136.2	85.8	4.4	0.9	0.5	1.8	28.7	45.1	267.4
MCE HCA	493.6	479.1	1.7	0.2	0.1	3.2	21.5	53.7	868.9
EBIT Margin %	60%	56%	25%	32%	31%	69%	83%	86%	47%
EBIT/MCE %	28%	18%	259%	450%	500%	56%	133%	84%	31%
EBIT CCA	49.4	(1.0)	4.3	0.9	0.5	1.7	28.1	41.8	168.1
MCE CCA	1,700.8	1,691.6	1.7	0.2	0.1	6.0	36.2	114.1	1,808.4
EBIT Margin %	22%	-1%	24%	32%	31%	65%	81%	79%	30%
EBIT/MCE %	3%	0%	253%	450%	500%	28%	78%	37%	9%

The key products in this group are MPF service monthly charge (UCLL) and the backhaul products.

The physical configuration of these products is illustrated in the following diagram.



MPF service monthly charge – urban and non urban

MPF is the copper cable linking homes to exchanges (aggregation points) for the transmission of voice, broadband and some data services. It is sold to access seekers and internal services groups as ‘MPF service monthly charge’. MPF is a key bottleneck asset in Telecom’s network, and providing access to it for other service providers through regulation is important to the promotion of competition in the telecommunications market.

MPF monthly charges have been set by through the Commission’s STD process for UCLL at:

- **urban lines** \$19.84 per month
- **non-urban lines** \$36.63 per month.

Pricing distinction between urban and non-urban lines is in recognition of the higher cost to supply non-urban areas as these areas feature lower customer densities and, therefore, higher costs per customer.

The table below³⁹ summarises MPF revenues and expenditure as disclosed by Telecom. It also includes the Commission's calculation of revenues and expenses on an average per-line⁴⁰ basis, which reveals the impact that Telecom's CCA asset valuation methodology has on reported EBIT. Also shown is a comparison of the regulated STD prices with the revenue per unit internal and external as published by Telecom.

MPF service monthly charge - urban & non urban				
	Annual (\$m)		Per line - per month (\$)	
	Urban	Non urban	Urban	Non Urban
average no. of lines			957,785	349,525
Revenues	228.2	153.7	19.9	36.7
Network expenses	20.1	13.1	1.7	3.1
Non-network expenses	31.3	17.3	2.7	4.2
Depreciation	40.6	37.5	3.5	8.9
EBIT HCA	136.2	85.8	12.0	20.5
MCE HCA	493.6	479.1	42.9	109.2
CCA depreciation adj	86.8	86.8	7.5	20.7
EBIT CCA	49.4	(1.0)	4.5	(0.2)
MCE CCA	1,700.8	1,691.6	148.0	403.3
<i>Revenue per unit -</i>				
STD price	\$19.84	\$36.63		
Internal	\$19.89	\$36.68		
External	\$19.20	\$34.25		

Under HCA, non-urban lines show a higher average EBIT than urban areas at \$20.5 per month compared to \$12.0 per month for urban. Under CCA, the EBIT position reverses with urban line EBIT of \$4.5 per month more profitable than non-urban lines, which report a small average negative EBIT of \$0.2 per month. This change is due to Telecom's CCA valuation which attributes disproportionately higher depreciation costs to non-urban lines.

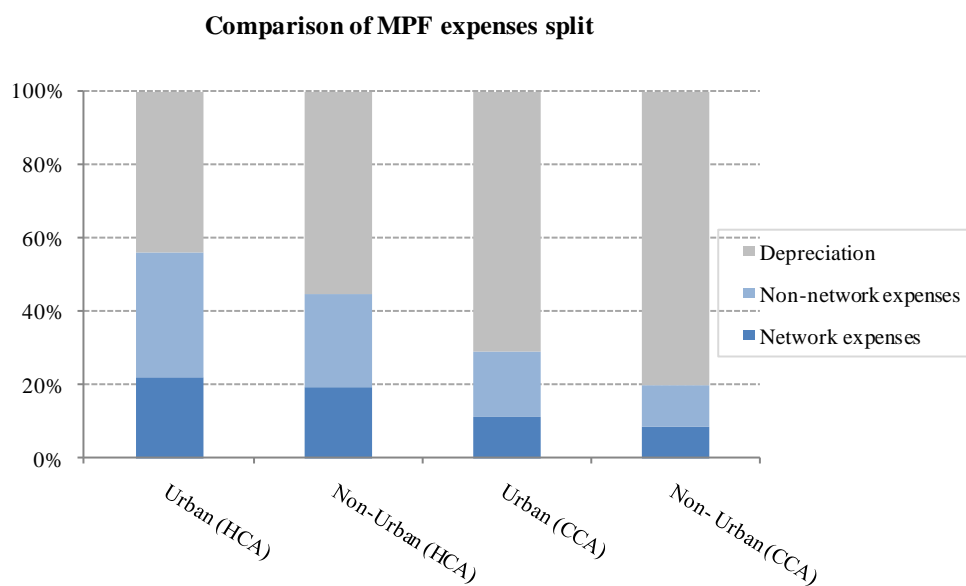
³⁹ This financial information *excludes* any lines that have been affected by the Chorus cabinetisation program. The introduction of cabinets means that a copper line from a home to the exchange is split in to two components that fall into other product classes.

⁴⁰ The "average lines" figure has been used instead of the "lines at the end of June 2010" as shown in the product statements. Lines numbers have been decreasing due to the cabinetisation program.

The Commission also noted the variation from the STD price for average internal and external per line revenues for MPF service, but recognises difficulties encountered by Telecom with internal revenue and volume reporting systems in this first year of product statement requirements. For this reason, the Commission is unable to identify whether there is any price discrimination in regard to these MPF products. The Commission expects these system issues to be addressed for 2011.

Effect of CCA valuation on MPF EBIT

The significance of depreciation expense is illustrated in the graph below where, in all valuations, depreciation is the largest cost component.

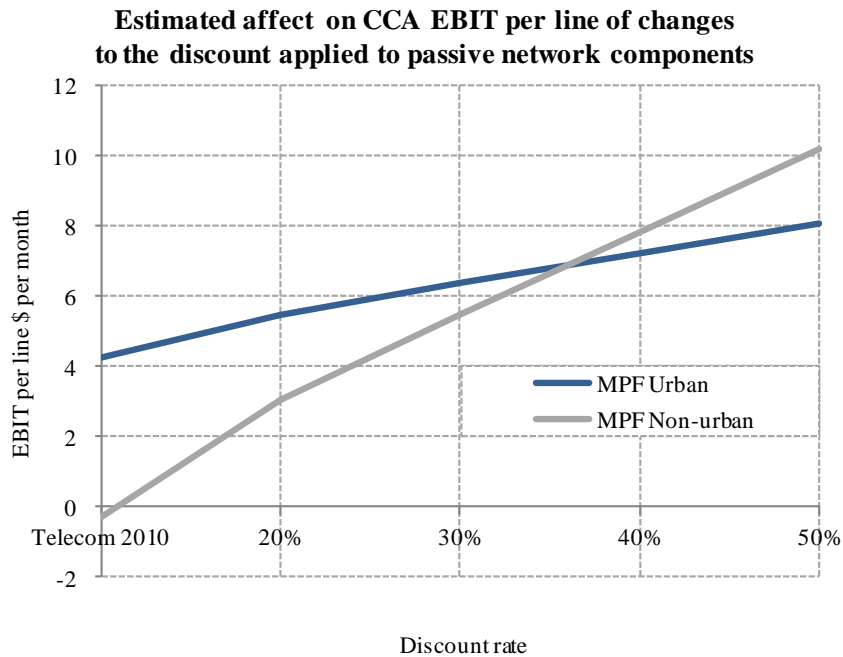


Under the HCA valuation, each non-urban line is assigned approximately 155% more fixed assets than urban lines. This is due to the longer non-urban route distances and fewer opportunities to share infrastructure (such as trenches and ducts). This results in a higher non-urban depreciation charge, which represents 55% of costs.

Under CCA, depreciation ratios per line increase for both urban and non-urban lines, with non-urban lines attracting an even higher allocation of fixed assets (273% higher than urban lines). The non-urban line depreciation rises to 80% of its expenses.

As the MPF service is predominately comprised of passive network components,⁴¹ its unit cost and EBIT is considerably affected by the trench costs Telecom applies in the passive network CCA valuation. As noted above, the Commission considers the CCA trench costs used in 2010 are too high, and therefore provide a distorted view of CCA EBIT. Sensitivity of per line MPF EBIT to the trenching discount rate applied in the CCA valuation is illustrated in the graph below.

⁴¹ Trenches, fibre and copper cable, ducts and manholes, joints, cabinets and cable terminals.



