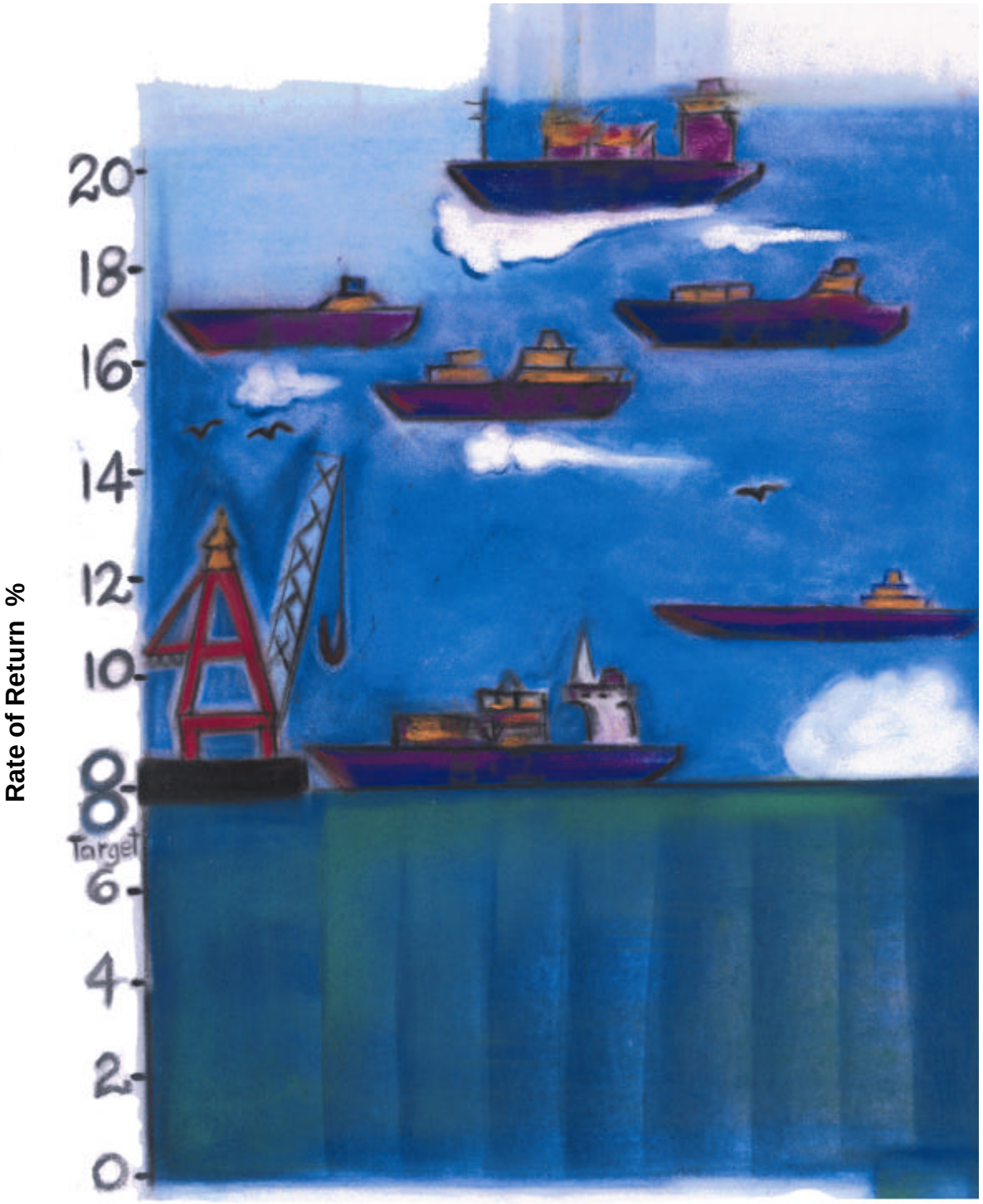
Portly Charges

Port Company Profitability



Simon Terry Associates

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Port Company Profitability

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March 2002

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Executive Summary

- This report examines the extent to which individual port companies have drawn profits in excess of those a successful but competitive business should achieve. It has been prepared as an input to the review of port company market power initiated by Government in October 2001. Our key numerical findings are:

  – Five port companies have substantially exceeded a reasonable rate of return, with four of the six studied achieving around double the 8% benchmark;
  – The resulting over-recoveries for the five ports are about $30 million a year at present;
  – Total over-recoveries since establishment of the port companies amount to around $300 million;
  – The present value of the market power exercised by these ports is of the order of $600 million.

Rates of Return

- A standard approach to assessing whether a firm has drawn excess profits is to measure its Internal Rate of Return (IRR) and compare this against relevant benchmarks. We have completed analysis on a sample of six of the nation's fourteen port companies.

- The key results below are calculated by drawing on the full financial flows for the period from corporatisation in 1989 to 2001. They show real after tax rates of return achieved by each of the companies in 2001 under two different measures. The first assumes a market value for the business at the end of the study period in 2001. This yields a typical range of between 11% and 20%. The second takes the more conservative approach of assuming book values for the businesses in 2001. This series shows typical rates of return of between 11% and 15%. Wellington is the outlier in both sets of results, with considerably lower IRRs.

Port	**Rate of Return to 2001**	
	Market Value At 2001	**Book Value at 2001**
Lyttelton	19.7%	14.8%
Marlborough	16.6%	12.9%
Napier	17.4%	12.4%
Nelson	11.1%	10.7%
New Plymouth	17.1%	13.8%
Wellington	8.2%	5.4%

Benchmark Comparisons

- To evaluate the significance of these results, they are compared against two relevant benchmarks. The first is the returns that could be expected by an investor in the New Zealand sharemarket. For the period from 1991 to 2001, the equivalent return on funds invested in a basket of the top forty stocks was 8.5%.

- This rate is very close to the benchmark Weighted Average Cost of Capital (WACC) for an infrastructure monopoly - the usual regulatory comparator. As the Commerce Commission notes, an actual return in excess of the appropriate target WACC over time suggests that the entity is earning an excessive or monopoly return. The WACC is the principal guide the Commission used to assess excess returns in the direct parallel of airfield activities. Against a target real WACC of 8%, the port company returns are often double the competitive level (assuming market valuations for the firms in 2001). Four of the six are between 8.6% and 11.7% higher than that level. Both the rates of return and the margins over WACC which we have found for four of the six port companies are higher than the levels which, in the Commission's view, provided clear justification for the imposition of price control.

Excess Returns

- A way of measuring the value of the excess returns is to calculate the level of revenue which would have sustained each port financially, while still yielding an 8% real after-tax return. This quantifies the total charges over-recovered from customers.

- Over the last six years, total revenues across five of the six ports were on average $30 million per year above the level consistent with an 8% benchmark (assuming book valuations for the businesses in 2001). When summed over the period 1989-2001, the estimated excess revenues total $304 million.

- Looking forward, port users face the risk that ports may change hands at market levels that are multiples of current book values. Acquirers would set charges in line with acquisition values, which we estimate would be at least $300 million above current book values. Combining this future oriented value with the total past over-recoveries provides an estimate of the total present value of the market power exercised by these ports. It is of the order of $600 million.

