
International Regulatory Perspectives

presented by

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on behalf of

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New Zealand Commerce Commission

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Purpose of Today's Conversation...

I have been asked by the respondents to bring an international perspective and share relevant lessons learned from overseas for your consideration in evaluating options for an optimal regulatory framework in New Zealand, in particular asset valuation methodologies and how they shape utility behaviours and influence regulatory outcomes.

Asset Valuation Methodologies...

Historic Cost-Based (DHC) approach is inappropriate

- It is unrelated to true asset value or the effective level of investment in the business.
- It encourages management to over invest in the Network where asset value depreciates over time, generating higher than necessary capital costs for consumers to bear.

Replacement Cost or ODRC is similarly problematic

- It is, at best, an estimate based on costly and intensive information. This is often subjective and lacks transparency.

But, despite its short comings, the Respondents would consider an ODRC-Based Asset Valuation more effective than a DHC-Based Asset Valuation

Summary Impacts of Historic Cost (DHC) on Asset Valuation

- Can create an incentive to cost-pad assets
- Inaccurate and incomplete existing historic construction cost details
- New investment can produce 'price shock' for consumers
- Lack of transparency - original asset recording is reported to be inconsistent
- No basis for determining which historic costs have been recovered in the past.
- No true linkage between depreciated life and technical life
- Consumers bear full costs without recognition of under-utilisation of assets
- Regulators typically grant 'franchise' and 'strandings' protections to the businesses (increasing customer risk) in exchange for lower asset valuations.

Summary Impacts of Replacement Cost (ODRC) on Asset Valuation

- Potential benefits and potential costs of optimisation are both high
- ODRC optimisation is information intensive and costly
- Risks to owners without offsetting benefits may depress ongoing investment in Network
- Likely future Network obsolescence from emerging technologies – potentially “stranding” assets and investment.

Asset Valuation – US Market

In the US market two types of asset valuation are used most widely. In most cases both methods are used within the same regulatory jurisdictions.

Original Cost New Less Depreciation (Equivalent to DHC)

- Used to determine the allowable rates of return in tariff setting. In exchange for this lower valuation basis, various monopoly protections are granted to the business owners.
- The regulators set what they believe to be a fair return on those investments. This fair return value is then used to support the cost of service calculations such that the tariffs are set to cover the ongoing costs and the allowable fair return.

Replacement Cost New Less Depreciation (Equivalent to ODRC without Reoptimization)

- Used as an accepted method of determining the value of the utility assets in the question of a sale, disposal, stranding, or a seizure of the assets.
- This method recognises that regardless of the levels of depreciation accumulated by the utility, the assets have a certain market value.

Asset Valuation – Australian Market

IPART (NSW Gas/Electricity Distribution)

- A mixture of DHC and Replacement Cost for assets acquired pre/post 1999
 - Land values And Easements at HC
 - Physical assets at ODRC

ESC – Formerly ORG (Victorian Electricity Distribution)

- Base reviews on original 1994 ODRC estimate, adjusted over the past review periods for inflation, depreciation and acquisition / disposal
- Initial asset values stipulated in the enabling legislation and not subject to re-optimisation (by the companies or the regulator)

ACCC – Electricity Transmission (National Regulator)

- ODRC –Under National Gas Code and National Electricity Code, ACCC has discretion to revalue assets, but only subject to local jurisdictional rules.
- In at least one case (SPI), the company has argued for revaluation.

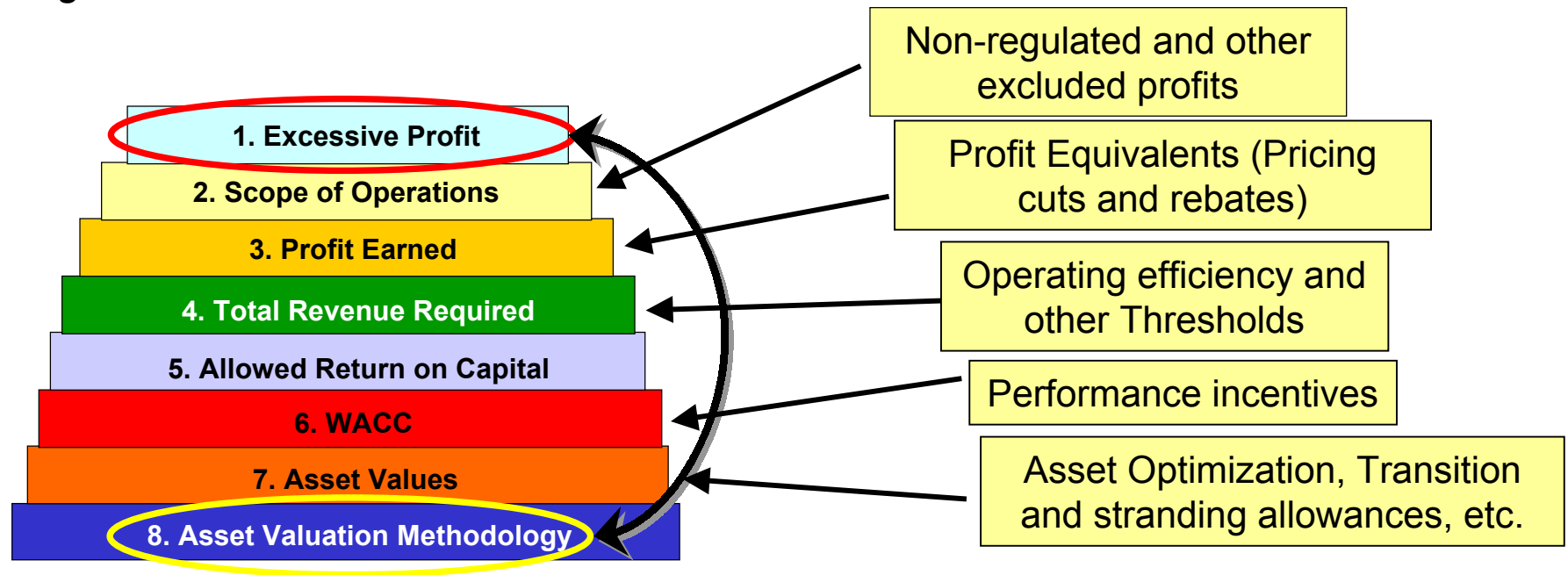
Asset Valuation – Overseas Market Implications for New Zealand