The analysis demonstrates that, for both urban and non-urban MPF lines, increasing minor works trenching discount rates above the rates applied by Telecom results in a positive EBIT. Non-urban line EBIT under CCA is very sensitive to changes in the trench discount rate due to the high allocation of fixed assets to non-urban areas on a per line basis.

In comparison to Telecom’s CCA trenching discount rates (4% for in-town ESAs and 11% for non mole-plough out of town ESAs), BT applied a 45% discount⁴² for 2009 and prior years, which was supported by the views of a number of its senior managers based on indirect evidence from tenders for work in related areas. Similarly, Telecom applied its discount rate based on the views of subject matter experts, although it was not able to provide evidence to support the discount assumptions.

Revenue per unit

Telecom’s Regulatory Financial Statements show a difference in revenues per unit internal and external, with revenue per unit internal slightly higher than STD price and revenue per unit external slightly lower. In response to the Commission’s compliance questions, Telecom explained that the variance between the revenue per unit - external and the STD price was largely due to credit notes being applied to the sales ledger in dollar value but not always credited for the associated volume. This, in turn, creates uncertainty regarding the reported volumes.

⁴² Source: BT’s *Detailed Valuation Methodology* dated 13 August 2009.

Commission's findings for MPF service monthly charge – urban and non urban

The Commission's analysis finds that if Telecom were to apply a higher discount rate to its minor works trenching costs used in the CCA valuation, there would be a positive influence on the EBIT of both urban and non-urban MPF service monthly charge products. In particular, the Commission considers that the non-urban lines would be EBIT positive under CCA if a higher discount than the current 4% (in town ESAs) and 11% (out of town ESAs) were applied.

UCLL backhaul service

Telecom’s UCLL backhaul service provides backhaul capacity from local exchanges to the core transport network interconnection at speeds of 100Mbps and 1Gbps. A separate 2Mbps backhaul service is used predominantly to link distribution cabinets to the local exchange and local exchanges to higher tier nodes for the backhaul of voice and mobile traffic.

Both of the UCLL backhaul products are regulated by the Commission with cost based prices set through international benchmarking. Telecom markets commercial alternative products at a price close to, but below the STD price. The 2Mbps backhaul service is not regulated, and is only purchased internally.

The table below provides a summary of these products. In addition, the Commission includes calculated average per circuit results for each of the products.

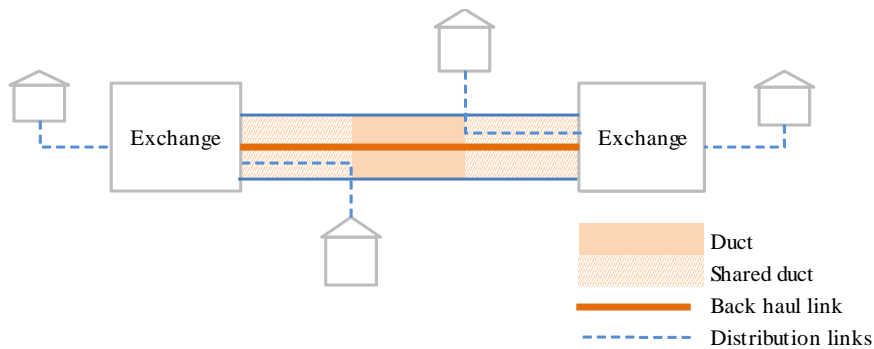
UCLL backhaul service - 100 Mbps/1 Gbps¹ & 2 Mbps

	Annual (\$m)			Per circuit - per month (\$)		
	UCLL backhaul			UCLL backhaul		
	100 Mbps	1 Gbps	2 Mbps	100 Mbps	1 Gbps	2 Mbps
average no. of circuits				123	829	15,125
Revenues	2.6	34.5	52.6	1,757	3,464	290
Network expenses	0.2	1.4	1.3	161	141	7
Non-network expenses	0.2	2.3	2.8	426	440	16
Depreciation	0.4	2.1	3.4	258	216	19
EBIT HCA	1.8	28.7	45.1	912	2,667	248
MCE HCA	3.2	21.5	53.7	2,203	2,166	296
CCA depreciation adj	0.1	0.6	3.3	181	145	(18)
EBIT CCA	1.7	28.1	41.8	1,094	2,812	230
MCE CCA	6.0	36.2	114.1	4,042	3,644	628

¹ Both 100 Mbps & 1 Gbps are reported across six average distance groups

The product group shows a high per circuit EBIT margin. This is partly the result of Telecom’s CCA valuation methodology, which attributes lower depreciation to backhaul products.

The following diagram provides a simplified view of how ducts and manholes are shared by both the access network and backhaul products. Exchanges are often linked by cables in ducts and it is standard practice to utilise these ducts and trenches to connect customers who are in the proximity of the duct routes.



There are a number of methods that can be applied to allocate trenching costs to the elements inside a trench. Telecom has chosen an “outside in/cable diameter”⁴³ methodology, which allocates costs based on the diameter size of the components within a trench and a duct. For example, a copper cable used in the access network, being of a larger diameter than the fibre used for transport backhaul, will attract a higher portion of the costs. Consequently, this methodology allocates a higher portion of trenching costs to copper based access products and a lower portion to backhaul products.

Expenditures associated with providing backhaul services are shown to be mainly non-network operating costs, much of which relate to corporate overheads.

Commission’s findings for UCLL backhaul service

There is a significant difference between the costs reported in Telecom’s UCLL backhaul Product Statements and the STD cost based pricing as determined by international benchmarking.

The Commission’s analysis reveals that Telecom’s trench cost allocation methodology allocates higher costs to services based on large diameter copper cables than fibre based backhaul services. At this point in time, the Commission has not reached an opinion as to the appropriateness of this methodology when compared with, for example, a base trench cost split of 50/50 between copper and fibre with the allocation of incremental costs.

⁴³ Telecom’s Regulatory Reporting Manual (paragraphs 1052 and 1053) states the outside in/cable diameter method allocates across the number of objects in the trench (in proportion to cross sectional area) and the across subsidiary objects (in proportion to cross sectional area) within each of these objects (if applicable) and so on.

Wholesale Services Group

The Wholesale Services Group consists of all of Telecom's wholesale activities and services and includes both wholesaling to external service providers and to Telecom's Retail Services Group.

The market within which the Wholesale Services Group operates is dynamic, with broadband connections currently growing at 17% per annum⁴⁴. Unbundling of access lines sold by Chorus (and found in the Access Services Group) over the year has resulted in an increase in competition at a wholesale level, with Vodafone, Kordia, and TelstraClear offering or capable of offering wholesale bitstream services to be used by other access seekers to provide retail broadband services. The regulated pricing for wholesale broadband access products is generally set on a retail-minus basis.⁴⁵

In 2010, Telecom was required to separate the Wholesale Services Group's results into 'relevant' and 'non-relevant' services where relevant services are products and services for which there is a current Standard Terms Determination⁴⁶ and non-relevant services are covered by commercially negotiated supply arrangements and/or internal trading arrangements. EBIT losses were recorded in Telecom's Regulatory Financial Statements for both relevant and non-relevant services under both HCA and CCA.

Wholesale Services Group								
Smillion	HCA				CCA			
	30-Jun-09	30-Jun-10	Variance	%	30-Jun-09	30-Jun-10	Variance	%
Revenues	863	925	62	7%	863	925	62	7%
EBIT	37	(10)	(47)	-127%	77	(26)	(103)	-134%
MCE	600	636	36	6%	634	691	57	9%
<i>EBIT Margin %</i>	4%	-1%			9%	-3%		
<i>EBIT/MCE %</i>	6%	-2%			12%	-4%		

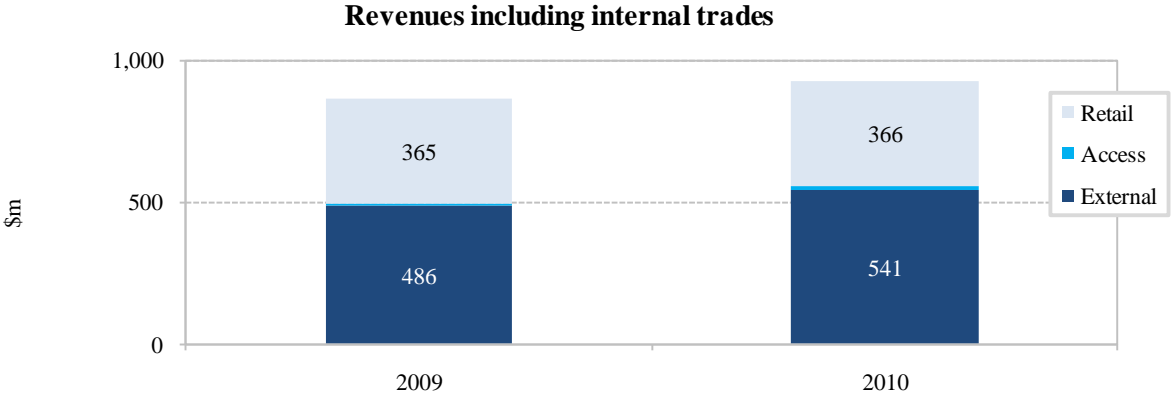
The Wholesale Services Group reported a 7% increase in total revenues to \$925m in 2010, with 58% of this earned from external sources (i.e. access seekers). Consistent with the accompanying uptake of wholesale services by access seekers, 11% of the revenue growth came from external revenues.