Market Shares

- A further exercise we have undertaken to review the port industry since corporatisation is to study changes in each port's market share. The striking feature of an analysis of international overseas cargo data is the extremely stable market shares held by each port through this period of very rapid rises in volumes. The 1989 Ports Review concluded that approximately 35% of trade by volume was "captive" in the short to medium term and that a further 30% was "dedicated". A breakdown of individual cargoes included in these categories suggests that any increase in inter-port competition that may have taken place since 1988 has not significantly affected market shares for these commodities.

A Commerce Commission Inquiry

- The above results provide a substantial *prima facie* case that market power has been both held and exercised by port companies, at the expense of users and ultimately of New Zealand's trading performance as a nation. The likely costs of regulation clearly lie far below the current level of excess profits.

- The case for proceeding to a Commerce Commission inquiry to verify the estimates presented in this report, to extend the analysis to all fourteen ports, and to recommend an appropriate regulatory response, is a strong one. The real question is not whether a Commission inquiry is warranted but how to secure high-quality regulatory discipline on port pricing.

CONTENTS

1 Introduction

1.1 Origins and purpose of this document

Radical restructuring of the New Zealand port sector followed the passage of the Port Companies Act 1988, which transferred commercial port operations out of the hands of the former Harbour Boards into the control of new corporate entities which, although still largely owned by local authorities, have adopted a commercial philosophy far removed from that which prevailed prior to 1988.

New Zealand's seaports constitute key infrastructural gateways between the domestic economy and the world economy. They are also important nodes in the country's domestic transport network, enabling bulky commodities such as cement and petroleum products to be distributed at the lowest possible cost from key production sites to dispersed centres of consumption, and providing an essential transport link between North and South Islands.

Seaports possess two features which potentially confer market power on their owners. First, suitable natural geographic sites for ports are scarce, which confers potentially large rental value on such sites. Secondly, port works tend to be capital intensive with corresponding economies of scale. Each of these features carries with it the potential for the port owner to "hold-up" users of the port. In both cases, market power is increased to the extent that users are captive to the particular port location or to particular facilities within the port site.

Historically, British common law included the principle that the owners of facilities such as ports which are "affected with a public interest" are entitled to charge no more than a fair and reasonable rate for access to the facility. In New Zealand this common-law doctrine was effectively repealed by the Commerce Act 1986, which made legal the capture of monopoly profits by any industry which has not been explicitly subjected to price regulation by an Order in Council under s.53 of the Act[1]. The effect of this change was to remove from the Courts the role of providing utility customers with a remedy against price-gouging and to place the responsibility for any regulation squarely on the executive branch of Government, in the person of the Minister of Commerce. To secure a remedy, therefore, port users must first convince the Minister to order an inquiry and then, if the Commerce Commission finds evidence of excess profits, must hope that the Minister is persuaded to introduce an appropriate form of price control to place a cap on port charges.

Over the past decade, various port users (both carriers and shippers) have claimed that the charges levied by corporatised ports in New Zealand since 1988 have exceeded a "fair and reasonable" level, and that some form of regulation is therefore warranted. In October 2001 the Ministers of Transport and Commerce announced that a consultants' study would be conducted to "give the Government an overview of the ports' market power issue and the

[1] This interpretation of the Commerce Act 1986 has been spelled out by the Privy Council in *Telecom v Clear* and by the Court of Appeal in *Transpower v Vector.*

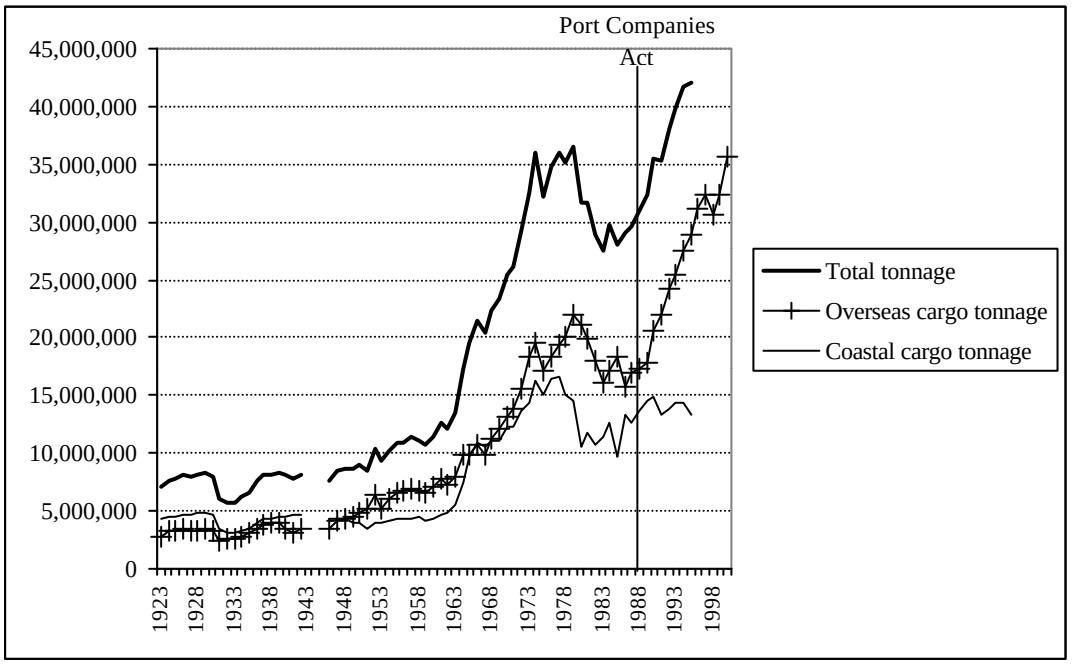
information necessary to make an informed decision about the merits of a Commerce Commission inquiry or other possible courses of action."[2]

KPMG Legal (KPMG) has asked Simon Terry Associates Ltd (STA) to gather and analyse key information on selected issues related to this inquiry. This report presents the results of our survey of the following issues:

- The extent to which port customers are captive to particular locations and/or facilities;
- The extent to which port companies have recovered excess profits relative to a fair and reasonable benchmark of what a successful but competitive business should have achieved over the period 1988-2001, using three case studies (Wellington, New Plymouth and Lyttelton);
- The potential implications for the New Zealand economy of excess profit-taking by port companies.

1.2 Some History

Reform of the New Zealand port sector came at the end of a decade of stagnating volumes, and just as a sharp upturn in the volume of cargo (comparable to the great boom of the 1960s) began.



The volume growth in overseas trade in the decade following corporatisation had not been foreseen by most analysts at the time the establishment units prepared financial plans for each port. Under the valuation methodology prescribed by the Ministry of Transport, the

[2] "Ports Market Power Study", press release by Hon Mark Gosche and Hon Paul Swain, 16 October 2001, MOT website.

businesses changed hands in 1988 at valuations which approximately matched the anticipated Net Present Value of each business.