- *Neither Historical Cost, nor Replacement Cost Asset Valuation Methodologies are ideal for NZ:*
- Application of an **Historical Cost approach** could reduce risks to lines businesses from “arbitrary” asset stranding. However, such benefits are limited due to the lack of reliable data on assets and the potential of “price shock” on end customers following major asset investments.
- Application of a **Replacement Cost approach** may overcome the problem of asset data consistency and price shocks. However, it creates a real risk to the businesses of “asset stranding” through ex post re-optimisation.

...Given the practical difficulties in implementing a “fair” and reliable Historical Cost approach, it seems inevitable that a Replacement Cost approach will be required. However, such an approach should not be implemented until current “rules” are comprehensively reviewed and revised and lines businesses have had sufficient time to prepare reliable asset registers.

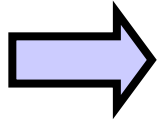
Asset Valuation Methodology Is Important, but Only One Factor to Be Considered When Evaluating Profits for a Regulated Business.

Numerous other components of the building block approach beyond Asset Valuation Methodologies affect a determination of Excessive Profit.



It is the recommendation of the Respondents, that the Commerce Commission allow interested parties to make comment on the its overall proposed regulatory approach to price controls, rather than seek comment on only the constituent parts of the proposed approach.

Commentary on the Some perspectives on the Regulatory Regime ...



- Thresholds
- “Excessive” Profits
- Cost of Regulation

The Respondents Considered Position on Thresholds...

1. Any threshold based regulatory mechanism should be **targeted** as opposed to universal. This will reduce regulatory complexity and cost, and will maintain the market based incentives that appear to have been working to date.
2. Tight threshold **definitions** need to be prescribed and not subject to later Regulatory intervention or variable interpretation. The regulatory regime must also prescribe how these thresholds will be applied to make decisions and drive Regulatory actions.
3. The current reform proposals, particularly the suggestion of regulatory intervention based on arbitrary “thresholds”, appear to ignore powerful **lessons from international experience**.
4. There is **no example**, that we are aware of anywhere in the world, where electricity profit regulation has been effective in stimulating sustainable efficiency improvements, or has delivered long-term benefits to end consumers.
5. In fact, driving economic efficiency by "offering" utilities an opportunity to earn (what in the NZ lexicon are (possibly)) "excessive profits" is the **entire purpose of UK/AUS - style "incentive" regulation**.

The Arbitrary Power to Intervene at Any Time Is Likely to "Unsettle" Financial Markets - and Increase the Cost of Debt and Equity for NZ Line Businesses

- A primary purpose of economic regulation of utilities is usually to "encourage" voluntary funding of utility businesses by debt and equity markets - at the lowest practicable cost.
- Uncertainty and risk increase financing costs; and financing costs for capital intensive businesses are the largest element of price.
- Therefore, regulators should be focused on helping utilities drive down financing cost - by increasing certainty and NOT adding risk (or even the perception of risk).
- This is indisputably in the interests of BOTH investors and consumers.

Therefore, clarity around threshold definitions and calculations, robust rules for their interpretation, and targeted application to only the industry outliers should be key elements of any threshold strategy the Commission may adopt.

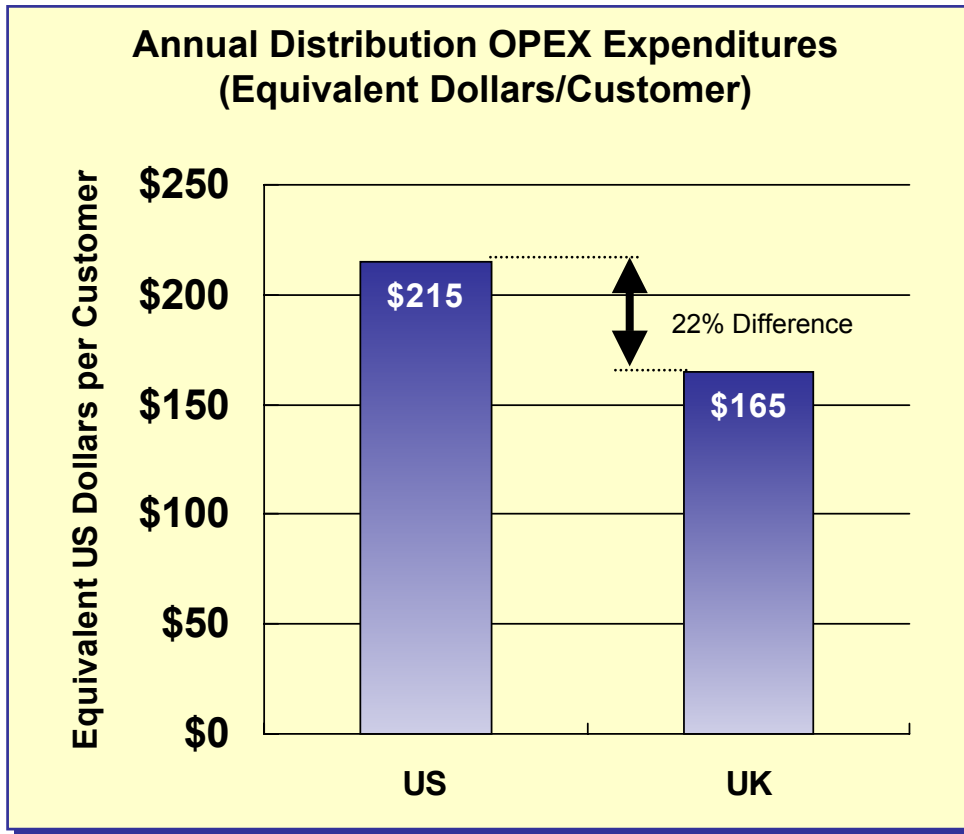
The US Market Has Had Profit Regulation For More Than 50 Years and Seem to Be the Best Place to Look at its Impacts. Allowable Rate of Return on Equity is Still a Common Threshold for Most State Jurisdictions.