⁴⁴ Commerce Commission, *New Zealand Retail Prices for Fixed Line and Mobile Services: A Benchmarking Comparison (November 2010)* at <http://www.comcom.govt.nz>.

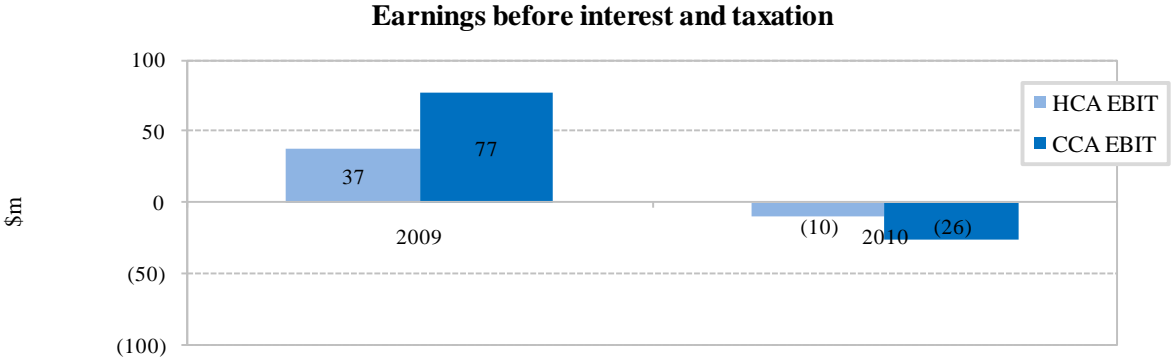
⁴⁵ Retail minus is a regulatory pricing methodology whereby a wholesale price is set as the access provider's retail price less an allowance (e.g. for the cost of providing retail and related functions).

⁴⁶ Non-relevant services are all other services provided by the Wholesale Services Group. Refer to Appendix A of the Commission's *Decision on Changes to the Telecom Regulatory Financial Statements Information Disclosure Requirements*, 17 May 2010 for the full list of relevant services.

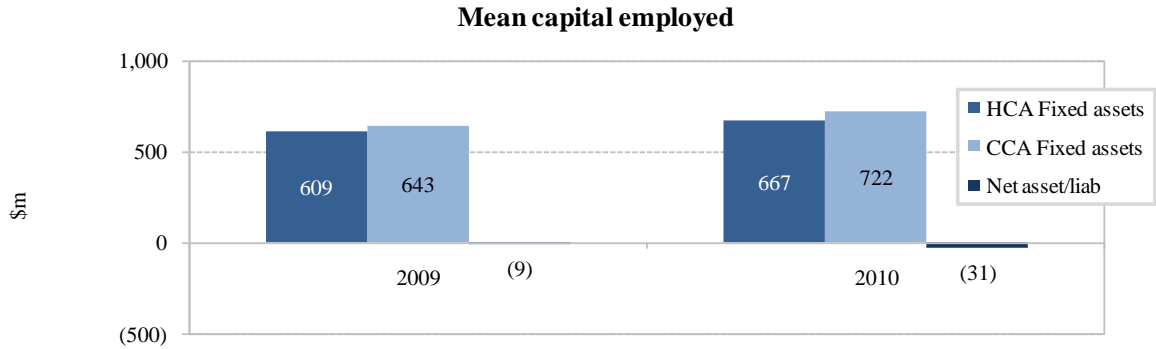
Internal revenues (42% of total) are principally generated from the provision of broadband services to the Retail Services Group for onward sale.



Despite the growth in revenue, the Wholesale Services Group is the least profitable of the Services Groups with an EBIT loss under HCA of 1% and a loss of 3% under CCA. The Wholesale Group’s revenue increase of \$62m but there was an increase in cost of sales of \$98m. Information provided by Telecom under compliance monitoring uncovered an inconsistent handing of UCLL backhaul costs between years. In 2010, all of these costs were shown in Wholesale, whereas in 2009 the majority of these costs were allocated to the Retail Services Group.



Unlike the Access Services Group asset valuation, there is little difference between the HCA and CCA valuations for the Wholesale Services Group. This is due to the bulk of its assets being relatively short lived electronic equipment and software. The increase in HCA MCE from 2009 to 2010 is principally due to increased software asset values, but will also contain some costs resulting from the fibre to the node cabinetisation programme.



Products

A summary of the Wholesale Services product information is presented in the table below.

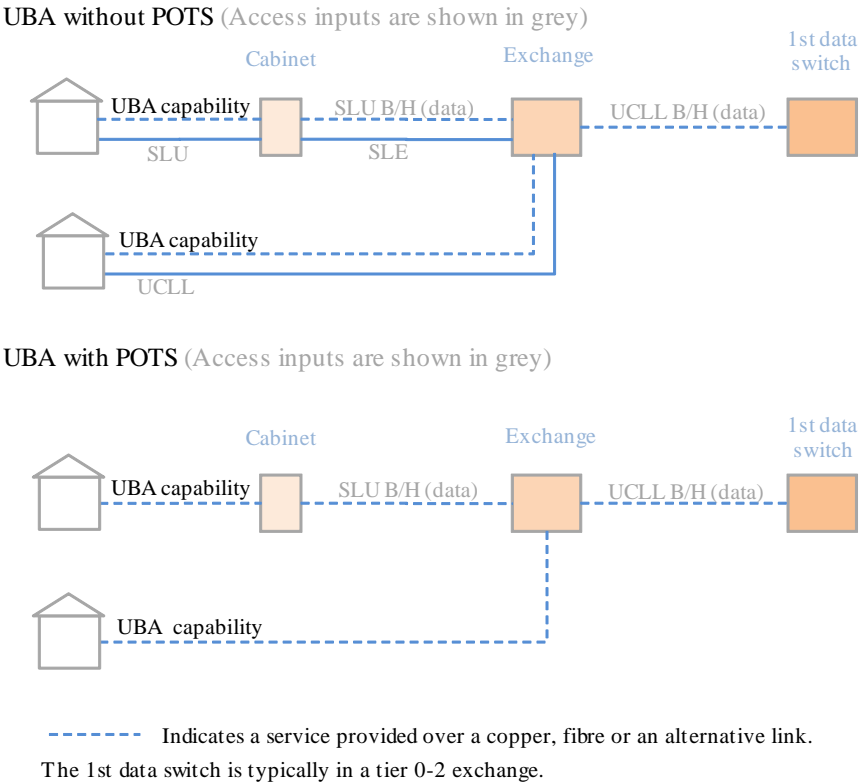
Wholesale Services Group Products					
<i>\$million</i>	Basic UBA with POTS	Basic UBA without POTs urban	Basic UBA without POTs non- urban	Line rental resale	Non- disclosed products
Revenues	9.0	2.1	0.4	172.0	406.5
EBIT HCA	(6.8)	(1.6)	(0.4)	(2.1)	5.9
MCE HCA	15.6	1.7	0.2	48.6	418.9
<i>EBIT Margin %</i>	-76%	-76%	-100%	-1%	1%
<i>EBIT/MCE %</i>	-44%	-94%	-200%	-4%	1%
EBIT CCA	(6.9)	(1.6)	(0.4)	(5.9)	(3.2)
MCE CCA	14.1	1.5	0.2	50.5	449.7
<i>EBIT Margin %</i>	-77%	-76%	-100%	-3%	-1%
<i>EBIT/MCE %</i>	-49%	-107%	-200%	-12%	-1%

All disclosed Product Statements report EBIT losses despite overall growth in revenue, whereas non-disclosed products as a whole report a positive EBIT under HCA. This outcome may be partly due to the allocation of common costs to the UBA products (discussed further below), and highlights the importance of transparency in the treatment of non-disclosed products.

Unbundled bitstream access (UBA)

Unbundled bitstream access (UBA) is used by access seekers to provide broadband connectivity to end-user homes and offices. The uptake of UBA is monitored by the Commission due to its significance in the development of competition in New Zealand's telecommunication's market.