Actual volume growth exceeded expectations and resulted in windfall revenues for many ports. This presented boards and management of port companies with the decision of how to allocate the gains from growth between lower charges to port customers, additional investment in port company facilities, and/or higher profits to owners. Most port companies have recorded financial performances substantially above the ratios anticipated at the time of establishment, while at the same time average revenues (reflective of overall average charges to port users) have fallen in real terms over the past decade.

Consequently the exercise of market power by port companies since their establishment during 1988-90 has been measured more in terms of their ability to resist reductions in real charges, rather than in the achievement of increased charges. The benchmark of a competitive rate of return on and of capital applies equally to the profitability of companies which price-gouge under conditions of static volume, and those which take windfall volume gains as extra profit rather than passing-on their average cost reductions. Under competitive conditions, market forces would hold profitability down to a competitive level, but these disciplines are to a considerable extent inoperative under conditions of natural monopoly.

2 Captive and Dedicated Cargo

The Ministry of Transport's Request For Proposals for the forthcoming report on the nature and extent of market power of port companies requests the consultant to consider the level of competition in the markets in which the ports operate. To the extent that competition between port companies exists, or has existed since the time of corporatisation, and insofar as there were previously-unexploited potential benefits for port users from transferring cargo from port to port, one could expect to see shifts in the shares of individual ports in cargo volume and value. An obvious way to test for this would be to examine the various cargoes loaded and unloaded at each of the ports with a view to identifying cargo gains and losses between ports. The existence of identifiable movements in volumes of cargo would be an indication that shippers are able to select among a range, albeit limited, of ports to process their cargo. If such shifts can be identified then they may indicate the existence of competitive behaviour (although they are not, of themselves, conclusive proof of competition, any more than absence of changes conclusively establishes absence of competitive pressure).

In this section, therefore, we undertake a preliminary shift-share analysis of port market shares.

2.1 The 1989 Ports Review

In 1989, shortly after corporatisation of the ports, the Government commissioned a review of regulatory issues in respect of port companies. The 1989 Ports Review[3] endeavoured to identify the extent of actual and potential competition within the ports industry. Historically there had been little or no competition between the harbour boards. The 1989 Ports Review noted that this was expected to change:

> *"It is clear, however, from discussions with port companies' management, that a more active competition stance is now being taken. This will be reflected in the future by investments in specialised facilities and* ***transfer of trade from one port to another.*** *In addition, active steps are being taken by port companies to reduce costs and therefore become more cost competitive."*[4]

The review also undertook an analysis which involved a programme of consultation with "*as many industry participants as possible*"[5] in order to assess the extent to which certain cargoes were captive to particular ports. They concluded that approximately 35% of trade by volume was captive in the short- to medium-term. In addition, a further 30% of volume was deemed to be dedicated by virtue of cargo being tied to facilities under the control of shippers.

The 1989 analysis reported on the ways in which ports already competed with each other and acknowledged that there were a number of factors which worked to reduce competition (as revealed in the captive and dedicated cargo assessments). However, they concluded

3 "*Ports of New Zealand Review of Regulatory Issues*", NZIER and Ernst & Young, December 1989

4 Ibid, page 4. Emphasis added.

5 Ibid, page2.

that: "*On balance, it is considered that the competitive elements outweigh these non-competitive factors.*"

While it is not possible to re-create the analysis of the 1989 Ports Review without also undertaking an extensive programme of interviews, the results of that review can be used to identify the cargoes that were considered, at that time, to be captive or dedicated. Those cargo types then provide the focus for the shift-share analysis using trade statistics.

2.2 Total Volume and Value Data

One indicator of the extent to which cargoes are footloose among ports is obtained by observing the shares held by individual ports in total cargo volumes over the period 1988-2001. Possibly the most striking feature of the overseas cargo data is the extreme stability of port shares during this period when aggregate volumes were rising very rapidly. (Comparison with airport and parcel-post volumes confirms no significant inter-modal competitive impact on the share of seaports in New Zealand's overseas trade.) Coastal cargo volumes are more difficult to track as Statistics New Zealand ceased to collect data on these after 1995, so that our analysis is restricted to the first seven years of reform. Detailed figures are in Appendix B.

Figure 1: Overseas Cargo Unloaded by Port

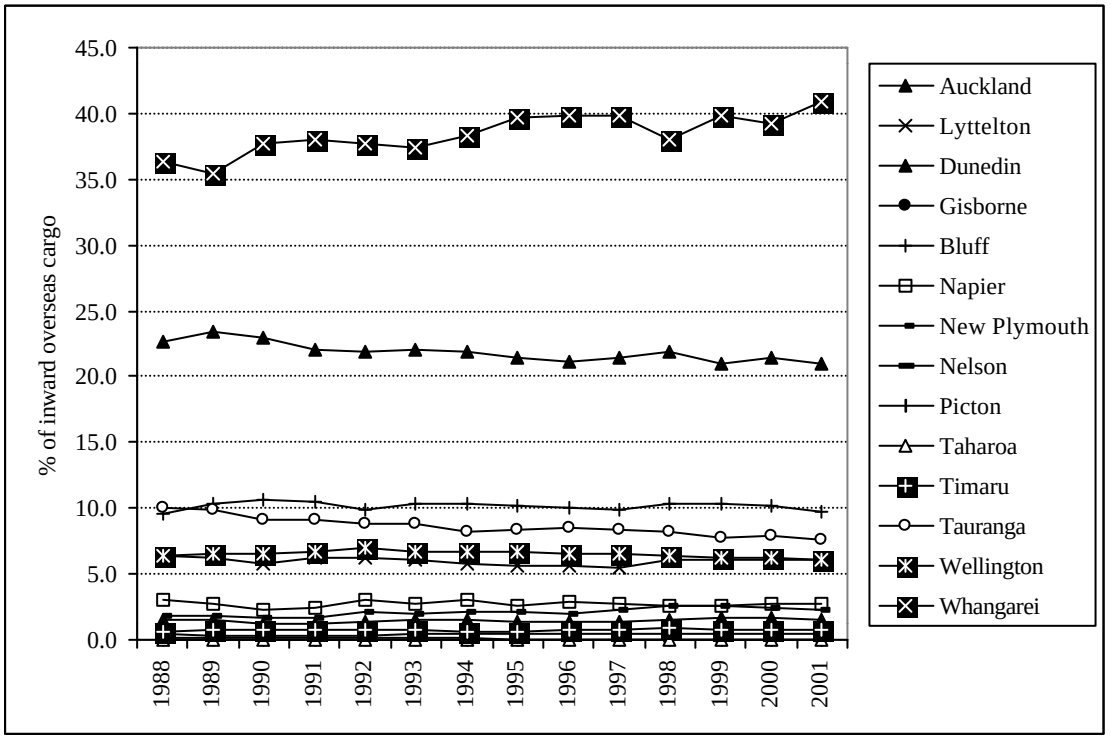
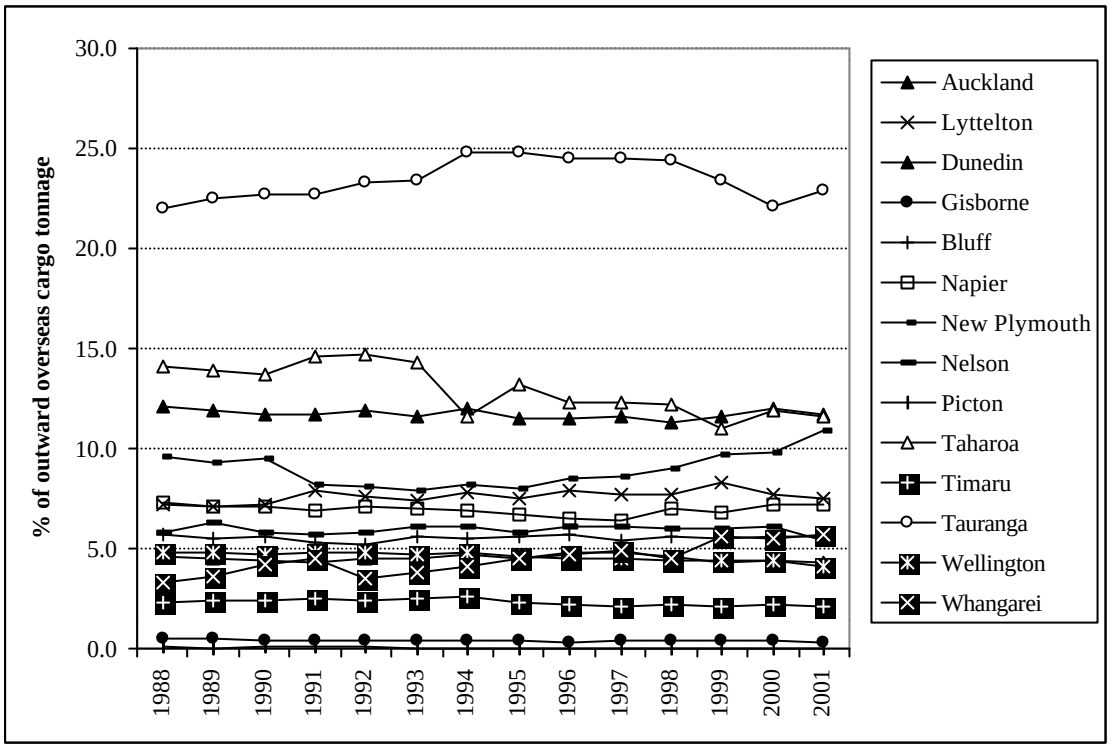