- Most Regulators set threshold (allowable) returns, above which the regulator, the company or the customers can require a new hearing and resetting of the rates.
- Earning beyond this allowable rate of return ('over-earning') has a variety of consequences / treatments under different regulatory mechanisms. The Company typically has it's allowable rate recalculated (higher or lower) by the regulator, with the Over-Earnings:
 - Put into a 'rate stabilisation account'
 - Refunded to customers in the form of rebates or price reductions
 - Directed to be spent on regulator sponsored initiatives
 - Retained by the company until such time as new tariffs are set

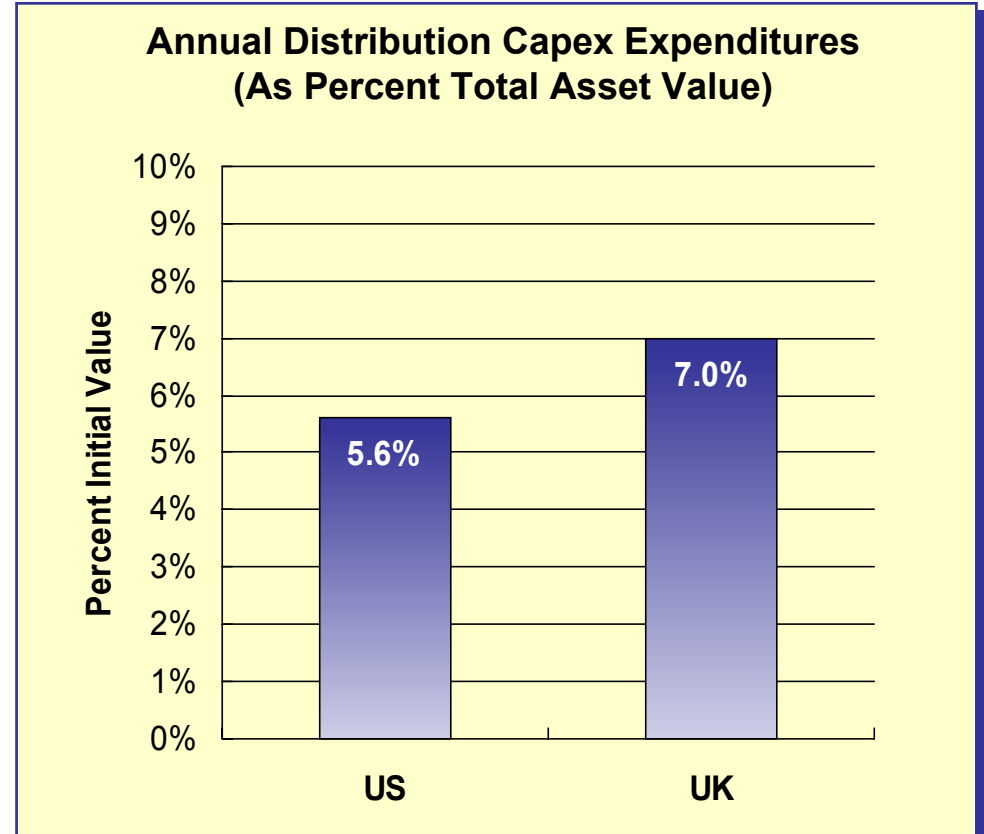
...But this “profit threshold” has been a powerful and effective disincentive for utilities to stop trying as they approach the profit cap.

In Fact, The US Utility Industry, Which 10 Years Ago Was 30 to 50% More Efficient Than the UK Distributors, Has Now Fallen Significantly Behind the Operating Efficiency of Most UK RECs

