



**NEW ZEALAND INSTITUTE FOR THE STUDY  
OF COMPETITION AND REGULATION INC.**

# **PENDULOUS PROGRESSION: 20 years of Telecommunications Regulation in New Zealand**

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## **CORPORATE MEMBERS**

Auckland International  
Airport Limited  
Contact Energy Ltd  
Fonterra Co-operative  
Dairy Group Limited  
Meridian Energy  
New Zealand Post Ltd  
NGC  
Powerco  
Telecom Corporation  
of New Zealand Ltd  
Transpower New Zealand Ltd  
Vector Ltd  
Victoria University of Wellington  
WestpacTrust Institutional Bank

# OVERVIEW

## The context

- telecommunications
- New Zealand

## Three eras

- from government monopoly to light-handed regulation 1987-2001
- return to industry-specific regulation 1999-2005
- reinstatement of government control 2005-7

## Relative performance

- transaction costs (overheads)
- consumer welfare (prices, products, availability, quality, uptake)
- competition (entry, timing, market shares)
- investment (timing, incentives, actual expenditure)



# CONTEXT: TELECOMMUNICATIONS

High fixed/sunk costs

Network industry

Natural monopoly tendencies

- implications for welfare
  - allocative efficiency
  - productive efficiency
  - dynamic efficiency
- competition *FOR* the market ('winner takes all') v 'missing market (nobody invests and all welfare foregone)

Policy-maker's dilemma

- maximising total welfare from current technologies whilst ensuring timely investment in next generation technologies



# POLICY-MAKER'S OPTIONS

## Public ownership and regulatory barriers to entry

- investment capital from compulsory taxation
- allocative efficiency advantages;
- but poor in productive, dynamic efficiency
- often used to achieve wider social objectives

## Private ownership, unrestricted entry and industry-specific regulation

- productive efficiency advantages from private ownership
- depends upon the type of regulation, but
  - maybe some allocative efficiency advantages
  - certainly higher administrative overheads
  - incentives must be carefully designed to ensure ongoing investment and new technologies (risks of 'regulatory failure' significant)



# INTERNATIONAL CONTEXT circa 1987

## Pursuit of increased efficiency

- ‘failure’ of regulated private monopoly franchises (US, Canada)
- ‘failure’ of government ownership (UK, most of Europe, Australia, New Zealand)

## Desire for increased competition

- a means to the end of increased efficiency

But how to achieve it given industry characteristics?

A ‘natural experiment’ for policy-makers

- ‘competition’ for new ways to govern industry interactions



# CONTEXT: NEW ZEALAND

1984

- constitutional and foreign currency crisis
- led to “one of the most notable episodes of liberalisation that history has to offer” Henderson (1995)

## Political and public policy consensus

- stable, credible, mutually consistent macroeconomic policies
- efficient allocation of resources
- achieving a competitive environment “wherever possible”
- markets operating relatively free from government intervention

Shaped policy approach of NZ’s contribution to the experiment



# NEW ZEALAND'S ECONOMY

Small size, small population, low population density, geographical isolation, challenging terrain, thin capital markets, highly-concentrated industries

Predominant competition issue for any industry:

- elimination of market power *per se* not feasible
  - pursuit of scale & scope economies makes it inevitable
- ex ante regulation costly per capita/per account
  - also, negative effect on private sector investment incentives
- challenge is to design framework where dominant parties can trade, but discourages exertion of dominance



# 'LIGHT-HANDED' REGULATION

'Lightly regulated' but far from 'unregulated'

Commerce Act 1986

- dominance permitted, but punished if exercised

Natural monopoly characteristics of former state-owned utilities required further safeguards

Specific information disclosure

- transparency of performance
- facilitates negotiations with businesses

Threat of further regulation if market dominance is abused

- Part IV of the Commerce Act

Specific contractual or legislated obligations





# TELECOMMUNICATIONS ACT 1987

Telecommunications separated from post and banking into arms-length state-owned corporation 1 April 1989

- with view to privatisation

Consistent with ‘light-handed’ principles

Using an industry-specific regulator (e.g. Australia) or structural separation (e.g. United States) rejected on efficiency grounds

Legislative protections removed

Reporting obligations

- transparent financial statements; regular reports to Ministry of Commerce; contracts offering discounts of more than 10% of listed prices to be disclosed



# PRIVATISATION 1990

Consortium – Bell Atlantic & Ameritech 12 September  
(\$4.25 billion)

- requirement to sell majority of shares to private investors – achieved 19 July 1991
- NZ's largest listed company (20-25% NZX capitalisation)

Reporting obligations transferred

'Kiwi Share' obligations

- 'price cap' on residential rentals
  - $\text{CPI} - x$  where  $x = 0$
- residential 'free local calling'
  - some of largest local calling regions in the OECD
- residential 'universal service'
  - rural rentals no higher than urban rentals



# LITIGATION 1991-4

Clear entered market 1991

- national, 20%, international 23% m/share within 5 years
- local interconnection agreement (ICA) sought 1991

S36 breach alleged

- High Court (no)
- Court of Appeal (yes)
- Privy Council (no)

Crux issue was use of ECPR pricing rule

- ruled a legitimate pricing methodology under Commerce Act
- but may be inefficient under some circumstances

Tension: Competition Law processes may not always deliver efficiency-raising outcomes



# OTHER CHALLENGES TO 'LIGHT-HANDED' REGIME

Long time taken to reach settlement

- interim uncertainty prevented further entry occurring

Courts can adjudicate only the behaviour contested

- cannot consider other factors (e.g. counter-offers)

'Kiwi Share' retail obligations create pricing dilemmas in upstream markets

- how to price upstream elements so
  - a) Telecom can recover fair costs of social obligation
  - b) efficient competitive entry in downstream markets is facilitated

1995 Inquiry recommended no changes

(Treasury/Ministry of Commerce)