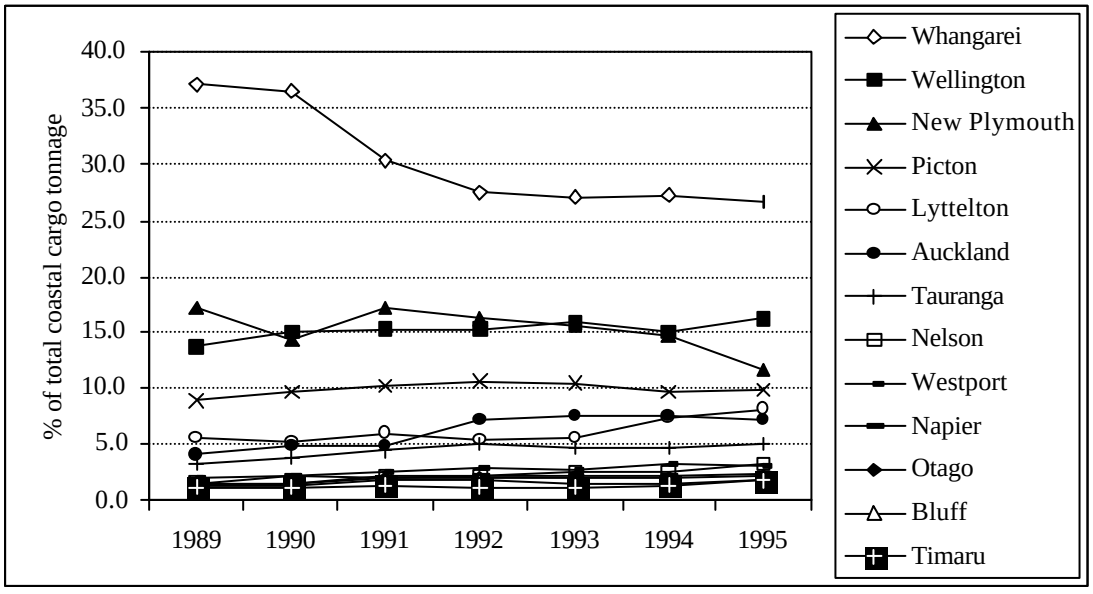
Figure 2: Overseas Cargo Loaded by Port



Insofar as there are any shifts evident in these data they would seem to relate more to volume swings in commodities such as petroleum products and iron sand than to competition among ports for shares.

Coastal volumes show somewhat more change 1989-1995, with oil product industry-wide changes again the most obvious driver accounting for declines at Whangarei and New Plymouth.

Figure 3: Coastal Cargo by Port



2.3 Detailed Cargo Movements 1989-2001

Using the cargoes identified in the 1989 Ports Review we examine the extent to which cargo types have moved among ports. If the predictions regarding competition among the ports are accurate then we could reasonably expect to see some evidence of cargo volumes for key commodities shifting between ports.

The Statistics Department has provided volumes and values of overseas cargo loaded and unloaded at New Zealand ports each year from 1989 though 2001. For each port the cargoes are broken down into 99 broad categories (refer Appendix C). We can use these classifications to identify cargoes that match or approximate the cargo types identified in the 1989 Ports Review.

The analysis does not include coastal data primarily because:

- that data was not in electronic form; and
- Statistics New Zealand has not recorded coastal cargo statistics since the year-ended June 1995.

However, if a fuller picture is required then it would be a relatively straightforward matter to enter the data that does exist (1989 through 1995) and analyse that in the same manner as for the overseas cargoes.

Appendix C displays the data for various cargo categories that were identified by the 1989 Ports Review as "dedicated" or "captive" (imports and/or exports as appropriate) and identifies movements in market share where they occur. The tables below summarise the movements that we have identified from the data. The first table deals with import data and the second with export data.

For each of the cargoes and ports considered there are two columns in the table: "1989 Port Review" which states whether the review considered that cargo to be dedicated or captive in 1989, and "Time Series" which indicates whether the data from Statistics New Zealand indicates that there has been movement between the ports concerned or whether the data suggests that the cargo is still captive/dedicated. Where "no change" is entered in the rightmost column this may not mean there has been no movement at all; the issue is whether any changes observed are sufficient to suggest a change in the market status of the relevant commodity.