Macro Efficiency Benchmark Comparisons



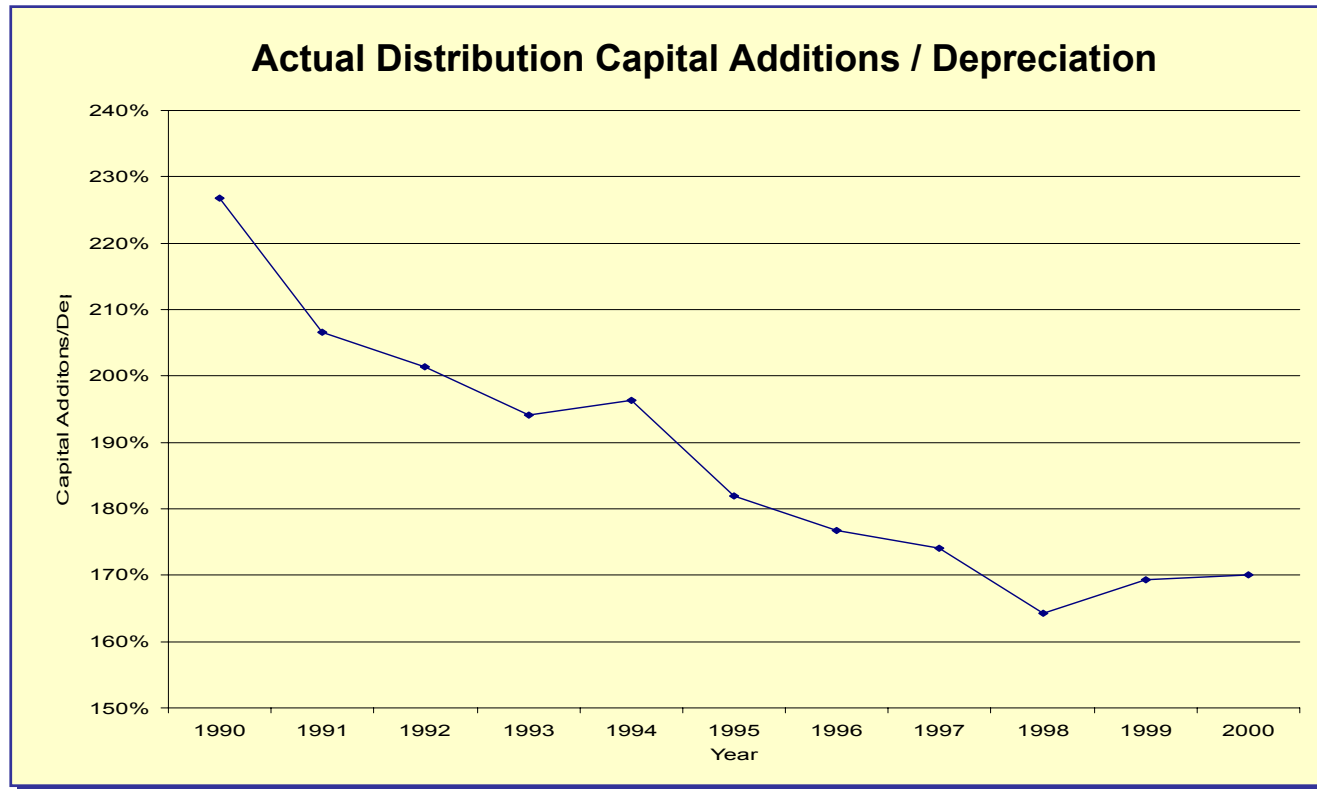
Note: All Expenditures year 2000



UK numbers normalized to reflect 40 year depreciation period vs. US 30 year norm

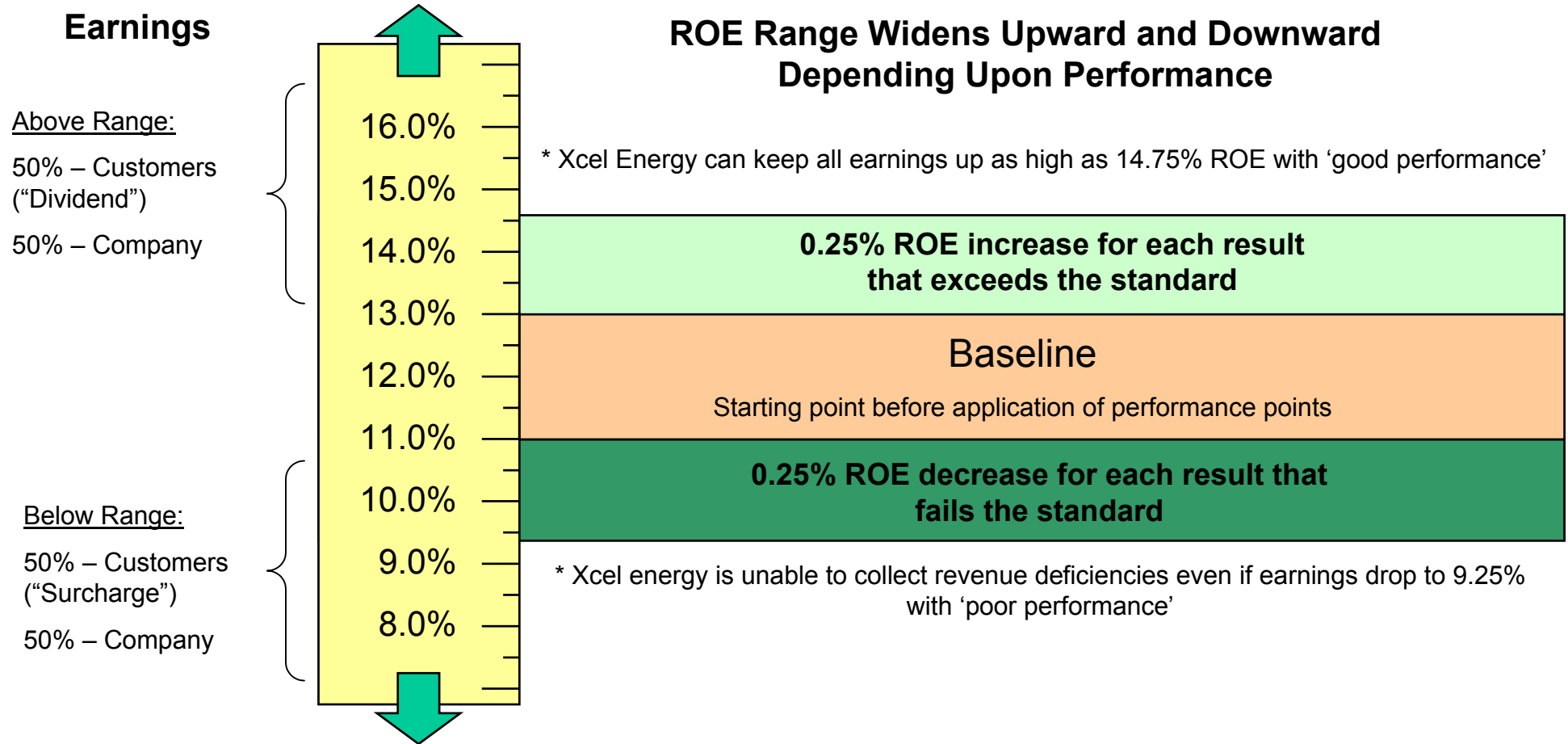
But The RECs Continue To Invest Capital at Rates Above Their US Peers