# PATTERN OF LITIGIOUS INTERACTION

## 1996 Telecom/Clear Interconnect Agreement

- 5 year deal challenged after 5 months
- Clear withheld payments pending another S36 case
- Telecom sought contractual performance via High Court
- Court ruled Clear could withhold until S36 case settled
  - efficiency consequences – Telecom underwriting Clear's competitive activities; implications for Telecom's future investment plans

Further tension between court adjudications and pursuit of efficiency ('competition' vs 'efficiency')

In the end, S36 action not completed

- contract went full 5 years
- changing market circumstances changed payoffs ('ISP Wars')



# 'ISP WARS'

## Post 1994

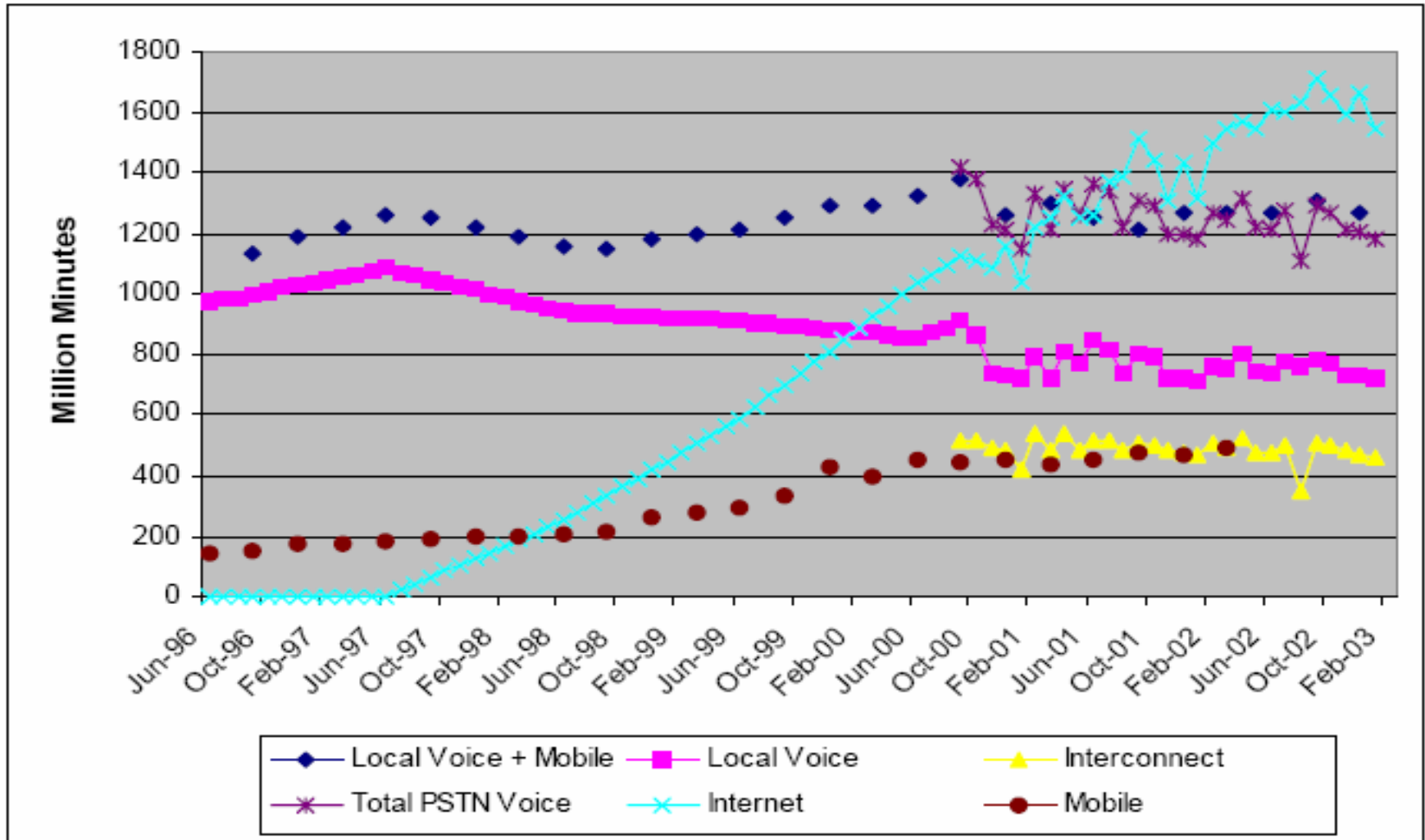
- flurry of market entry once court decision increased certainty
- arrival of the commercial internet induced more entry (ISPs)