The MPF copper line is an essential input component to the UBA service. The basic UBA with POTS service pricing is set on the basis that a wholesale access seeker will pay separately for the copper line, usually through the purchase of the line rental resale product.⁴⁷ Where an access seeker does not pay for the copper component of UBA separately, the cost of the MPF is included in the UBA without POTS price, known as ‘naked UBA’ under the Commission’s STD. UBA prices are currently regulated using a retail-minus price cap. The physical configurations of these products are illustrated in the following diagrams.



UBS is a commercial variant of UBA which is being grandfathered with all current customers being migrated to either the regulated services or a commercial variant.

The table below provides a summary of the three basic UBA products disclosed by Telecom and also provides a breakdown of the revenues and expenditures per UBA product on a per connection basis.

⁴⁷ The STD also allows access seekers to pay for the MPF through other means, such as by purchasing the regulated SLU product and the unregulated SLE services from Chorus directly.

Basic UBA with POTS & without POTS urban and non urban

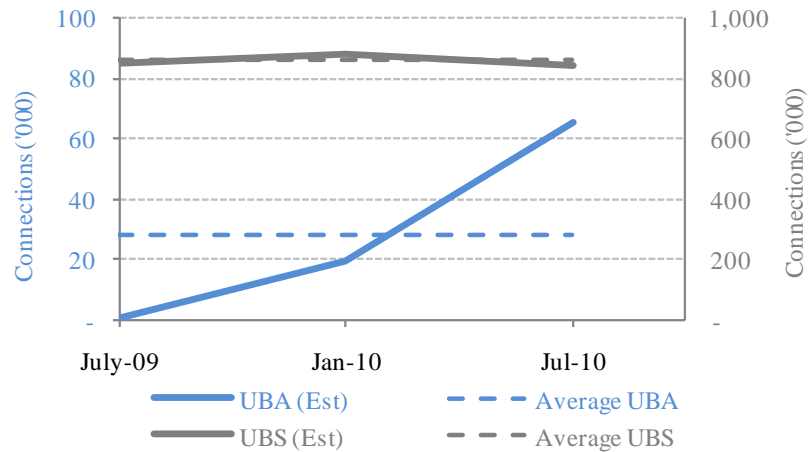
	Annual (\$m)			Per connection - per month (\$)		
	With POTS	Without POTS urban	Without POTS non urban	With POTS	Without POTS urban	Without POTS non urban
average connections				28,566	3,636	557
Revenues	9.0	2.1	0.4	26.2	46.7	66.0
Network expenses	10.7	3.0	0.7	31.2	70.0	103.4
Non-network expenses	0.9	0.2	0.0	2.7	4.4	6.1
Depreciation	4.2	0.5	0.1	12.3	12.6	12.8
EBIT HCA	(6.8)	(1.6)	(0.4)	(20.0)	(40.3)	(56.3)
EBIT HCA	-6.8	-1.6	-0.4	-20.0	-40.3	-56.3
MCE HCA	15.6	1.7	0.2	45.4	39.8	53.7
CCA depreciation adj	0.1	0.0	0.0	0.2	0.2	0.2
EBIT CCA	(6.9)	(1.6)	(0.4)	(20.2)	(40.5)	(56.5)
MCE CCA	14.1	1.5	0.2	40.9	35.4	32.9

Telecom published that there were 57,134 UBA with POTS connections in use, with corresponding annual revenues of \$9m. However, applying the STD prices, the Commission calculates that revenues of \$9m should roughly equate to 28,566 connections (57,134 connections should equate to revenues of \$17.9m). The Commission has used this lower average volume to calculate per connection costs and EBIT, but notes that these calculations may not be reliable.

The Commission understands that the 2010 invoiced revenues for UBA with POTS were booked at \$9m in Telecom’s accounting ledger but invoiced volumes are uncertain due to insufficient data entry throughout the year for the quickly growing product. For the purposes of the product statements, Telecom advised the Commission that it chose to assess UBA volume information by using the year end connection volumes, despite the fact that UBA had grown rapidly over the year. It used these volumes to attribute costs over both regulated and non-regulated (UBS) bitstream products.

By using the end of year volume figure as a basis for attributing expenditure across products (as opposed to an average - refer dashed line on graph below), Telecom’s Product Statements result in an overstatement of costs attributed to UBA. Conversely, compliance data provided by Telecom confirms that the UBS (non-regulated) version of this product reports a positive EBIT and it is likely that there has been an understatement of the costs associated with the UBS product.

The graph below estimates growth in UBA product volumes and the corresponding decrease in UBS product volumes over the year.



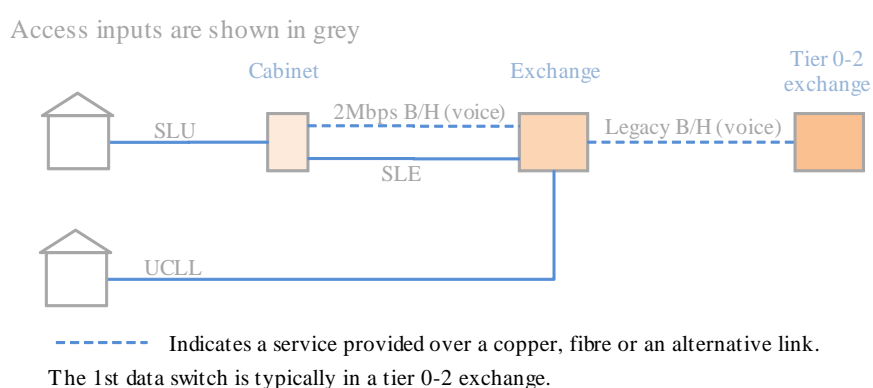
In addition to the volume and cost allocation issues identified above, Telecom has advised that a component of the revenues and expenditure associated with the internal portion of the UBA Product Statements relates to product trials prior to 1 January 2010. The Commission requested that Telecom separate the trial revenues from normal trading revenues but Telecom could not comply due to the state of its record keeping.

Commission’s finding on Unbundled bitstream access (UBA)

The Commission considers that the UBA product statements in their current form prevent the Commission’s assessment of these products. Furthermore, it considers that Telecom’s methodology in these Product Statements appears to be inconsistent with the Regulatory Accounting Principles and gives a distorted view of the product.

Line rental resale (LRR)

Line rental resale (LRR) is the resale version of POTS voice service that is sold to external service providers. As illustrated in the diagram below, it is comprised of an MPF line (sub-loop or UCLL line) and a backhaul component. For a sub-loop line it includes a 2Mbps voice backhaul component from the cabinet to the exchange.



The LRR product is no longer regulated but has traditionally been made available on a retail-minus approach following the Commission’s decision on application of TelstraClear⁴⁸. All LRR revenues are generated from external sources.

The table below summarises Telecom’s LRR Product Statement and also shows results on a per line basis.

Line Rental Resale		
	Total lines annual (\$m)	Per line per month (\$)
Revenues	172.0	25.9
Network expenses	140.2	21.1
Non-network expenses	18.8	2.8
Depreciation	15.2	2.3
EBIT HCA	(2.2)	(0.3)
MCE HCA	48.6	7.3
CCA depreciation adj	3.8	0.6
EBIT CCA	(6.0)	(0.9)
MCE CCA	50.5	7.6

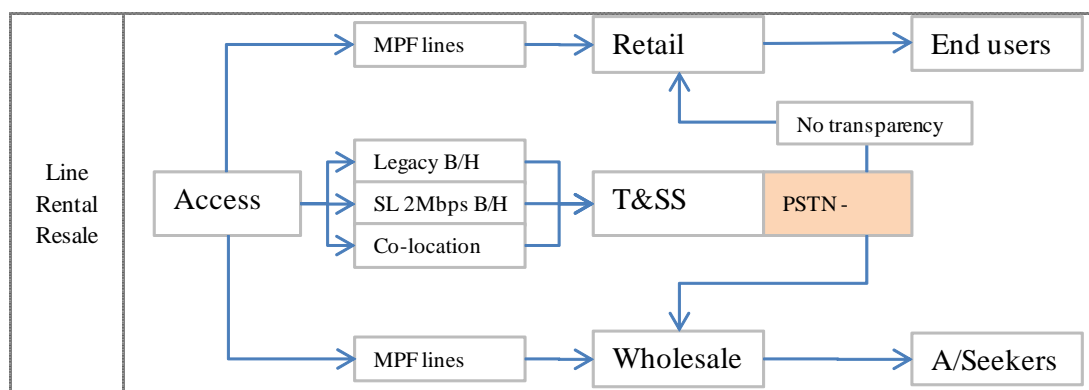
⁴⁸ This Determination has now expired and the retail minus approach is retained as a back-up should there be competition issues.