US Asset Managers are Pursuing Strategies to Reduce Cost, Increase Returns and Decapitalize the Network. This Has Many US Regulators Worried About Growing Reliability Risks.



Thought Leading Regulators Are Responding With Schemes That Provide Incentives for Efficiency Gains and Sustainable Reinvestment....

Case Study – US Market: Xcel Energy – *The State of North Dakota* has adopted a flexible ROE threshold with links to performance which Incent continuous improvement



Case Study: The “UK / Aus” Type Regulatory Regime Is Beginning to Make Inroads Into the US Market

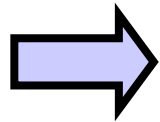
Central Maine Power’s ARP2000 Features

- **Seven year term** - Jan 2001 to Dec 2007
- Covers network prices only
- **“X” Factor** - Prices adjusted each July by inflation less productivity offset which ranges from 2% to 2.9%
- Significant **service quality guarantees** and penalties
- Recognition of significant force majeure and governmental / regulatory-related costs
- **Low-end risk sharing**
- **No high-end earnings sharing**
- Price flexibility

Relevance to the New Zealand Market – Thresholds - The Regulator Will Need to Be Clear As to the Definitions and Standards It Plans to Use, How It Plans to Use Them, and What Outcomes It Hopes to Achieve.

- Without a clearly defined mechanism for disposition of earnings the regulator runs the risks of a continual resetting of the underlying tariffs, leading to:
 - confusion on the part of the customers,
 - added expense of the regulatory investigations and determinations; and the
 - risk of inconsistent disposition of over earnings, leading to inequities across customer groups and between customers and shareholders and resulting public pressure
- Profit regulation provides a powerful and effective incentive for utilities to “stop trying” as they approach the profit “cap”. This “improvement disincentive” cannot be countered by imposing something like “an efficiency threshold”
- In addition, vague discretionary power for regulators to intervene – at any time - creates substantial regulatory risk that would unsettle financial markets, thereby increasing financing costs for lines businesses.

Commentary on the Some perspectives on the Regulatory Regime ...

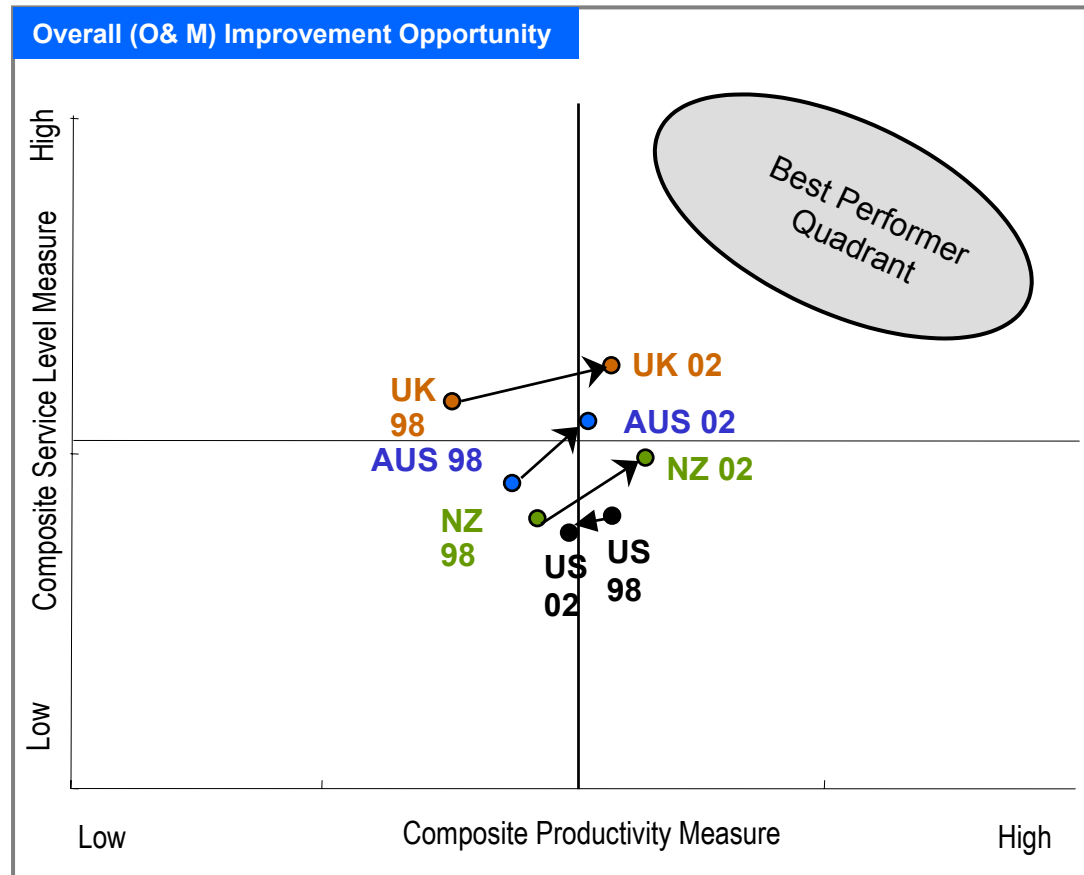


- Thresholds
- “Excessive” Profits
- Cost of Regulation

The Respondents Considered Position on “Excessive Profits”...