Table 2-1: Overseas Unloaded Cargo (Imports)

Cargo	Port	1989 Port Review	Time Series
Petroleum	Whangarei	Dedicated	No change
Bauxite	Invercargill	Dedicated	No change
Inorganic chemicals	North Island	50% captive	No change
Salt and minerals	All	50% captive	Gisborne, Nelson & Picton – all tonnage lost New Plymouth >50% lost Wellington >50% market share lost

Table 2-2: Overseas Loaded Cargo (Exports)

Cargo	Port	1989 Port Review	Time Series
Fish	Nelson Auckland	Captive	Inconclusive No change
Wood	Nelson	Captive	Lost 8% market share – Inconclusive
Wood	All others	50% captive	No change
Aluminium	Invercargill	Dedicated	No change
Petroleum	New Plymouth	Captive	No change
Organic chemicals	New Plymouth	Captive	No change
Coal	Lyttelton	Captive	No change
Fruit and vegetables	Tauranga Napier Nelson	Captive	No change
Fruit and vegetables	All others	50% captive	No significant change

With very few exceptions there appears to have been no significant change in the respective shares of the cargoes that the 1989 Ports Review classified as either dedicated or captive. This is understandable for dedicated cargoes where there is a specialised facility or processing plant located close to the wharf, particularly where that facility is under the control of the shipper.

However, the classification of "captive" was described in the Review as not a literal use of the term and that "*Cargoes are often not captive to a port but they are unlikely to use a port other than the one closest to the point of production, at least in the short to medium term*"[6]. the Review noted that a major consideration was to establish the extent to which there was actual or potential competition both within and between ports. In that context the statement was made that "*approximately 35% of trade by volume is captive in the short to medium term*"[7]. Given that over eleven years have passed, it would be reasonable to expect that the effect of any competition would be exhibited in the data. The available information indicates that any increase that may have taken place in inter-port competition since 1988 has not significantly affected market shares for these commodities. Either competitive behaviour has been less vigorous than anticipated, or the economic benefits from relocation of trade flows have turned out to be very limited.

It may be noted that the results of our review of the data confirm a similar comparison of 1998 with 1988 presented at the 1998 Shipping Conference[8].

6 Ibid, page 38.
7 Ibid, page 4.
8 NZ Shipping Federation, "Ports and Port Services", paper for New Zealand Shipping Conference, section 6 pp.12-13.

3 Port Company Rates of Return

3.1 Establishing a Fair and Reasonable Benchmark

The issue of whether port companies have recovered excess profits can be addressed only once a benchmark standard has been set, relative to which actual financial performance can be evaluated. The overseas jurisdiction with most experience in this area is the United States, where the Supreme Court in 1944 adopted financial sustainability as the benchmark against which public utility rates should be set, and ruled that rates should provide no more than a commercial return on depreciated actual (original-cost) investment expenditure.

The classic statement of the principle comes from Bonbright:[9]

> The test of fair rates is their adequacy to yield a well-managed company a reasonable return on its actual capital invested. ... if the company, in prior years, has been permitted to amortise a portion of its gross capital investment, through annual charges to depreciation, it cannot fairly claim the right to continue earning a return on this investment, which it has already fully recouped. Any other rule would involve double counting against the ratepayers.

The *Hope* decision stated:[10]

> The investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock... By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital…. Rates which enable the company to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for the risks assumed certainly cannot be condemned as invalid, even though they might produce only a meagre return on the so-called 'fair value' [e.g. replacement-cost] rate base."

The US standard, in other words, is that the company should be able to operate as a successful business in the sense of securing a competitive return on and of the capital committed by the owners. This would appear to correspond to the intent of the expression "operate as a successful business" in the Port Companies Act 1988 and certainly appeared to be the interpretation placed on the Act by the Ministry of Transport and the various consultants involved in preparing establishment plans for the individual ports in 1988-1989.

To apply this principle, US ratemakers aim to set the rates for utility services at such a level that for every dollar committed by the owners to prudent investment in used and useful assets, a full return on and of capital is received. The return of capital should be secured from depreciation allowances set to match the actual life of the asset. The return on net capital should be equal to what the investor could otherwise have obtained from investing in a competitive enterprise of equivalent riskiness.

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9 Bonbright, J.C., *Valuation of Property*, Columbia University Press, New York, 1937, Vol.2 p.1139..

10 *Federal Power Commission v Hope Natural Gas Company*, 320 U.S. 591 (1945).

When this criterion of financial sustainability is met, the discounted-cash-flow value of the business going forward will be equal to the depreciated original cost incurred by the owners, as measured at the same point of time.[11] This was the explicit basis on which the port assets were valued at the time of their transfer to the new companies in 1988.[12]

3.2 Methodology

To evaluate retrospectively whether the standard regulatory criterion of financial sustainability ("operating as a successful business" at a competitive rate of return) has been achieved, the approach we have adopted is to calculate the Internal Rate of Return (IRR) actually achieved by the businesses and to compare this with the target rates of return set out in the establishment plans prepared for individual port companies, and with the competitive rate of return available over the same period on other projects of equivalent riskiness (i.e. the WACC). STA has previously used this methodology to measure excess rates of profit in electricity lines businesses[13], gas pipelines[14], and airports[15]. It corresponds closely to the methodology specified by the Ministry of Transport, and used by the consultants who prepared the valuations of the individual port companies with which they commenced trading.

We have calculated the realised rate of return for six ports: Lyttelton, Marlborough, Napier, Nelson, New Plymouth (Westgate) and Wellington (Centreport). For each port covered by our study we have assembled data on the 1989-2001 cashflow stream comprising

(i) an initial outlay equal to the value at which the assets were transferred from the old Harbour Boards to the new companies,
(ii) the free cashflow stream of each port business as shown in annual reports, exclusive of abnormal items not clearly related to the returns on the port operation, and
(iii) a terminal (exit) value, representing the value of the business as a going concern.

The initial outlay corresponds to the amount which a hypothetical investor would have had to spend to acquire each port at the time of corporatisation. For the purposes of the present analysis this has generally been equated with the value at which the fixed assets were transferred onto the new company books. (The other components making up the formal transfer price for each business as a going concern were current assets and liabilities, which generally cancelled each other out at the time of transfer.)

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11 See Carpenter, P. and Lapuerta, C, *Asset Valuation and Pricing of Monopoly Infrastructure Services: A Discussion Paper*, The Brattle Group, July 2000.

12 See Ministry of Transport memorandum 19/2/7/2 of 13 May 1988 "Port Company Act: Asset Valuation Principles"

13 Geoff Bertram and Simon Terry, *Lining Up the Charges: Electricity Line Charges and ODV*, Simon Terry Associates Ltd, July 2000; also Chapter 9 and Appendix 8.1 of Geoff Bertram, Ian Dempster, Stephen Gale and Simon Terry, *Hydro New Zealand: Providing for Progressive Pricing of Electricity*, Electricity Reform Coalition, March 1992.

14 Bertram, G., Dempster, I. and Terry, S., *Pipeline Profits* July 2001.

15 Geoff Bertram, Ian Dempster and Simon Terry, *Rates of Return at Auckland International Airport*, Simon Terry Associates Ltd July 2000

Free cashflow is computed by:

- taking operating cash surplus before payment of interest and tax, and with no allowance for depreciation;
- subtracting actual cash outlays on acquisition of new capital assets both to replace worn-out assets and to provide for growth of the business, net of cash received from disposal of fixed assets;
- subtracting cash tax paid to obtain the post-tax real cashflow to the owners of the business; and
- deflating this from nominal to real terms using an appropriate price index (we have used the PPI Inputs to convert all figures to 2000 June-quarter dollars).