The Telecom reported revenue per line per month average of \$25.90 is significantly below the price charged for resold lines (\$34.78 - \$38.26⁴⁹ for major cities and \$42.00⁵⁰ for all other areas). This is due to the fact that when Telecom prepared the LRR Product Statement, it included a number of other non LRR service revenues (such as second line service) together with their volume equivalents. As a result, the combined revenues and volumes made it difficult for the Commission to ascertain:

- The actual EBIT on a pure line rental resale product
- Whether or not the retail minus approach is being reflected by Telecom Wholesale in its Wholesale pricing.

The Commission estimates that the LRR product is making a small EBIT loss at approximately 3% whilst the other combined charges are making a positive EBIT based on the assumption that LRR includes a line charge, co-location and backhaul costs.

In addition to the reporting issues discussed above, the Commission has also found that the provisioning of LRR products differs for the Wholesale and Retail Services Groups. The diagram below provides an overview of the provisioning process.



Both Wholesale and Retail purchase MPF lines from the Access services group and are then allocated costs relating to the PSTN⁵¹ from T&SS, the Shared Services unit. The Commission has not been able to ascertain whether the costs allocated to Retail are the same as those allocated to Wholesale. The lack of transparency raised concerns over discriminatory pricing which may benefit the Retail Services Group at the expense of Access Seekers who purchase the Wholesale LRR product.

⁴⁹ Based on Telecom’s “Homeline plan” (excl. GST), <http://www.telecom.co.nz/homeline>.

⁵⁰ Based on Telecom’s “Homeline plan” (excl. GST), <http://www.telecom.co.nz/homeline>.

⁵¹ The Public Switched Telephony Network provides the POTS service.

Commission's finding on Line rental resale (LRR)

The Commission considers that Telecom has not appropriately applied the regulatory accounting principles in the production of this statement.

In addition, lack of transparency in the allocation of costs from T&SS affects the Commission's ability to fully analyse this product.

Retail Services Group

The Retail Services Group consists of all activities and services provided by Telecom directly to end users in New Zealand. It includes Telecom Retail, Gen-I (a provider of integrated information technology services to businesses and other large clients) and Telecom's retail mobile services.

The Retail Services Group faces increasing competition from access seekers using wholesale inputs to provide services to end customers. Increasing competition at the retail level combined with restrained consumer spending and business confidence appear to have resulted in decreasing average prices and/or volumes for several retail services.⁵²

Voice calling and local services for example, the largest source of Retail revenue is, are experiencing increased competition from the uptake of UCLL and migration of voice services to alternative mobile and VoIP networks. Retail reported declines in both customer numbers and revenues.

In the broadband market, which is experiencing growth and increased competition, Retail revenues increased at just under half the rate of growth in connection numbers, indicating falling average prices. Retail's mobile connection numbers and revenues were relatively flat for 2010, despite the entry of a third mobile operator and outages in Telecom's XT network.

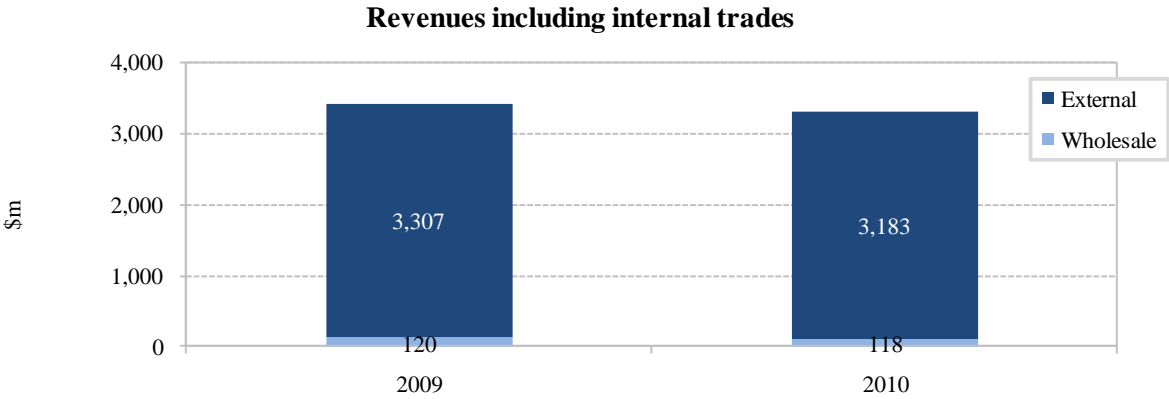
It's important to note that many of the Access and Wholesale Services Groups' products and services are sold internally as well as to its wholesale customers, hence increases in, for example, wholesale broadband connections, do not necessarily result in a corresponding increase in Retail volumes.

This section examines the Retail Services Group's regulatory financial results in terms of revenues, EBIT and MCE. No products are discussed, as Retail was not required to disclose Product Statements.

Retail Services Group								
Smillion	HCA				CCA			
	30-Jun-09	30-Jun-10	Variance	%	30-Jun-09	30-Jun-10	Variance	%
Revenues	3,427	3,301	(126)	-4%	3,427	3,301	(126)	-4%
EBIT	185	143	(42)	-23%	253	54	(199)	-79%
MCE	1,778	1,760	(18)	-1%	1,928	1,867	(61)	-3%
<i>EBIT Margin %</i>	5%	4%			7%	2%		
<i>EBIT/MCE %</i>	10%	8%			13%	3%		

⁵² Refer to pages 56 & 57 of Telecom's 2010 Annual Report.

The Retail Services Group reported total revenue of \$3.3b in 2010, which is a 4% decrease from 2009. The Retail Services Group is a net internal consumer⁵³ with just over 96% of its revenues earned from external suppliers, and 3% from the Wholesale Services Group (for the resale of retail services - mainly fixed phone and mobile services).

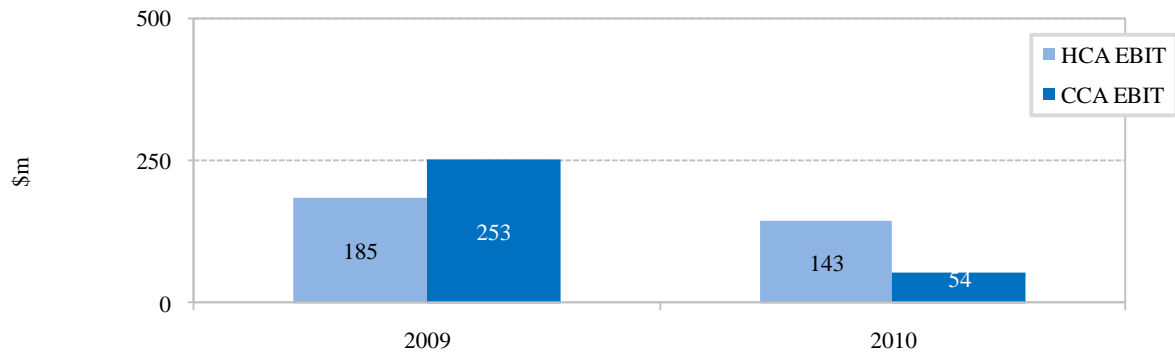


Retail Services purchased a total value of \$1.1b of internal services from the other Services Groups. Of its total expenditure, 58% went to the Access Services Group for access services (such as UCLL) and 33% to the Wholesale Services Group for broadband services. The remaining 9% of internal expense relates to Telecom’s overseas activities (classified in the regulatory reporting as the Other Services Group).

The Retail Services Group’s EBIT under both HCA and CCA were lower than the Telecom Group’s weighted average results. It reported significantly lower earnings under both HCA and CCA in 2010 by 23% and 79% respectively primarily due to an increase in the respective gross asset values (HCA software +\$232m, mobile +8m, other telecoms equip +66m; CCA software +\$254m, mobile +109m, other telecoms equip +95m). This flows through to additional depreciation expense for both methodologies.

⁵³ The Retail Services Group conducts the majority of its business with external customers. In 2010, its external revenue was \$3,183m compared to \$118m of internal revenue.

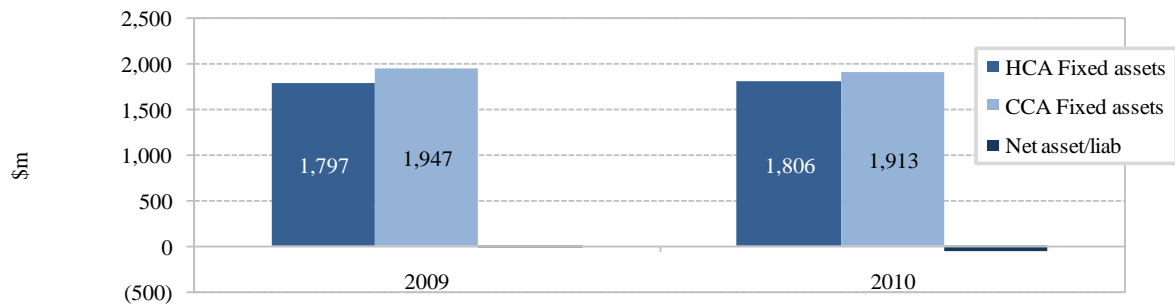
Earnings before interest and taxation



The Retail Services Group's MCE under HCA increased insignificantly to just over \$1.8b and similarly under CCA decreased slightly due to decreases in cash and short-term investments, and the total fixed asset value.