1. The Regulation of “Excessive Profits” by its current definition would provide companies with a **significant disincentive to capturing efficiencies**. New Zealand distributors are arguably well down the efficiency path already, even in the absence of such profit regulation.
2. Lack of clarity around how “Excessive Profits” would be applied as a threshold could lead to **financial market uncertainty and higher capital costs** for distributors.
3. **Calculating** any Profit threshold would be problematic, and must take into consideration: normal business and profitability cycles, emerging business risks, differences between Trust and IOU profit motivations, appropriate regulatory incentives, and arms length profits at each stage of the distribution value chain.
4. Profit thresholds, if any, must therefore be carefully designed and **tailored to the unique circumstances of each distributor** before rational regulatory outcomes could result. This would likely be complex and costly, and is unlikely to be justified based on the potential gains for customers.

Compared to the UK and Australian Markets, the New Zealand Lines Businesses That We Have Benchmarked Have Already Made Significant Efficiency Gains.



The average of the New Zealand companies below compare favourably against the US, UK and AUS markets without the need for significant regulatory intervention.

Further improvement in service levels will require additional investment in the assets, and systems.

Source: UMS Group proprietary benchmarking data on a global peer group of more than 150 distribution businesses

Note: US, UK, AUS are the normalised industry averages

New Zealand includes normalised data for WEL Networks, United Networks, Vector, Powerco & Horizon Networks

Further, The Regulation of Excessive Profits Will Be Problematic to Implement...

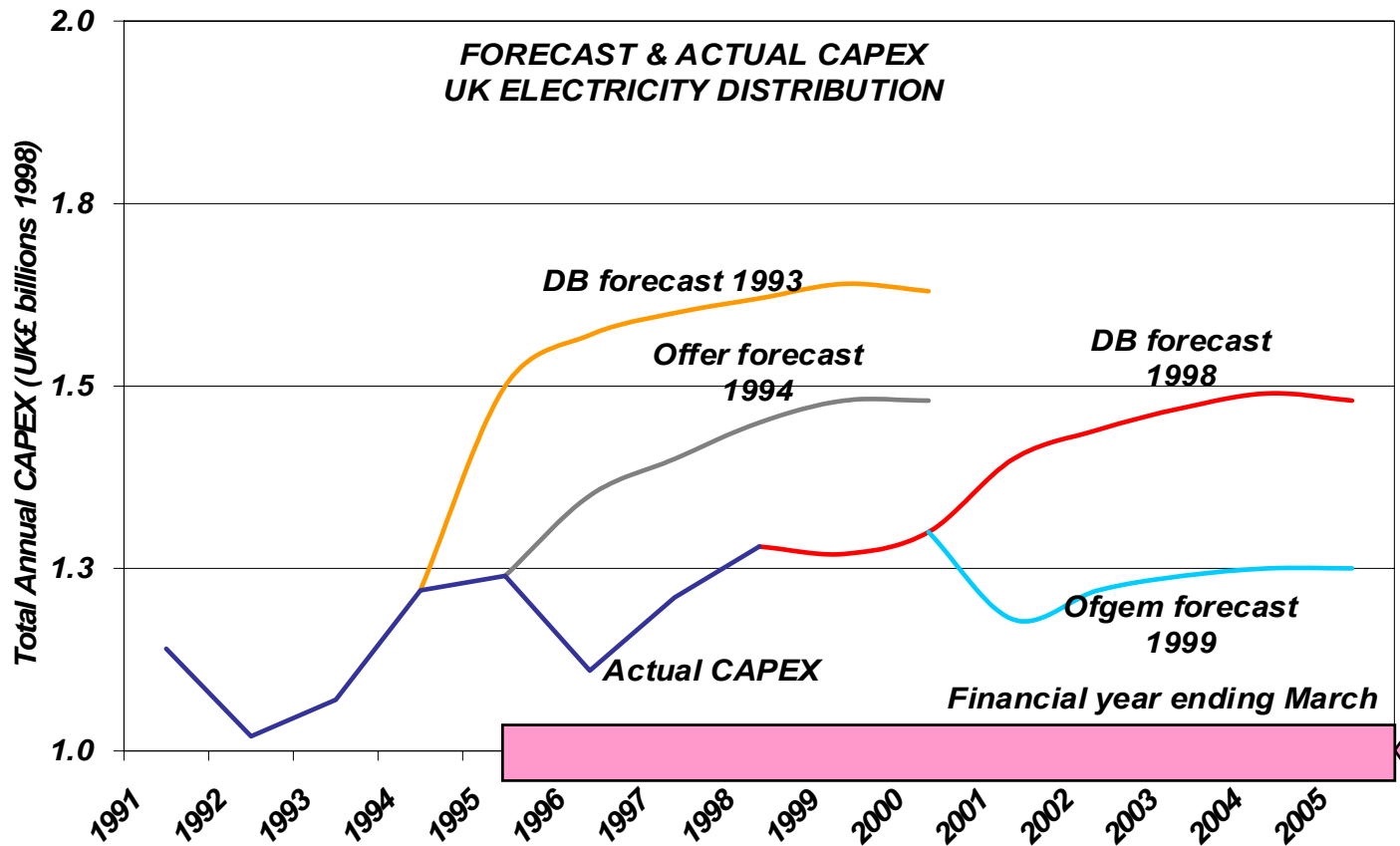
- The current definition of 'Excessive' is unclear.
- The term 'excessive profits' is ambiguous and must be viewed in the context of the listener.
 - To the public this would suggest 'unfair', 'usurious', and 'one-sided'.
 - An economist would view it as simply 'higher than the minimum level required to accomplish the desired results'.
 - And to a monopolist, it might mean 'high enough to fail the the front page test'.
- The term 'excessive profits' should probably not be applied to the following cases:
 - Short term or temporarily high returns earned in connection with regulatory incentives for outperforming key performance targets
 - Unregulated profits, or those derived from a scope of activities that is broader than those of other firms in the market
 - Profits paid to shareholders that are equivalent to price reductions granted to customers of trust owned distribution businesses in the same jurisdiction