## Changing traffic patterns

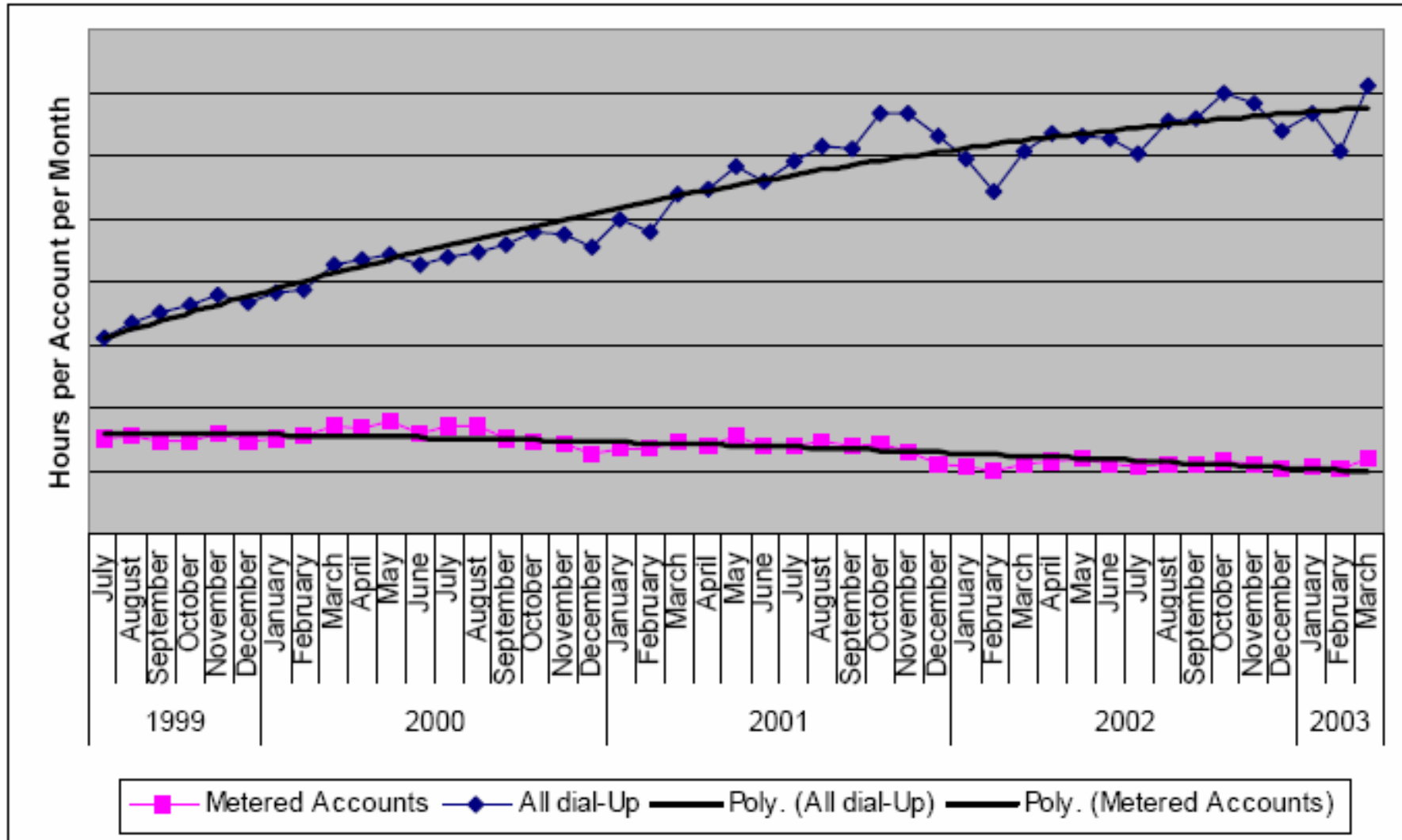
- 'free' local calling under Kiwi Share – increased usage at no cost to consumers
- altered payoffs from Telecom/Clear ICA
  - strategic interactions from contractual arbitrage
  - gains shared with consumers via low ISP prices – price wars amongst ISPs, emergence of 'free' ISPs



# TELECOM PSTN TRAFFIC 1996-2003



# DIAL-UP USAGE PER ISP ACCOUNT





# RESPONSES

## Telecom

1. Stop the cash flows to non-Telecom ISPs (0867 package)
2. Migrate internet users off the PSTN as soon as possible – early implementation of ADSL
  - January 1999 – 3<sup>rd</sup> in the OECD
  - nationwide – 85% of customer lines by 2002
  - high quality (2Mbps base offering)
  - low prices (3<sup>rd</sup>-lowest in the OECD in 2000, taking into account speed etc.)
  - universal pricing

## Commerce Commission

- laid S36 breach charges re 0867 (even though Minister satisfied)
- case still to be heard 8 years later



# PERFORMANCE OF THE 'LIGHT-HANDED' REGIME

## Dynamic efficiency

- timely investment in new technologies

## Allocative efficiency

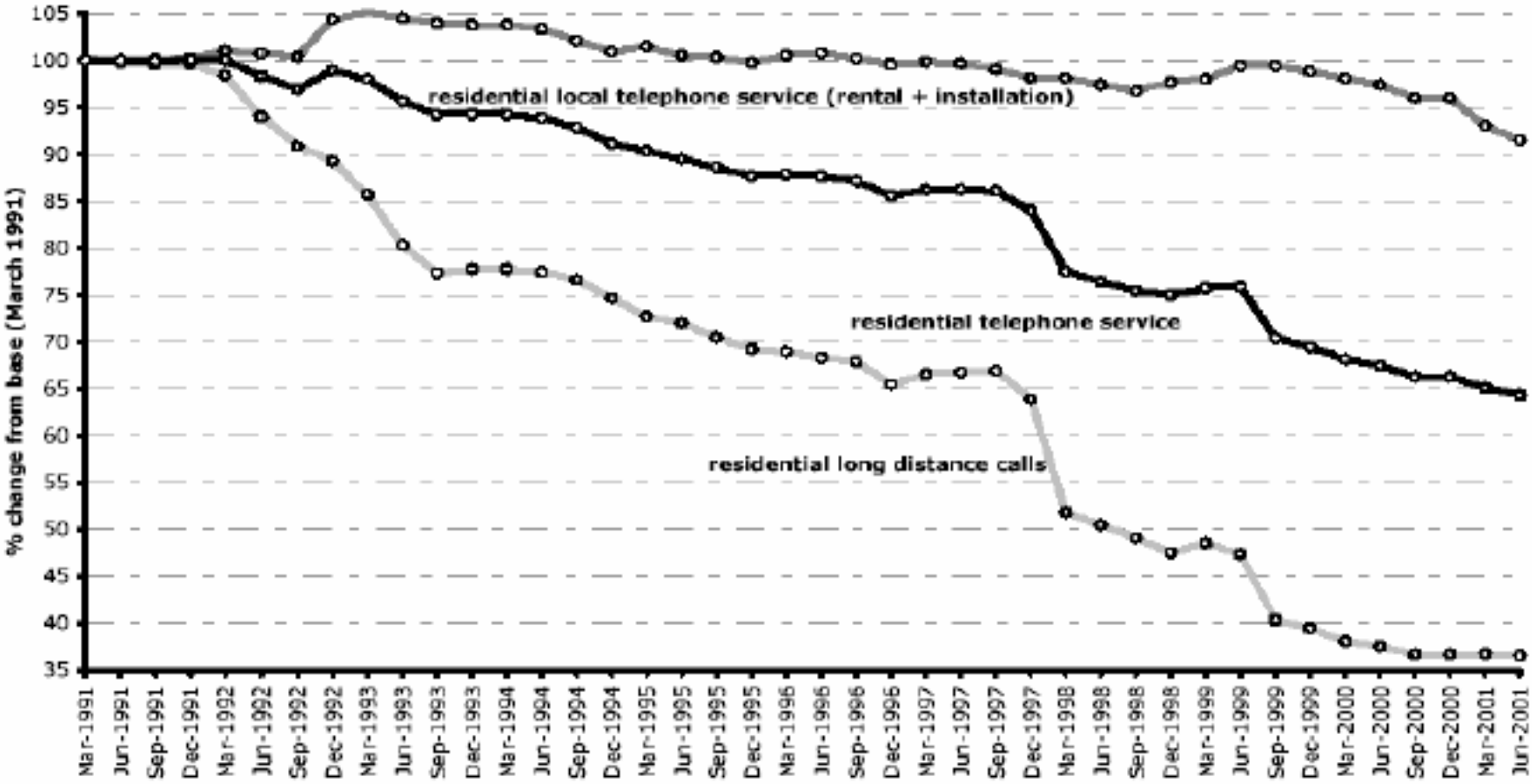
- low prices (absolute and relative) across all technologies
- role of 'Kiwi Share'