The terminal value of the business in the last year of the analysis period has been estimated using two possible values. The most conservative approach is to use the net book value of fixed assets, which is a robust, audited figure from the published accounts, but which may significantly understate the value which would be placed on each port in an open-market sale process (at least in the cases of those ports which exhibit excess profits). Alternatively, "exit values" for each port business can be estimated from observations of the ratio of Enterprise Value to EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation) for those ports whose shares are traded on the sharemarket[16]. This provides a market-based estimate of the sale price which could be realised if each port's shares were sold off on the market at the terminal date of the analysis, at a market value reflecting observed operating cashflows of the business and the expectation that those cashflows would be sustained into the future.

Our model in effect imagines that a new owner purchases each port business for cash at the beginning of the 1988/89 year, achieves the actually-observed operating revenues and costs through to 2000/01, while committing additional cash to the business in line with actually observed investment expenditure, and sells out at the end of the 2000/01 year for the exit price determined as above.

The rate of return is then measured by the IRR of this stream of net realised cash profits, which can validly be compared with the appropriate WACC for the industry.

The analysis does not need to engage with the detailed financing of the capital structure of the business, which port managements will design with an eye to matters such as the tax shield provided by debt. The procedure of subtracting actual cash tax means that our after-tax IRR incorporates any tax-shield benefits actually secured by the port companies. The standard accounting concept of depreciation is not relevant in this analysis other than indirectly when the exit value for the business is based on net book value of fixed assets, i.e. after deducting accumulated depreciation. Taking account of the total amount of actual capital outlay in each period, together with the original purchase price of the business ensures that the annual flows capture all of the capital costs as and when they occur.[17]

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16 Auckland, Northland, Lyttelton, and Tauranga.

17 Discrepancies between notional depreciation charges (from the P&L account) and actual capital spending programmes mean that the net book value at period end will not match exactly with the cashflow components of our income stream. These discrepancies are not expected to be significant.

Comparing the resulting IRR with the relevant WACC is thus a comparison of like with like. Insofar as port companies have been able to secure additional returns from their financing activities over and above the profits secured on port operations, those gains are excluded from the net profit stream analysed.

In addition it is desirable to exclude, so far as possible, any profits and capital outlays associated with non-port activities in order to focus on the returns secured in the market for port services alone.

In certain respects this methodology corresponds to procedures used by Taylor in his 1999 review of port financial performance[18]. In deriving his measure of annual net profit, for example, Taylor proceeds as follows:

> To ensure comparability between companies and to eliminate distortions caused by differences in capital gearing, the … analysis is based on net profit before interest (but after tax). That is, the measure is a return to all providers of capital, whether debt or equity.

To derive his estimated profit rate, however, Taylor divides his profit estimate for each year by the average book value of net assets for the same year, excluding any revaluations, and then compares this ratio directly with various estimates of WACC.[19]

Our analysis below departs from Taylor in four respects:

- First, we work with deflated data to eliminate the issue of allowing for inflation.
- Second, we use actual cash capital expenditure in place of notional depreciation in calculating net cashflow.
- Third, we use actual cash tax paid by each company, in place of Taylor's "standard rate of 33c in the dollar irrespective of tax differences available to individual companies".[20]
- Finally, and most important, we evaluate the internal rate of return over the entire period analysed, in place of Taylor's procedure of computing an annual net profit rate for each year and then averaging these percentage rates.

This last procedure is central to Taylor's proposition that "the profitability of the total industry has varied between approximately 9% and 12% [nominal] over the entire period"[21] and hence that profitability has not been excessive. The fallacy in his year-by-year approach when applied to an industry with rapidly-growing revenues and high rates of new capital expenditure is that the long-run rate of return on funds committed is understated, since the denominator of the rate-of-return ratio (that is, the ratebase on which returns in ***future*** years are to be recovered) rises together with the numerator (representing the return on investment outlays in ***previous*** periods).

The correct way to measure the true rate of return secured on capital outlays is to assemble cashflows over a period of several years and to evaluate the internal rate of return over the

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18 Taylor, R.N., *Ports Study: Final Draft*, March 1999, p.4.
19 Taylor, R.N., *Ports Study: Final Draft*, March 1999, pp.4-5, paras 3.2-3.5.
20 Taylor, R.N., *Ports Study: Final Draft*, March 1999, p.4 footnote 5.
21 Taylor, R.N., *Ports Study: Final Draft*, March 1999, p.4 and Chart 4.

project period as a whole. Our use of this method overcomes the inherent tendency of Taylor's methodology to understate the actual profitability of an expanding business, due to his procedure of calculating a long-run profit rate from annual rates of return by simply averaging them over the period.[22]

3.3 Results

Six ports were selected for study: Lyttelton, Marlborough, Napier, Nelson, New Plymouth (Westgate) and Wellington (Centreport). These six present a reasonable cross-section of the nation's 14 large and smaller port undertakings. They accounted for 37% of all tonnage through sea ports in 1995 – the last year for which comprehensive statistics are available.

Detailed tables showing the cash stream and calculation of Internal Rate of Return for each port analysed are presented in Appendices C to H. All rates of return in this section are real and after tax. The cash streams are calculated from the audited cashflow statements and fixed-asset data contained in the published Annual Reports of the port companies. (The calculations have been replicated using the profit-and-loss accounts, with results which confirm the cashflow-based figures presented here.[23])

Our main results are for the port company operations taken as a whole, unavoidably including activities such as property investments which could not be disaggregated satisfactorily on the basis of the published cashflow statements. (In the cases of Napier and Nelson it has been possible to use the profit-and-loss accounts to provisionally separate port operations from property investments, but this exercise has made no significant difference to the rates of return obtained.)

Because we have estimated rates of return entirely on the basis of audited figures available from port companies' own accounts, our results are robust and can readily be replicated. The only information used in our analysis which is derived from other sources is the Enterprise Value/EBITDA ratio (used to estimate market values of port companies as going concerns) which has been estimated from observed market data for those port companies whose shares are traded. There again the data used is drawn from the public record and can readily be replicated by other analysts.

The key results for the full period from corporatisation to the end of the 2001 financial year are set out in the table below. With the exception of Centreport the typical range of real after-tax rates of return has been between 11% and 20% using estimated market value of the port businesses to terminate the data series, or between 11% and 15% using the book value of fixed assets as the terminal value. Centreport shows a much lower IRR of 8.2% using a market exit value, or 5.4% using book value.

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22 Taylor, R.N., *Ports Study: Final Draft*, March 1999, p.5 para 3.5 and Chart 2.