Alternatively, Efficiency “Incentives” Do Work... Experience in the UK and Australia Clearly Demonstrates the Effectiveness of the Above WACC (Excess?) Profit Incentive to Drive Efficient Investment (and the Capture of OPEX Efficiencies)

- Thereby eliminating costly US-style cost-of-service regulation and costly re-optimisation of post-opening assets.
- But also suggesting the need for a low-cost method of sharing efficiency benefits between consumers and investors.

...Further, in The Australian and UK Models, the Regulator Generally Intends That All DBs Will Exceed the Forecast Regulated Returns Each Year. This Provides the Primary Incentive to Drive Economic Efficiency .

Case Study - UK Electric Distribution: Utilities Are Consistently Outperforming Regulatory Benchmarks...



It should be noted that throughout this period several cost – saving initiatives were implemented such as:

- Geographic Info Sys
- Asset Management Decision Making Systems

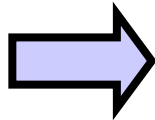
...Therefore “Efficiency” Incentives Do Work, With Consumers Benefiting in the Long-term.

But, If The Commission Must Apply An 'Excessive Profit' Threshold, An Appropriate Definition of 'Profit' Must Consider the Following...

- Appropriate allocation of profits to each element of the distribution business value chain, (i.e., Asset Ownership, Asset Management, Network Services, Customer Care Services).
- The risks associated with competition, stranded assets and economic risk capital on effective returns - Regulators in Australia and the UK are now becoming aware of and granting appropriate treatment and acknowledgment of the economic risk capital employed in the business.
- The cyclicity of the business, or the period for which profits are deemed excessive.

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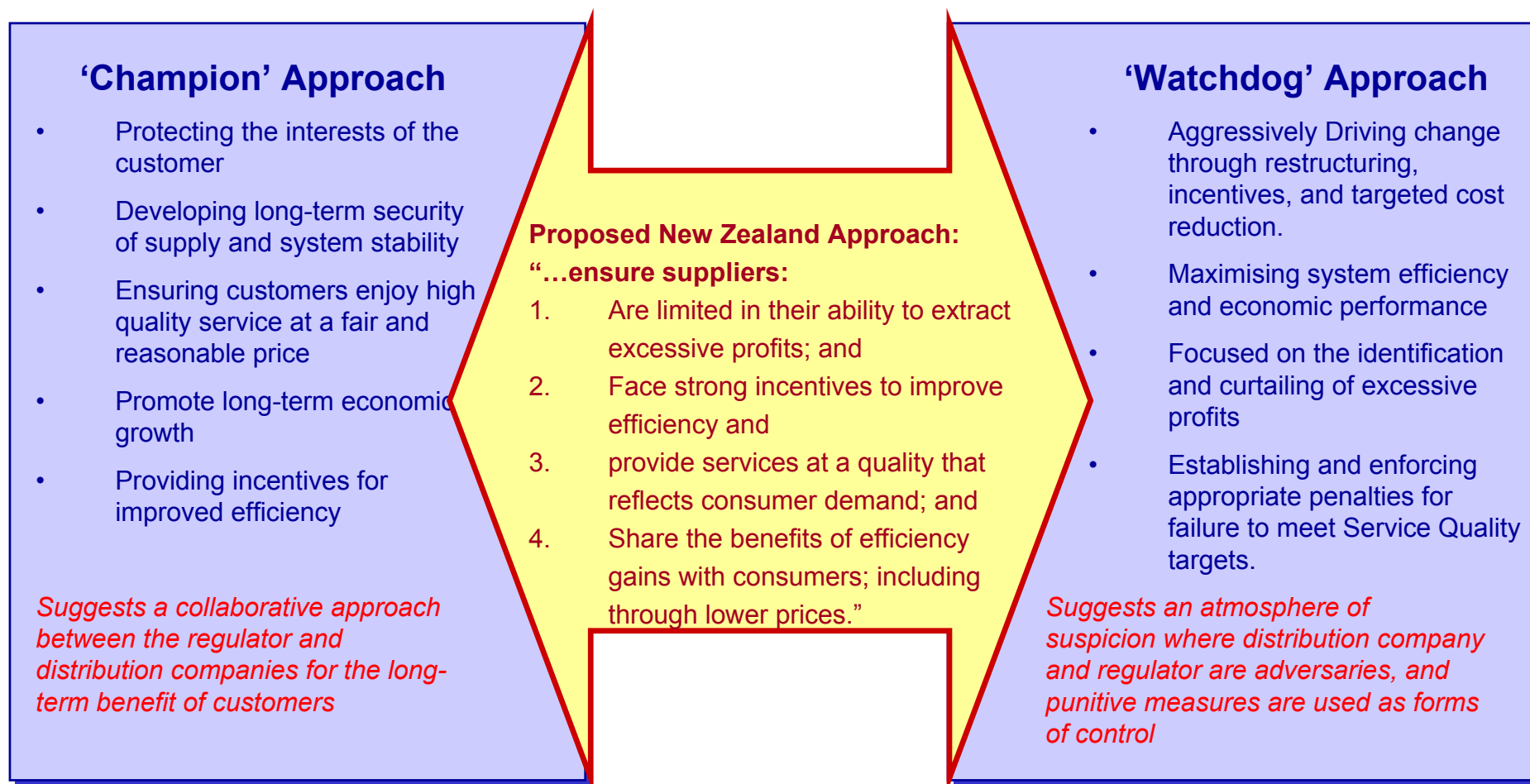
The Respondents Considered Position on the Cost Effectiveness of Regulation...