## Competition

- highly competitive ISP market
- multiple technologies
- dominant firm, competitive fringe disciplines



# NZ REAL RESIDENTIAL TELEPHONE PRICE INDEX 1991-2001



# OECD TELEPHONE CHARGE TIME SERIES

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>Residential</i>											
<b>Fixed</b>	100.0	109.18	112.66	112.76	112.82	122.39	125.91	112.97	115.50	119.27	124.08
<b>Usage</b>	100.0	104.17	98.45	96.77	94.05	98.56	90.09	81.29	78.69	70.54	57.80
<b>Total</b>	100.0	106.17	104.13	103.16	101.56	106.09	104.42	93.97	93.42	90.03	83.31
<i>Business</i>											
<b>Fixed</b>	100.0	104.30	107.45	107.59	107.99	108.07	106.37	113.07	118.68	123.37	118.55
<b>Usage</b>	100.0	103.50	96.88	94.18	91.29	92.52	83.26	86.46	84.31	75.18	55.50
<b>Total</b>	100.0	103.66	98.99	96.86	94.63	95.63	87.88	91.78	91.18	84.82	68.11
Source: OECD, Tellgen											



# A TRIUMPH FOR 'LIGHT-HANDED' REGULATION?

Procedural concerns still remained

- court cases took long time to be resolved/create uncertainty
- tension between 'increased competition' and 'increased efficiency' remains unresolved

Telecom still had a dominant position in the market

'Kiwi Share' obligations still causing distortions

- who should bear costs?
- how is it distorting entry decisions?
  - accusations of predatory pricing when Telecom matched Saturn prices in Wellington
  - 'ISP wars' would have been muted by per-minute charging



# INDUSTRY-SPECIFIC REGULATION

## Commerce Act changes 2001

### Ministerial Inquiry 2000

- Government policy “to ensure that the regulatory environment delivers cost-efficient, timely and innovative telecommunications services on an ongoing fair and equitable basis to all existing and potential users”
- recommended industry-specific regulator despite lack of evidence that the previous regime had ‘failed’
  - cost-based pricing (TSLRIC) prescribed for designated services
  - but designation to be made only where indicated on efficiency criteria)

### Telecommunications Act 2001

- instituted regulator, Kiwi Share obligations separated out and levied ex post as a charge on all industry participants



# 'LIGHT' INDUSTRY-SPECIFIC REGULATION

Commissioner appointed December 2001, took up duties March 2002

First decisions released November 2002

Multiple determinations sought in 2003

- TelstraClear, iHug, CallPlus, Compass, WorldXChange
- at same time as TSO determination, LLU inquiry
- each determination follows court-like process (but all contracts, rather than a representative one) taken to determination
- most determinations for 12 month period – redeterminations sought almost as soon as the original determinations finalised
- easy access to a regulatory determination removes most of the incentives for the parties to commit effort to resolving the issues independently



# IMPROVED PERFORMANCE?

## Transaction costs

- Commission's 2003 budget double that anticipated by 2000 Inquiry

## Entrant investment, dynamic efficiency

- access to Telecom wholesale products dilutes competitor incentives to invest in alternative platforms

## Timeliness

- TSO decisions, mobile termination taking longer than 1991-4 court case
- no services provided until determination is made
  - cf 'ISP Wars' when Telecom and TelstraClear fighting simultaneously in courtroom and market
- ex post levying means no certainty of obligation for entrants
  - how to make entry decision/price services?