The low CCA uplift for the Retail Services Group represents about 6% of its HCA net book value and is explained by the fact that its asset base has a higher percentage of assets with shorter asset lives (such as mobile, services and software assets).

Mean capital employed



APPENDIX A: REGULATORY ACCOUNTING FRAMEWORK

Regulatory accounts disclose financial information for regulatory purposes. As a form of information disclosure, regulatory accounting – or accounting separation where an incumbent is vertically integrated – provides financial transparency over the operation and behaviour of the incumbent on an operationally separated basis, and counters the potential for anti-competitive pricing behaviour.

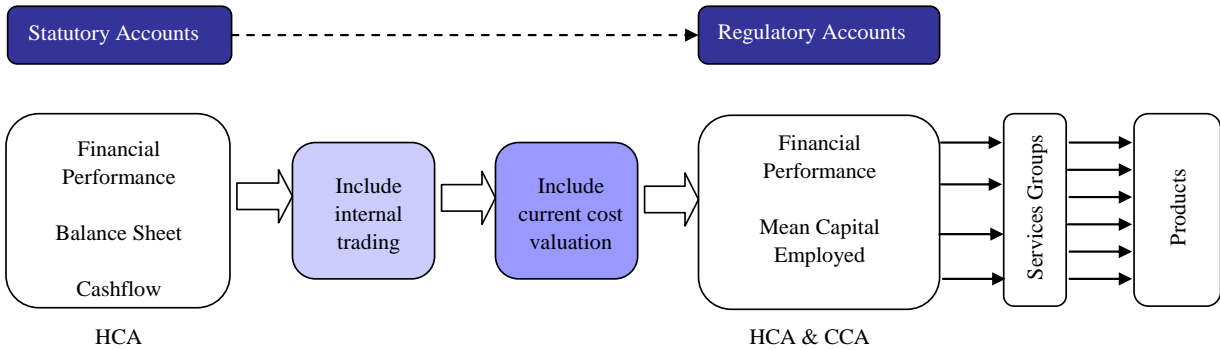
Part 2B of the amended Telecommunications Act 2001 (the Act) introduced a requirement for the accounting separation of the incumbent Telecom Corporation of New Zealand Limited (as a complement to its operational separation). Under accounting separation, the Act requires Telecom to publish financial and other information specified by the Commission’s Requirements. In particular, Telecom must report on the performance of its access network, wholesale and retail businesses as if those activities were operated as independent entities.

Telecom’s Regulatory Financial Report includes reporting for the following Services Groups:

- The **Access Services Group** includes the activities of Chorus.
- The **Wholesale Services Group** includes the activities of Telecom Wholesale but excludes International activities.
- The **Retail Services Group** includes the activities of Telecom Retail and Gen-I.
- The **Other Services Group** includes the activities of the international business group and overseas operations.⁵⁴

The Services Groups are not the same as Telecom’s internal business units due to the attribution of shared Corporate and Technology and Shared Services (T&SS) group expenses and assets. This is particularly the case for the Wholesale and Retail Services Groups.

In preparing its Regulatory Financial Report, Telecom’s financial records were processed as shown in the diagram below.

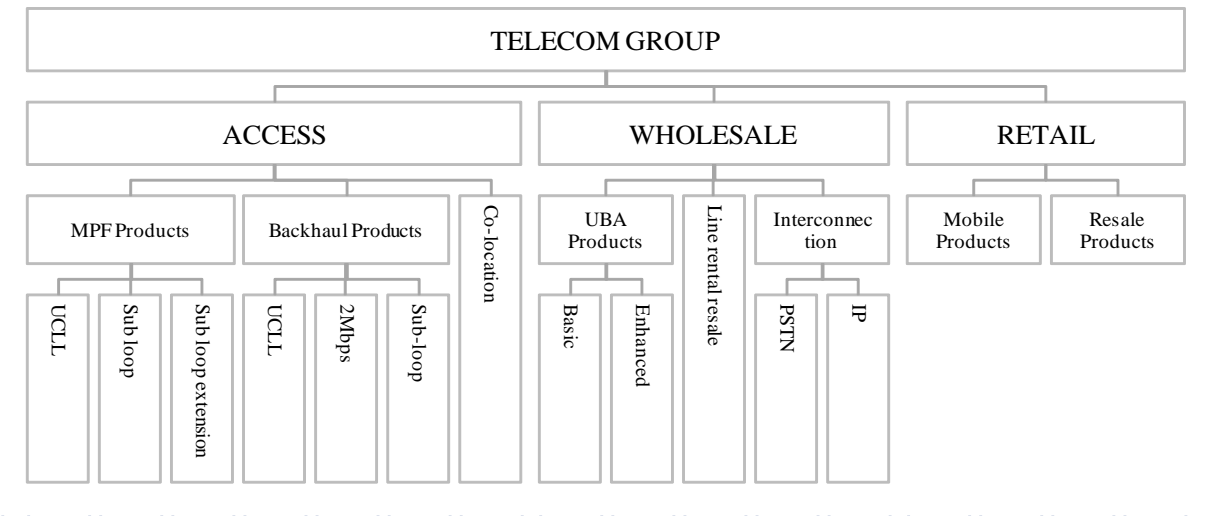


⁵⁴ The Other Services Group has not been included in the Commission’s analysis as it lies outside the scope of the Act. Its business activities operate outside of New Zealand.

The Commission published its first Telecom Accounting Separation Information Disclosure Requirements on 25 March 2009 as a result of which Telecom published its first set of Regulatory Financial Statements for the financial year ending 30 June 2009 in December 2009. Telecom was required to prepare Regulatory Financial Statements for the Consolidated Group, as well as separate financial statements for the Services Groups.

The Commission’s Requirements for the financial year 2009/2010 (below referred to as 2010) required Telecom to publish a limited number of ‘Product Statements’. Product Statements are an integral part of regulatory reporting and are intended to provide detailed information about key products provided to Telecom’s competitors. As 2010 was a transition year for the introduction of Product Statements, Telecom was required to prepare these statements for only a limited number of products, most of them regulated or equivalent to regulated products, including Metallic Path Facility (MPF)⁵⁵, UCLL backhaul, Unbundled Bitstream Access (UBA) and Line Rental Resale (LRR).

The detailed structure of Telecom’s regulatory reporting, including Telecom Group, Service Group and Product Statement layers is illustrated in the diagram below



A key function of the Commission under the Act is to publish a ‘Summary and Analysis’ of Telecom’s disclosed information for the purpose of:

*“promoting greater understanding of the operation and behaviour of the business units of Telecom and changes in operation and behaviour over time”.*⁵⁶

In preparing this Summary and Analysis, the Commission has analysed Telecom’s Regulatory Financial Statements for compliance with the Commission’s Requirements, Group and Product

⁵⁵ Also known as the Unbundled Copper Local Loop (UCLL), although excludes sub-loop and sub-loop extension lines.
⁵⁶ s69ZG of Part 2B of the Telecommunications Act 2001.

performance, and for potential indicators of anti-competitive pricing behaviour, such as discrimination of service prices paid by internal services groups and access seekers.

APPENDIX B: THE COMMISSION'S APPROACH

In preparing this Summary and Analysis, the Commission has assessed Telecom's Regulatory Financial Statements for both compliance with its Requirements and any potential indicators of anti-competitive behaviour. This section explains the Commission's approach to this analysis.

Compliance with requirements

The 2010 Requirements introduced Regulatory Accounting Principles which are overarching guidelines for preparing the Regulatory Financial Report and the Regulatory Reporting Manual.

The principles were introduced to improve the reliability, transparency and robustness of Telecom's disclosed information in the absence of specific instructions or requirements. The Regulatory Accounting Principles are:⁵⁷

- Definition⁵⁸
- Use of NZ GAAP
- Transparency
- Causality
- Objectivity
- Consistency.

In assessing Telecom's Regulatory Financial Report, the Commission considered the extent to which Telecom adhered to these principles.