23 In principle the cashflow-derived results are more reflective of actual performance. The P&L comparative results are included in the relevant appendices

Port	Post-Tax Real Internal Rate of Return to 2001	
	Terminal value set at estimated Market Value	Terminal value set at book value of fixed assets
Lyttelton	19.7%	14.8%
Marlborough	16.6%	12.9%
Napier	17.4%	12.4%
Nelson	11.1%	10.7%
New Plymouth	17.1%	13.8%
Wellington	8.2%	5.4%

The table and charts below track the evolution over time of individual port companies' Internal Rates of Return as the exit date moves out in time from 1991 to 2001 (i.e. as the analysis period is lengthened).[24]

The time-path of the IRR provides some indication of the impact of any countervailing power that may have been exercised by port users over the period. For example, as the chart below shows, Westgate had an IRR of 17.1% real post-tax over the period 1990-2001, but the port's IRR had earlier peaked at 31.6% for exit in 1996, before the port became involved in serious litigation with users of its NKTT terminal (which accounts for around 90% of port revenues), culminating in payment of a rebate on wharfage of $4.25 million in 2000 according to the Annual Report.[25]

In contrast the time path of Lyttelton's IRR is suggestive of a company which has steadily pushed the boundaries of profitability in a deregulated environment without encountering effective countervailing power either from users or from Government. The IRR for the twelve-year period is almost 20% real post-tax using market value for the exit price, and 15% real post-tax using historic book value.

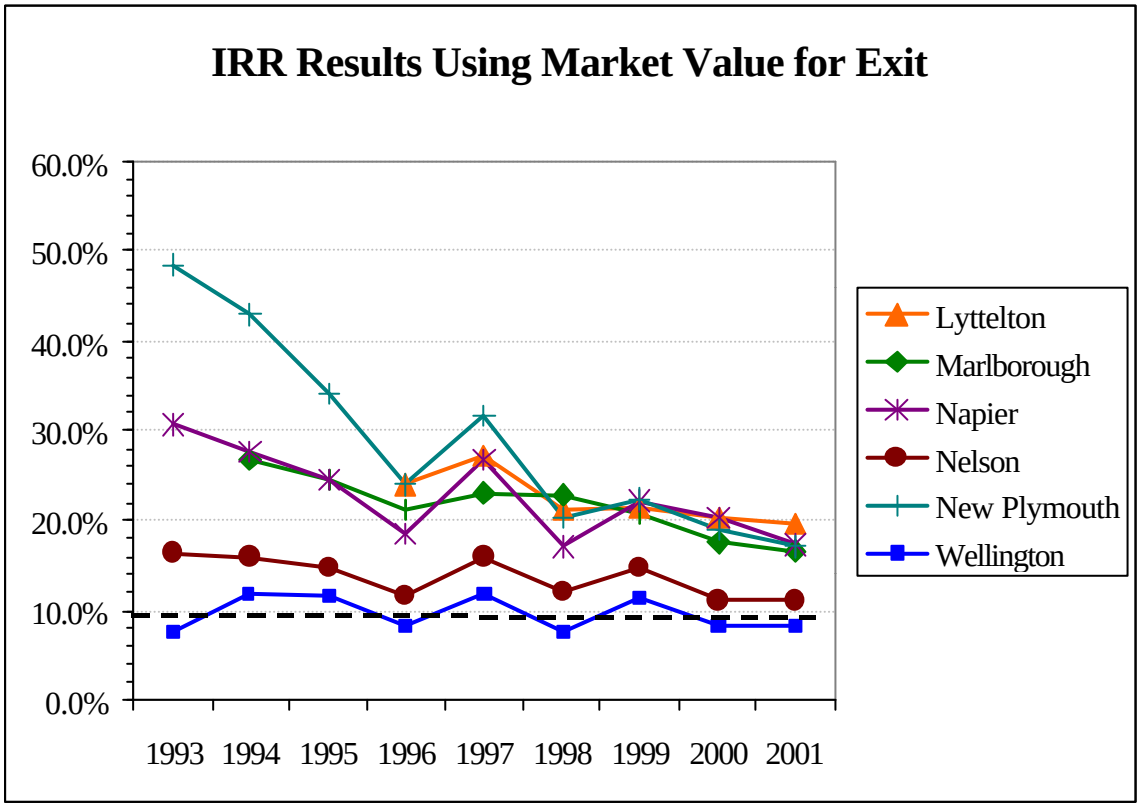
Centreport is a different category of result. For this company the entry price was relatively high ($91.6 million in June 2000 dollars to acquire a cashflow stream averaging $5.5 million post-tax, compared with Lyttelton's $47.4 million to acquire a cashflow stream averaging $8.7 million). The IRR of 8.2% (or 5.4% on historic book value) brings the port into line with a conservative competitive rate of return.

[24] Most of the ports analysed changed their financial reporting year from a September to a June basis in the early 1990s. This presents a minor problem for the calculation of IRRs, given that the standard formula applies to full-year data. The choice was between attempting to convert all data onto a June-year basis prior to calculating the IRR, or using the data as taken from annual reports without modification except that prior to the change in reporting conventions, September years would be treated as June years, and the inevitable nine-month period to June of the first post-transition year would appear as if it were a full year (that is, there will be one "annual" entry in the profit stream understated by a quarter's worth of income). We have opted for the second approach, which has the effect of ensuring that our IRRs are biased downward relative to the "true" rate of return, although the quantitative effect is unlikely to be great. The results below are therefore to be read as lower bounds.

[25] Westgate *Annual Report 2001* p.11.

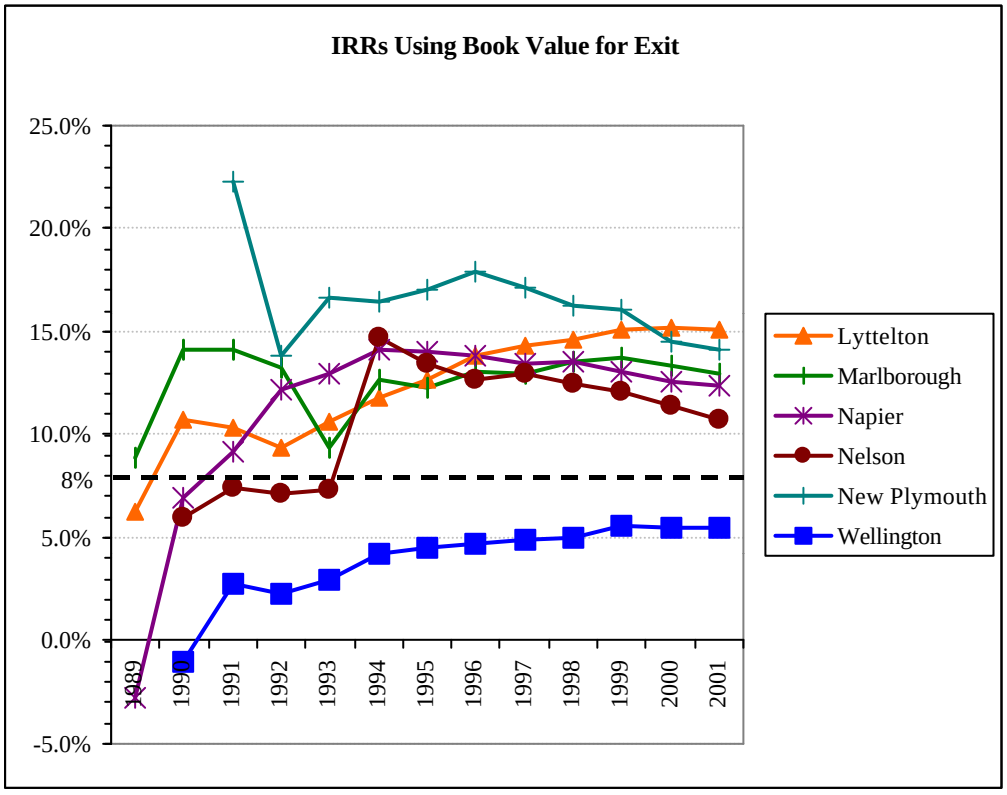
Evolution of IRR for Six Ports, Using Estimated Market Value for Exit