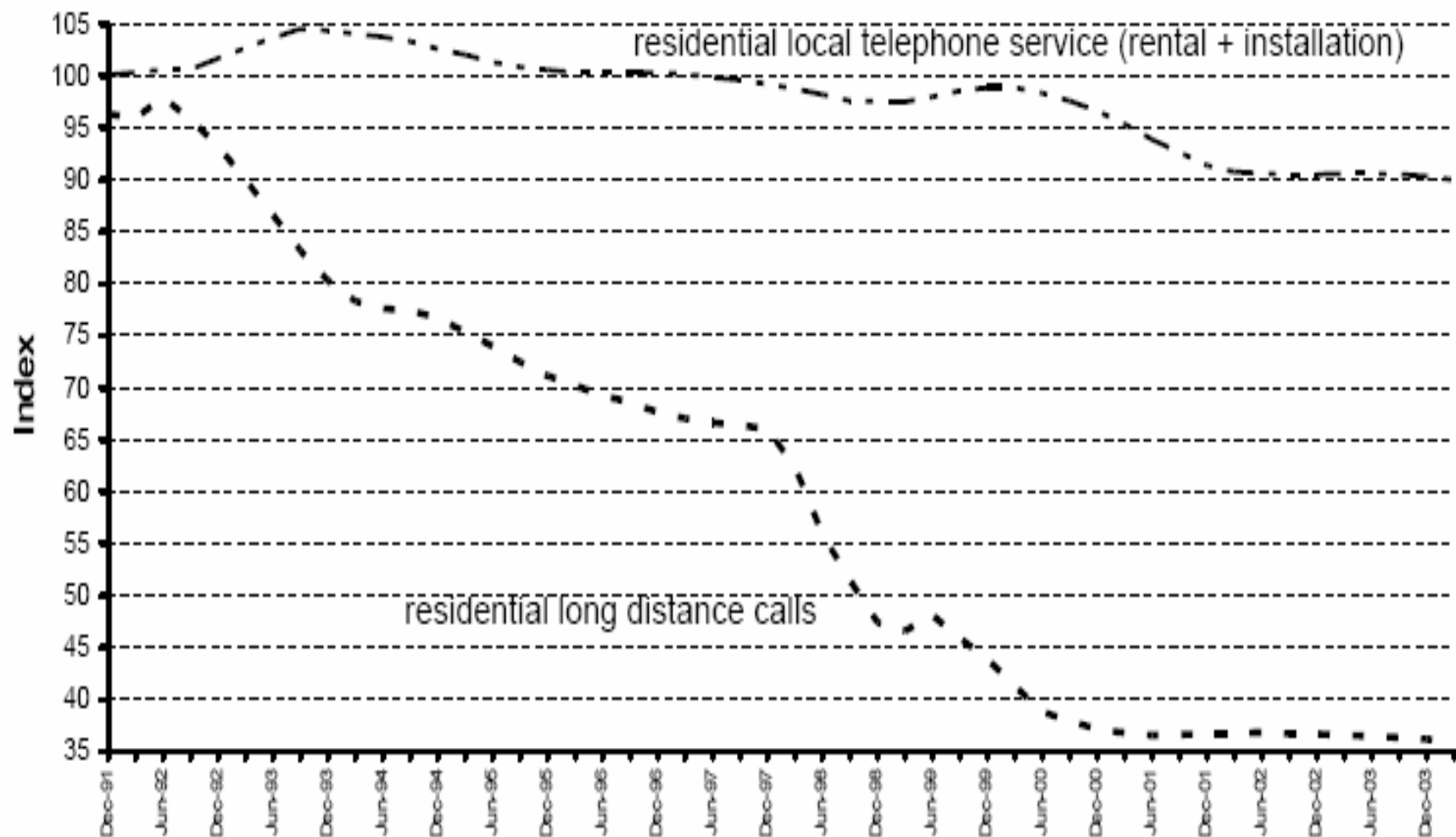
## Allocative efficiency

## Incumbent investment

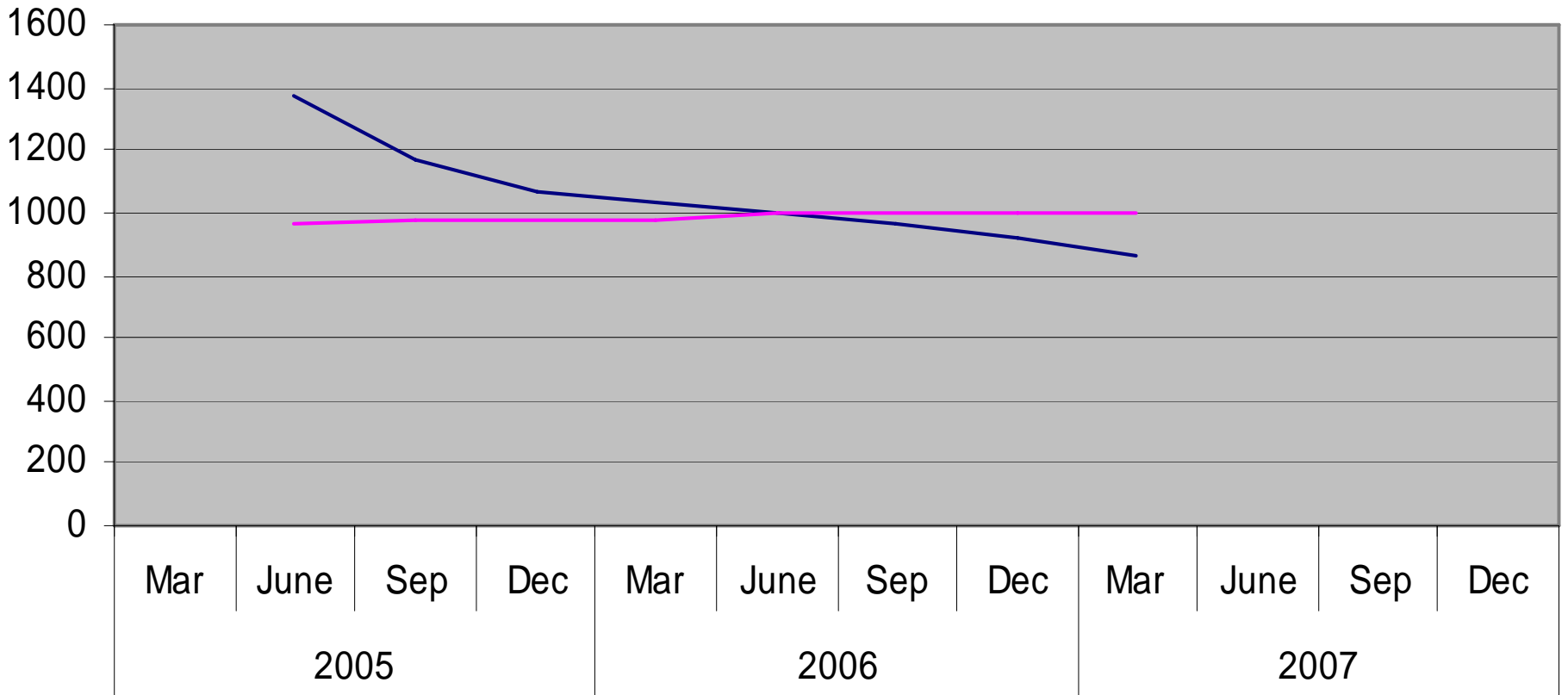