Due to its significance in the identification of costs and profitability, the Commission specifically considered the extent to which Telecom's CCA valuations met the principle of 'objectivity'. This principle required Telecom to "*apply regulatory accounting processes and procedures which are objectively justifiable and reasonable.*"

The Commission tested the CCA asset valuations for objectivity by comparing Telecom's CCA valuations to the valuation the Commission calculated using both a bottom-up valuation model and top-down analysis of key parameters. The Commission also compared CCA input values (i.e. discounts) to benchmark data from overseas.

Behavioural analysis

Incumbent telecommunications operators typically own and operate bottleneck assets. They are often vertically integrated entities with large sunk investments, significant fixed costs, and large economies

⁵⁷ These principles are defined and discussed in the Requirements and the relevant decision paper respectively. The later can be found at <http://www.comcom.govt.nz/assets/Telecommunications/Telecom-Separagraphtion/Accounting/Decision-on-Changes-to-the-Telecom-Regulatory-Financial-Statements-Information-Disclosure-Requirements-17-May-2010.pdf>

⁵⁸ Definition: Where any word or expression used in the Regulatory Reporting Manual is defined in clause 2 of the Requirements, that word or expression should be understood as having the same meaning

of scale and scope. Firms with assets and structures such as this may have strong incentives to reduce output quantities and raise prices, thereby reducing total welfare in society. The solution to such a market failure is typically to impose restrictions on the behaviour of the firm through direct or indirect regulation of profits, prices, and service conditions.

The listing below provides an overview of the competition issues that may arise and describes the Commission's approach to using regulatory accounting information to test for these.

Excess pricing

Transfer charges between Services Groups within Telecom are checked against STD price caps. This provides an indication of whether STD pricing is excessive, along with an indication of how access charges regulated in the STDs are related to the effective and efficient cost.

Assessment of the profitability of the Services Groups also provides a high level indication of the extent to which prices may be cost-based. For 2010, the Commission examined profitability by reviewing the EBIT for the Services Groups and products, as well as reviewing Telecom's attribution and asset valuation processes. The attribution methodology was identified as a concern in 2009 and is important to the Product Statements.

Price discrimination

Anti-competitive price discrimination may occur if an entity charges a higher price to its downstream competitors than it implicitly charges its own downstream business units for the provision of an essential wholesale input.

For 2010, the Commission examined average revenue per unit for essential wholesale services (internal vs. external) and reviewed the aggregated flows of internal transfer charges.

Cross-subsidisation

A firm with significant market power can use profits derived in markets where it faces limited competition to subsidise loss making activities elsewhere, in order to protect or create limited competition.

Testing for cross-subsidies in a vertically integrated multi-product entity (such as Telecom) is difficult, particularly due to the complexities of cost allocation. However, it is less likely that cross-subsidies exist, where prices are based on costs that were allocated in line with the Regulatory Accounting Principle of causality.

For 2010, the Commission examined EBIT margins in the Product Statements and reviewed the fully allocated cost attribution methodology applied by Telecom.

Below-cost pricing

A firm with significant market power could sell a product below cost for a sustained period of time with the intention of deterring entry or driving a competitor out of the market. Any short-run losses will be more than offset by long run increased market share and profitability.

Due to the Commission's concerns with several aspects of the Regulatory Financial Statements (including cost allocations and CCA asset valuations) the Commission could not effectively assess for below-cost pricing.

Competition monitoring

Examination of trends, including the volumes of external and internal trades at wholesale level and market shares at retail level, can provide an indication over time as to whether competition is being promoted and statutory objectives are being achieved.

Although only in its second year of operation, the 2010 Regulatory Accounts provided information on the growth of regulated products and the trend towards competition at the retail level by access seekers using using wholesale inputs.

Summary of approach

The following table summarises the Commission's approach

Purpose	Potential Indicators and Analysis	Telecom Information	Commission Analysis
Compliance with Regulatory Accounting Principles	<ul style="list-style-type: none"> Year-to-year comparisons of revenue and cost data International benchmarking Bottom-up assessment of CCA asset valuation 	<ul style="list-style-type: none"> Regulatory Financial Statements Product Statements Compliance monitoring information 	<ul style="list-style-type: none"> Year-to-year comparisons of cost data by Services Groups and product level Commission's bottom-up model of Telecom's passive network
Excess pricing	<ul style="list-style-type: none"> STD compliance Return on investment indicators and profit margins analysis Review of cost-based pricing (based on attribution methodology) 	<ul style="list-style-type: none"> Consolidated Group Statements Services Group Statements Product Statements 	<ul style="list-style-type: none"> Profit margins analysis of Access Services Group and Wholesale Services Group Review of cost attribution methodology
Discrimination	<ul style="list-style-type: none"> EBIT margins External transactions vs. internal trading arrangements Invoices 	<ul style="list-style-type: none"> Access and Wholesale Product Statements including volumes Reconciliation of internal trading transactions 	<ul style="list-style-type: none"> Review of Access and Wholesale product profit margins Review external vs. internal trades and impact on products
Cross-subsidisation	<ul style="list-style-type: none"> Comparison of costs with standalone costs and incremental costs EBIT margins of Services Groups and Products 	<ul style="list-style-type: none"> Product Statements Product volumes 	<ul style="list-style-type: none"> Review of product EBIT margins Review of attribution methodology
Below-cost pricing	<ul style="list-style-type: none"> EBIT margins for products in Retail Services Group 	<ul style="list-style-type: none"> Retail Services Group Financial Statements 	
Competition monitoring	<ul style="list-style-type: none"> Trend analysis of market share at wholesale and retail level Product Statement pricing and volume trends across Services Groups 	<ul style="list-style-type: none"> Product Statements including volumes 	<ul style="list-style-type: none"> Review of volume data

APPENDIX C: SUMMARY OF SERVICES GROUPS

Services Group	Assets	2010 Key Products	Key Internal Trades
Access Services Group	<p>Network assets include the majority of the passive network assets consisting of the passive copper network, fibre optic cables, and ducts and manholes for the distribution side of the network, along with a number of exchanges.</p> <p>Non-network assets include software to operate and maintain the distribution network.</p> <p>HCA NBV \$1.9b (43% of total Regulatory Group assets excl. of Other Services Group).</p> <p>CCA NRC \$5.1b (66% of total Regulatory Group assets excl. of Other Services Group).</p>	<p>UCLL suite of products: MPF service monthly charges, MPF new connections, MPF transfer, UCLL backhaul service, and 2 Mbps backhaul.</p> <p>Revenues of \$494m for the above products (47% of total Access Services Group revenues).</p>	<p>MPF lines: the sale of lines from a customer's home to an exchange (UCLL) or a cabinet (SLU), and from the cabinet to the exchange (SLE).</p> <p>Co-location: the sale of space in exchanges and cabinets.</p> <p>Backhaul: the sale of cabinet or regional backhaul.</p> <p>Fibre access: the sale of non-copper access from a customer's home to an exchange.</p> <p>Field services: the sale of provisioning and maintenance of the above services.</p>
Wholesale Services Group	<p>Network assets include exchange software and electronics consisting of routers, switches and DSL equipment for connection in the distribution network.</p> <p>HCA NBV \$0.7b (16% of total Regulatory Group excl. of Other Services Group).</p> <p>CCA NRC \$0.7b (10% of total Regulatory Group excl. of Other Services Group).</p>	<p>Unbundled bitstream suite of products: basic UBA backhaul, UBA backhaul service, UBA backhaul service new connection, and line rental resale.</p> <p>Revenues of \$183m for the above products (31% of total Wholesale Services Group revenues).</p>	<p>Bit-stream: the sale of broadband services.</p> <p>Backhaul: the sale of the backhaul of the bit-stream products through to the transport network.</p> <p>Access services: the purchase of MPF, UCLL, SLE, SLU, co-location, field services, fibre access, POTS and national transport and interconnection.</p>
Retail Services Group	<p>Network assets incl. passive network assets of fibre cable, ducts, power systems etc. to run some transport network assets from T&SS, the mobile network, a number of exchanges, and routers, switches and the PSTN.</p> <p>HCA NBV \$1.8b (41% of total Regulatory Group excl. of Other Services Group).</p> <p>CCA NRC \$1.9b (24% of total Regulatory Group excl. of Other Services Group).</p>	NA	<p>Access services: the purchase of MPF, UCLL, field services, fibre access.</p> <p>Wholesale services: the purchase of UBS and UBA products, and national transport and interconnection.</p>

APPENDIX D: SUMMARY OF INDEPENDENT AUDIT

Telecom appointed KPMG to conduct its regulatory audit to the required “prepared in accordance with” (PIA) level of assurance. This PIA only provides an opinion on whether Telecom’s information has been prepared in accordance with Telecom’s Regulatory Reporting Manual, and does not indicate whether or not Telecom complied with the Requirements.