There are additional costs associated with with 'heavy-handed' regulation that have adverse effects on the regulator, the distribution business and the customer:

- Additional costs to the Regulator (and ultimately the customer) for consultants, increased internal staff and costs associated with legal counsel
- Intense downward pressure on distribution costs impacting their ability to make investments required for network health and reliability
- Heavy handed regulation creates an ethos that pits management against the regulator and produces a great deal of waste in the system.

...An intensive regulatory regime is likely to be cost prohibitive for the relatively small New Zealand distribution businesses.

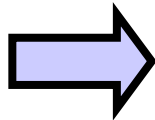
Many Of The Issues We Have Raised Lead Back To The Mission And Role Of The Regulator



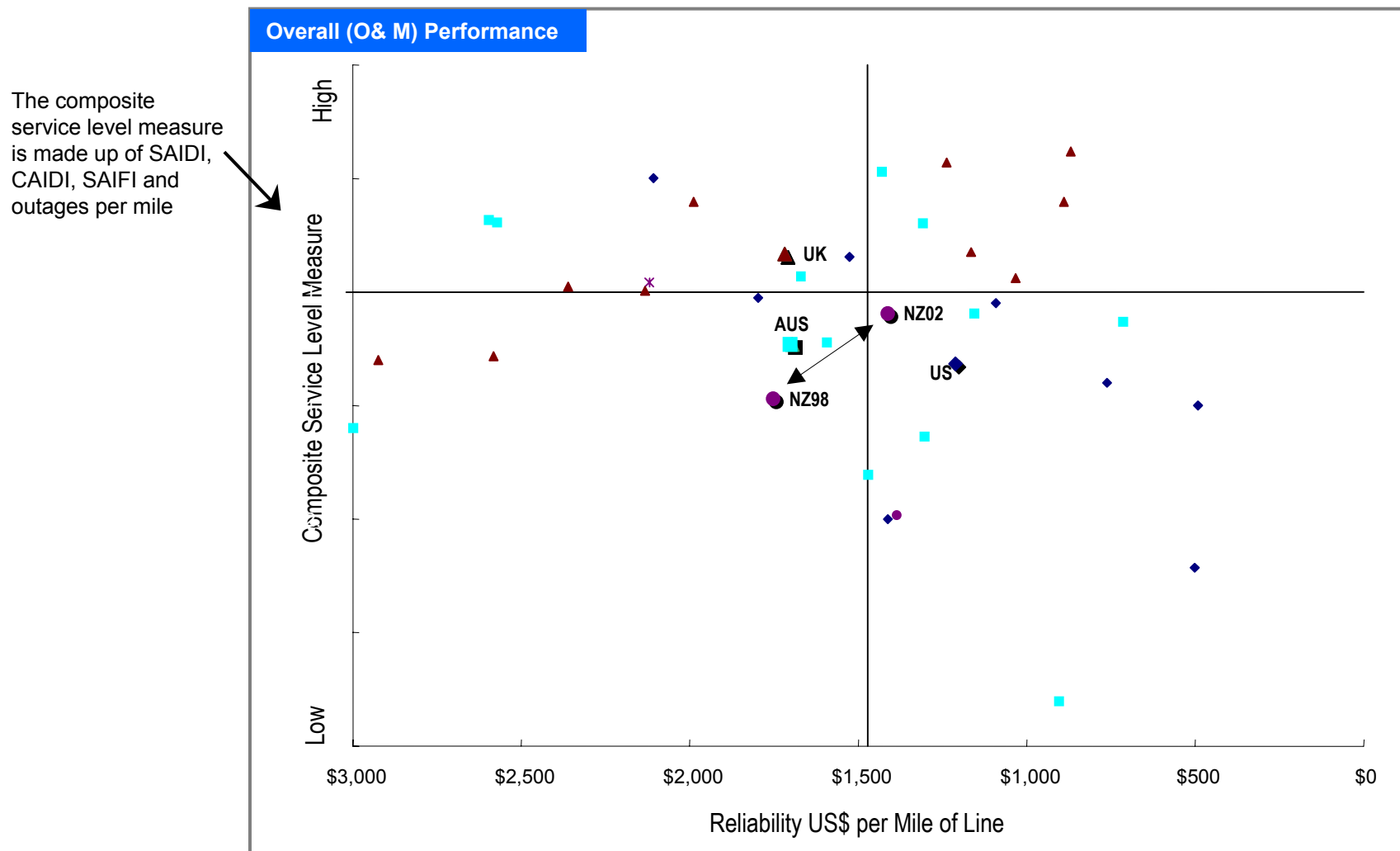
...A More ‘Intense’ Role for the NZ Regulator Would Only Make Sense In An Atmosphere of Mistrust and Gross Industry Inefficiency

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- Appendix 1



The chart below contains actual performance data from 1998 for the US, UK, AUS, and NZ markets. It also contains the 2002 average for NZ.



Source: UMS Group proprietary benchmarking data on a global peer group of more than 150 distribution businesses