## Statistics NZ Real Residential Telephone Service Price Index: March 1991 Base = 100

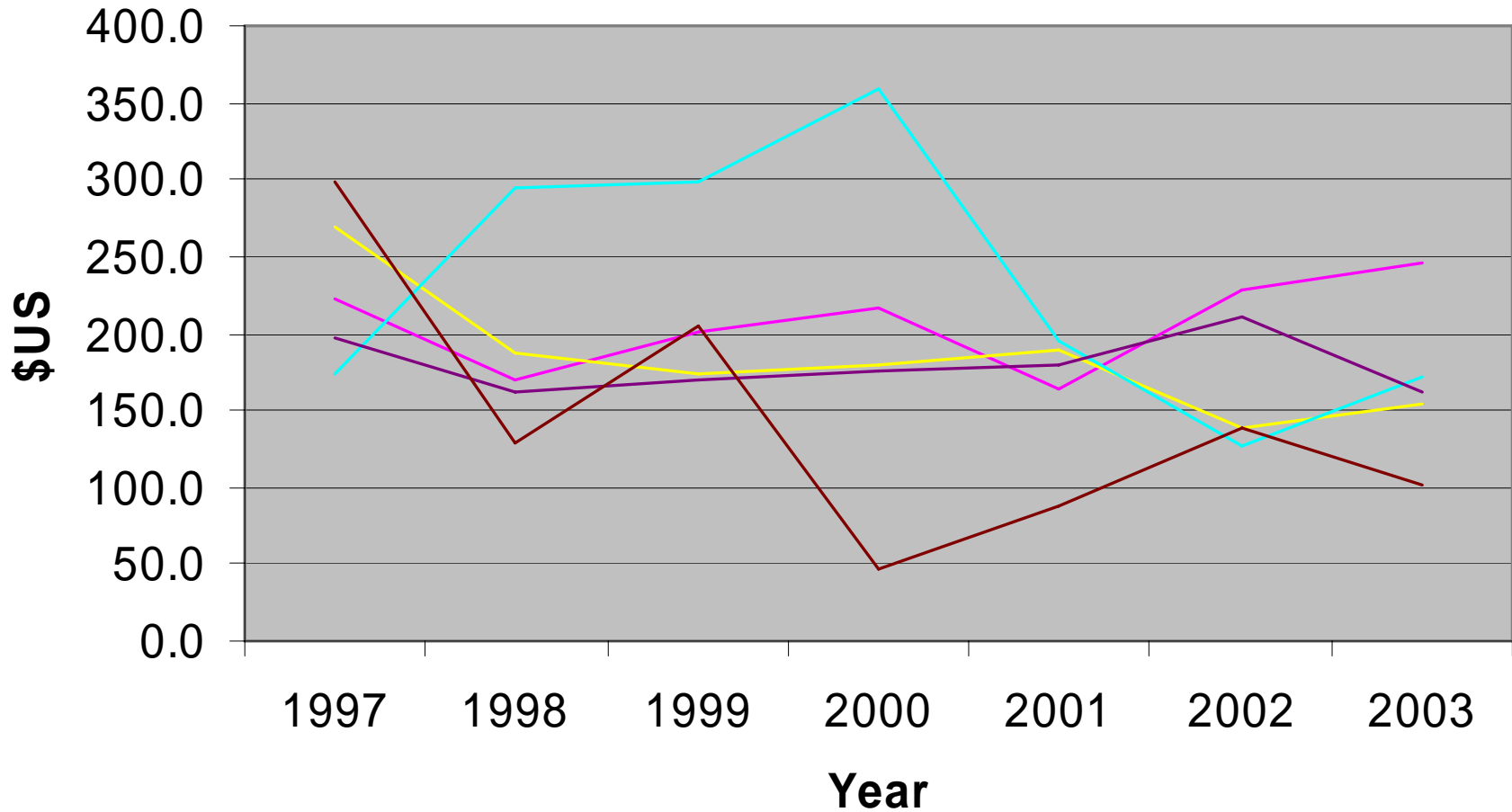


# NZ Telecommunications