KPMG gave an unqualified audit opinion⁵⁹ of Telecom’s Regulatory Financial Statements including an explanatory paragraph highlighting their uncertainty over the completeness and accuracy of the network inventory data.⁶⁰ Operational data are important inputs into Telecom’s attribution and asset valuation models. It was KPMG’s view that any physical verification of the network inventory data may result in a material variance in Telecom’s Regulatory Financial Statements.

⁵⁹ KPMG Auditor’s Report on pages 9-11 of Telecom’s Regulatory Financial report for the year ended 30 June 2010.

⁶⁰ This is non-financial data sourced from Telecom’s operational systems.

LIST OF DEFINED TERMS AND ABBREVIATIONS

Access Services Group	The Services Group consisting of all business activities and services provided by Telecom's ANS Unit (Chorus) as if it was operated as an independent or unrelated company, and including <ul style="list-style-type: none">(i) all Relevant Network Access Services;(ii) any services provided over Telecom's Local Access Network;(iii) that portion of Shared Services activities provided in support of any of the foregoing.
Accounting Separation Requirements	See <i>Requirements</i> .
Annual Report	The report prepared by Telecom under section 208 of the Companies Act 1993.
Business Unit	The internal structure that Telecom is organised into for its day to day operations. There are five customer facing business units: Chorus, Telecom Wholesale (including International), Telecom Retail, Gen-I Australasia and AAPT and two support centres: Shared services and Corporate.
Commission	Commerce Commission established by section 8 of the Commerce Act 1993.
Compliance Monitoring Information	Information Telecom provided to the Commission for the purpose of monitoring Telecom's compliance with the Accounting Separation Requirements.
Cost Allocation	Cost allocation splits costs across two or more cost units where a causal relationship cannot be established and the costs are not directly attributable.
Cost Attribution	Cost attribution charges a specific cost directly to a cost unit. It involves a causal relationship.
Current Cost Accounting	An accounting methodology under which assets are valued at their replacement cost using current market prices.
EBIT	Earnings before interest and taxation. A measure for reporting underlying profitability that ignores corporate funding structures which can impact the interest and tax expenses.
ESA	Exchange Service Area. A geographical region historically defined as the serving area for fixed the line telephony services delivered from a particular telephone exchange.
Financial Year	The period of 12 months commencing on 1 July in any year and ending 30 June in the following year.
FTTN	Fibre to the node. This term is often used in association with or as reference to the cabinetisation program.
GBV	Gross Book Value. The gross book value is the original or historical price paid for an asset, without a depreciation deduction, but with adjustments for revaluations gains and losses.
GRC	Gross Replacement Cost. The total cost of replacing an asset or group of assets without making any recognition for depreciation.
Historical Cost Accounting	Assets are valued at cost at the time of their purchase.
Independent Auditor	A person who – <ul style="list-style-type: none">(i) is qualified for appointment as auditor of a company under the Companies Act 1993;(ii) has no relationship with, or interest in, Telecom that is likely to involve the person in conflict of interest;(iii) has not assisted with the compilation of the information or provided advice or opinions (other than in relation to audit reports or in respect of the interpretation of the Requirements) on the methodologies or processes used in compiling the information; and(iv) is not associated with nor directed by any person who has provided any such assistance, advice or opinion.

LRR	Line rental resale, also known as Resold POTS. This is the resale version of the plain old telephony service (POTS) that is sold to external service providers.
Manuals	The documents prepared by Telecom which set out the methodologies used to prepare the Regulatory Financial Report.
MCE	Mean Capital Employed. The average of the opening and closing net capital employed.
MEA	Modern Equivalent Asset. This is a valuation method where an existing asset is valued based on the cost of building a similar, but new and modern, asset with comparable productive capability. MEA can be used to calculate CCA asset values when technology has changed. Adjustments may be made to the value to account for improvements in functionality etc.
MPF	Metallic path facility. This is the copper cable linking homes to exchanges for the transportation of voice and data services. It is often referred to as UCLL and does not include the sub-loop extension (SLE).
NBV	Net Book Value. This is the depreciated cost of an asset and equals the original cost of an asset adjusted for revaluations (GBV) less depreciation and amortisation.
NRC	Net Replacement Cost. This is a form of CCA asset valuation which recognises the effects of depreciation on an asset's replacement value. NRC equals the GRC less an allowance for depreciation and amortisation commensurate with the age of the asset being valued.
NZ GAAP	Generally Accepted Accounting Practice as defined in section 3 of the Financial Reporting Act 1993.
Operational Separation Undertakings	The Telecom Separation Undertakings undertaken by Telecom to the Minister of Communications in accordance with section 69K(2)(c) of the Telecommunications Act 2001, as varied from time-to-time, which requires Telecom to operationally separate into an Access Network, Wholesale, and various Retail business units acting at arm's-length from each other in relation to a number of services, and with broader obligations not to discriminate and to move to an Equivalence of Inputs standard with respect to certain relevant services.
Other Services Group	The Services Group consisting of Telecom's international operations and corporate management services and those activities and services that are not provided by the Access Services Group, Wholesale Services Group, or the Retail Services Group.
Part 2B	Part 2B of the Telecommunications Act 2001.
Product Statement	Financial Statement summarising revenues, expenses and supporting information in accordance with the form of the report in the Requirements.
Regulatory Accounting Principles	Principles described in clause 7 of the Requirements that Telecom must include in the Regulatory Reporting Manual and follow in preparing the Regulatory Financial Statements.
Regulatory Financial Report	The consolidated collection of information, including the Regulatory Financial Statements and Product Statements, to be published by Telecom.
Regulatory Financial Statement	Any or all of the Regulatory Statements of Financial Performance, Regulatory Statements of Mean Capital Employed, Regulatory Statements of Fixed Assets and Product Statements whether prepared using historic cost accounting or current cost accounting, and any consolidated version of these statements.
Regulatory Reporting Manual	Telecom manual which sets out the methodologies used to prepare the information required by the Requirements including an introduction, glossary, technical dictionary, and a description of attribution methodologies, of asset valuation methodologies and accounting policies.
Regulatory Statement of Financial Performance	Financial statement summarising revenues and expenses for the relevant financial year.
Regulatory Statement of Mean Capital	Financial statement of the mean capital employed being the sum of the fixed assets (including intangible assets), inventories and debtors less creditors, and any short term provisions; calculated as the average of the capital employed at the start of the year and the capital

Employed	employed at the end of the year but excluding taxes, dividends, short and long-term debt, and goodwill for the relevant financial year.
Regulatory Statement of Fixed Assets	Financial statement that describes property, plant and equipment with an accounting life greater than one year, their dollar values, the life of the assets, and the accumulated depreciation for the relevant financial year.
Requirements	The Telecom Accounting Separation Information Disclosure Requirements as issued by the Commission on 17 May 2010.
Retail Services Group	The Services Group consisting of all business activities and services provided by Telecom directly to end-users in New Zealand, including – <ul style="list-style-type: none"> (i) those provided by Telecom’s Retail Unit; (ii) retail mobile services; (iii) those provided under the Gen-I brand; and (iv) those that would be provided by telecom’s Retail unit of it was operated as an independent or unrelated company, including that portion of Shared services activities provided in support of any of the foregoing; but excluding any activities or services attributable to another Services Group.
Services Group	Any of the four categories in or to which all business activities and services of Telecom must be allocated and/or attributed; being the Access Services Group, the Wholesale Services Group, the Retail Services Group and the Other Services Group.
SLE	Sub-loop extension service. A service wholesaled by Chorus which allows an access seeker to maintain service to end users from an exchange following the introduction of a cabinet between the end user and the exchange.
SLU	Sub-loop unbundling. A suite of wholesaled services which relate to the unbundling of the copper local loop.
STD	Standard Terms Determination. A type of determination made by the Commission in the telecommunications sector where the price, terms and conditions are available to multiple access seekers.
Telecom	Telecom Corporation of New Zealand Limited and any of its subsidiaries.
Telecommunications Act	Telecommunications Act of 2001
TSO	Telecommunications Services Obligations – an obligation under the Telecommunications Act to supply certain telecommunication 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.
UBA	Unbundled Bitstream Access. A suite of wholesale Telecom services which provides broadband connectivity to a home or office.
UCLL	Unbundled copper local loop. This is the copper cable linking homes to exchanges for the transportation of voice and data services.
Wholesale Services Group	The Services Group consisting of all business activities and services provided by Telecom on a wholesale basis, whether internally to Telecom or externally to another service provider, including – <ul style="list-style-type: none"> (i) relevant Wholesale Services, and (ii) Any activities or services that would, if the Wholesale Unit was operated as an independent or unrelated company, be attributed to the Wholesale Unit, including wholesale mobile services and that portion of Shared Services activities provided in support of any of the foregoing.