Consumer Price Index



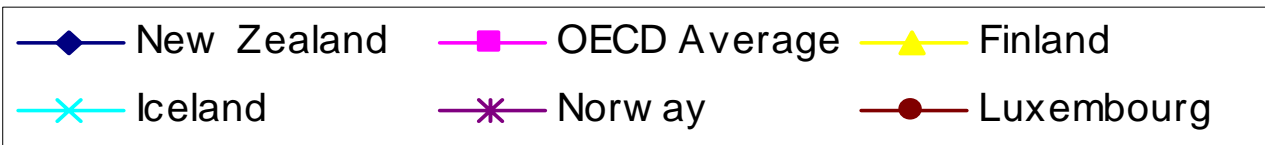
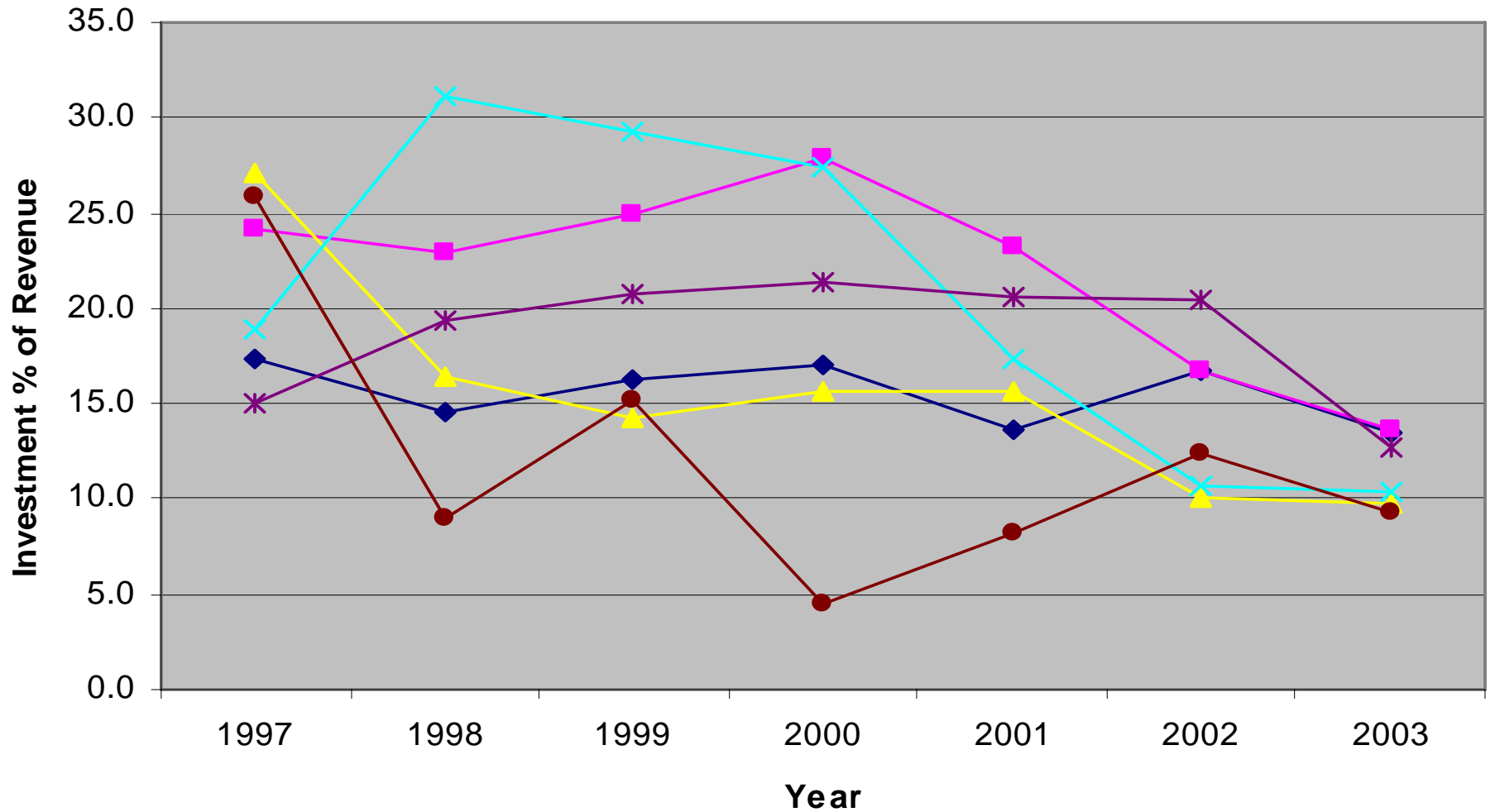
— Equipment SE9082 — Services SE9083

# INVESTMENT PER ACCESS CHANNEL – EARLY DIGITISERS



— NZ — Finland — Iceland — Norway — Luxembourg

# INVESTMENT AS A PERCENTAGE OF REVENUES



# 'HEAVIER' INDUSTRY-SPECIFIC REGULATION

## LLU Inquiry 2003

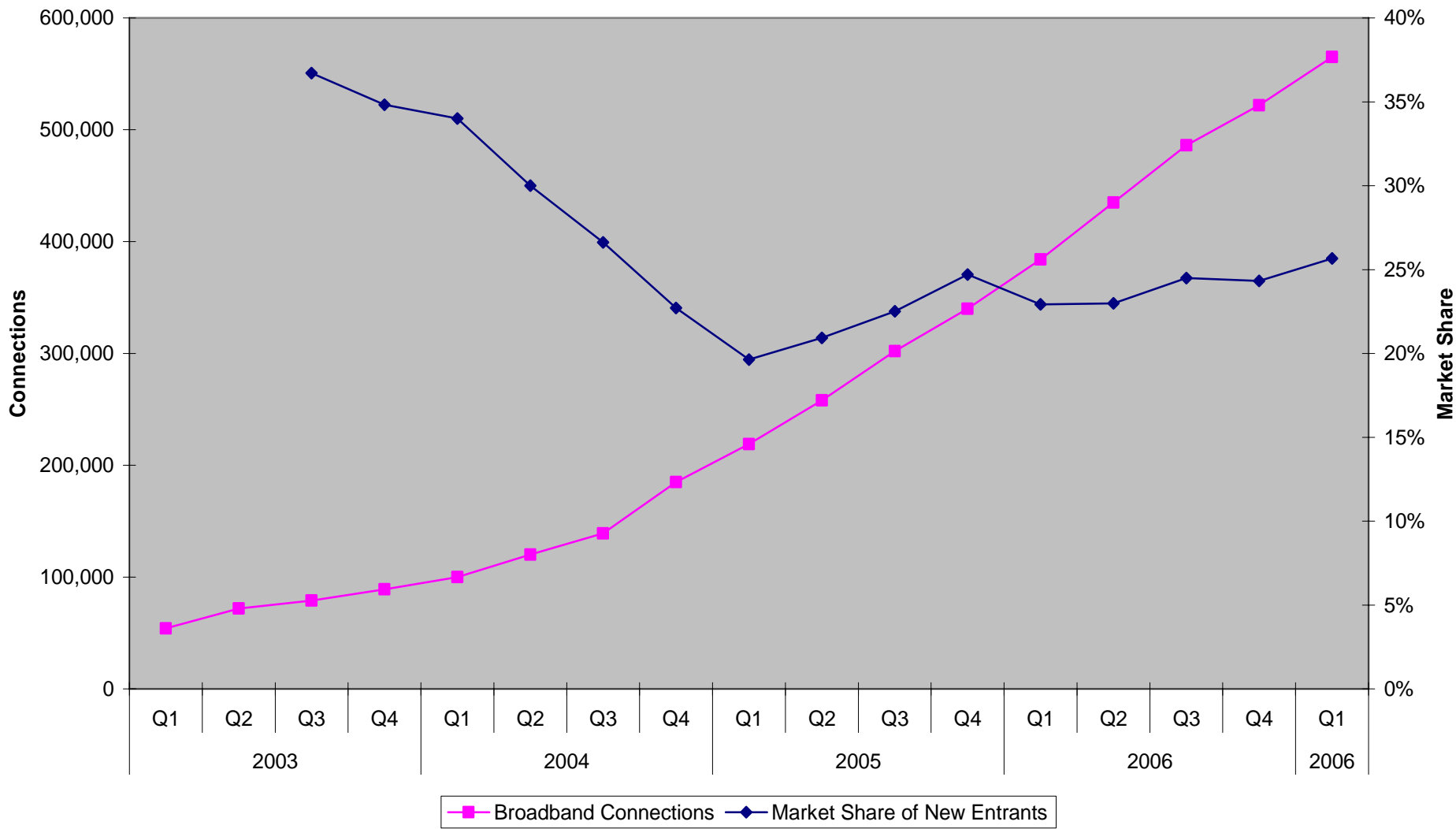
- full LLU rejected on efficiency considerations (preservation of incumbent investment incentives for NGN)
- limited access regulation (bitstream unbundling) to increase competition in broadband market (benchmarked using international TSLRIC prices)
- objective => increase broadband uptake (a proxy for consumer welfare)
- Telecom' on notice' to sell 250,000 connections (33.3% via competitors by December 2006)

First bitstream products available September 2004

Did this have the desired effect?



# New Zealand ADSL Market 2003-2006



# AN EFFICIENCY PROBLEM OR A COMPETITION PROBLEM?

## Labour Party Manifesto (September 2005)

- “this Labour-led government has ended the destructive period of ultra-light handed regulation that stifled competition, growth and consumer choice in ICT markets”
- will “closely monitor and enforce commitments made by Telecom New Zealand under the local loop unbundling decisions and ensure targets for broadband uptake for the next three years as outlined in the Digital Strategy are met”

## Speech from the Throne (November 9 2005)

- “with respect to ICT, my government will be advancing policies to ensure that the telecommunications sector becomes more competitive and that we achieve faster broadband uptake in line with our competitors”



# STOCKTAKE 2006

## Predetermines a 'competition problem'

- does not address efficiency issues directly
- recommendations to fully unbundle and impose operational separation based solely upon a desire to increase competition
- regulatory Impact Statement says no cost-benefit analysis is necessary
  - all other regulatory recommendations (including 2004-7 Mobile Termination) backed up by CBAs using either total welfare or consumer welfare as the efficiency-based criterion

## But what form of competition is it reasonable to expect in a small, distant, open economy such as NZ?

- dominant firm, competitive fringe on different infrastructures may be as good as it gets
- plus, oligopolistic markets re-emerging in rest of OECD
  - how to manage/regulate interplatform oligopolies?





# COMPETITION REPLACES EFFICIENCY AS PRIMARY OBJECTIVE OF NZ REGULATION

Articulated in the 2<sup>nd</sup> Mobile Termination decision

Telecommunications Act uses different standard of test (consumer welfare) from Commerce Act (total welfare)

- based on Commerce Act Part IV – regulation of existing market power

Primacy of competition over efficiency

“Where there is a tension between the net public benefits and promotion of competition, the statutory context indicates that the primary consideration is the promotion of competition ... the Telecommunications Act is focused on regulating access to promote competition. It does not provide a mechanism that specifically allows for efficiency considerations to take precedence over the promotion of competition. Nor is there anything in the statutory scheme to suggest that this is the case”



# THE PENDULUM HAS SWUNG BACK

Failing of competition laws circa 1986 to deliver most efficient outcome was the main criticism of the light-handed regime

2005/6 decisions indicate that the tension must be resolved in favour of competition

The means has become the end

Implications for efficiency

- long term investment now doubtful in a market where there is only one (private) party with financial ability and demonstrated willingness (to date) to fully build out a fibre-based NGN?



# TO GOVERNMENT CONTROL OF SECTOR DIRECTION, CIRCA 1984?

February 28, 2006:

- the Economic Development Minister (not Minister of Communications) announces that the mobile termination decision is being deferred whilst the Crown engages in a negotiation with Vodafone and Telecom

April 30 2007:

- 5 year agreement announced (Minister of Economic Development)
- effectively same outcome as Commission's April 2006 (revised) recommendation

May 31 2007:

- Minister of Communications announces (in a speech) that he, not the Commissioner, will lead unbundling and separation processes
- new Commissioner announced in same speech



# BUT ONLY 359 DEGREES

Structural separation, combined with LLU, all other manner of regulatory interventions is ideal for governments who used to own telcos. They can still control sector decisionmaking just like they used to when they owned the firms, have, but bear none of the financial risks. But do they realise that they cannot force investors to fund new networks in the same way that they forced taxpayers to fund them in the past? And do consumers?

Paraphrase from Greg Sidak's keynote address, Network Neutrality Conference, Ecole Nationale Superior de Telecommuniques, Paris, May 31 2007