IRR for investor exiting at end of financial year	Lyttelton	Marlbor-ough	Napier	Nelson	New Plymouth	Welling-ton
1993		0.6%	30.7%	16.5%	48.4%	7.7%
1994		26.8%	27.7%	15.9%	42.9%	11.8%
1995		24.4%	24.5%	14.9%	34.1%	11.5%
1996	23.9%	21.3%	18.4%	11.6%	24.1%	8.4%
1997	27.2%	23.1%	26.8%	15.9%	31.6%	11.7%
1998	21.3%	22.9%	17.0%	12.0%	20.3%	7.6%
1999	21.4%	20.7%	22.2%	14.8%	22.3%	11.3%
2000	20.4%	17.5%	20.2%	11.2%	19.0%	8.4%
2001	19. 7%	16.6%	17.4%	11.1%	17.1%	8.2%



Evolution of IRR Using Book Value for Exit

IRR for investor exiting at end of financial year	Lyttelton	Marlbor-ough	Napier	Nelson	New Plymouth	Wellingt on
1989	6.0%	8.9%	-2.8%			
1990	10.4%	14.1%	6.9%	5.9%		-1.0%
1991	10.0%	14.1%	9.2%	7.4%	22.3%	2.8%
1992	9.1%	13.2%	12.2%	7.1%	13.8%	2.3%
1993	10.5%	9.3%	13.0%	7.3%	16.7%	2.9%
1994	11.6%	12.6%	14.1%	14.7%	16.4%	4.3%
1995	12.5%	12.3%	14.1%	13.5%	17.0%	4.5%
1996	13.6%	13.1%	13.8%	12.6%	17.9%	4.7%
1997	14.1%	13.0%	13.4%	13.0%	17.1%	4.9%
1998	14.4%	13.5%	13.5%	12.5%	16.3%	5.0%
1999	14.9%	13.8%	13.0%	12.1%	16.0%	5.6%
2000	15.0%	13.3%	12.6%	11.4%	14.5%	5.5%
2001	14.8%	12.9%	12.4%	10.7%	14.1%	5.4%



It is worth examining the origins of Centreport's high entry price. The original port company plan, prepared by the Wellington Harbour Board's Establishment Unit and forwarded to the Minister of Transport, recommended a valuation of $119 million (in dollars of the day). The valuation that was ultimately approved by the Minister was $72.5 million (i.e. the $91.6 million in June 2000 dollars). The lower figure was arrived at by:

increasing the discount rate used in the valuation model from 6% to 8%; eliminating a one-off real price increase of 6.35%; and reducing real deposit rates by 1%. However, the assumptions in the valuation model included volume growth assumptions that were described at the time as "optimistic".[26] That report recommended that a more appropriate valuation, with the same assumptions but using "reasonable" growth in volumes, would be $62.9 million. It would be a task beyond the scope of this report to attempt to recast the historical accounts for Centreport to incorporate a reduced opening valuation. However, if we were to assume that such a reduction simply reduced the value of land assets and, therefore, depreciation and other figures were unchanged, then the IRR for entry in 1988 and exit at book value in 2001 would increase from 5.4% to 7.2%.

Appendix K compares the projected volumes and revenues in some port establishment plans with actual outturns. The assumptions in the Establishment Plan for Centreport project a smooth growth in real revenue whereas the actual result has been for actual real revenues to be below the projections for all years but one. This result contrasts with Westgate and Lyttelton which both show actual revenues significantly above establishment plan projections in the later years.

3.4 Returns to Equity Holders

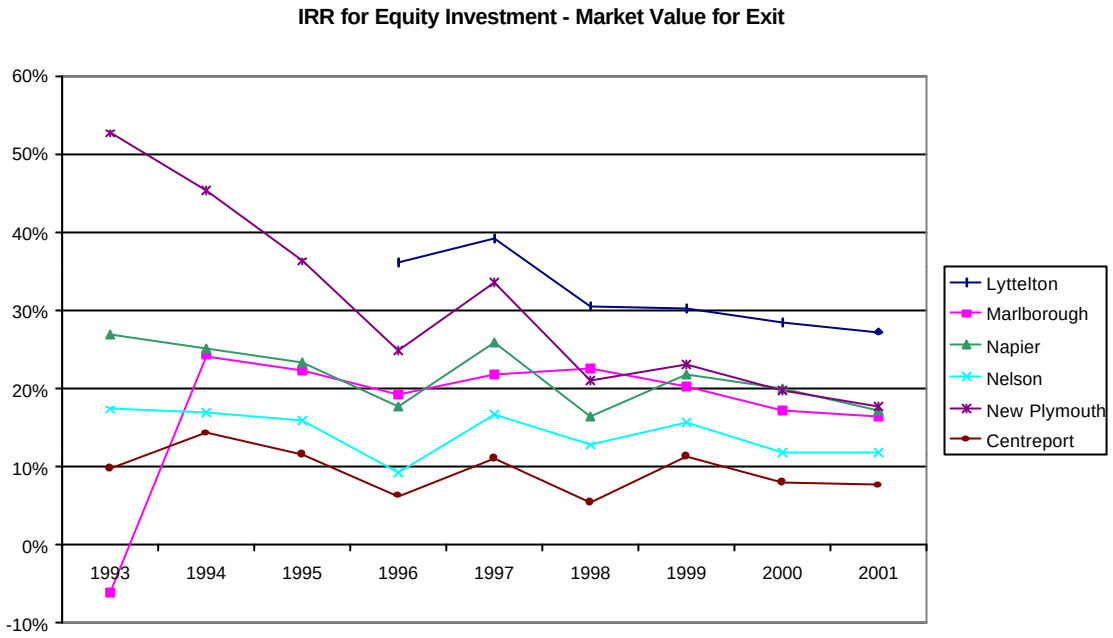
As a means of cross-checking the IRR calculations in the earlier sections a further analysis was undertaken that was aimed at assessing the returns that had accrued to the shareholders of the ports over the period since corporatisation. Conceptually, the methodology is very simple:

- Shares are purchased at the point of corporatisation, typically 1 October 1989;
- For each year, up to and including the year of exiting the year of exiting the investment, dividends are received;
- If, during the period under consideration, there are any increases or decreases in issued capital, these are paid or received as appropriate;
- At the end of the period the shares are sold using the EV/EBITDA multiple to derive a terminal value – naturally debt in the business is deducted from the Enterprise Value thus calculated and the equity holders receive the residual.

The internal rate of return is then calculated for the above stream of cashflows, for each port.

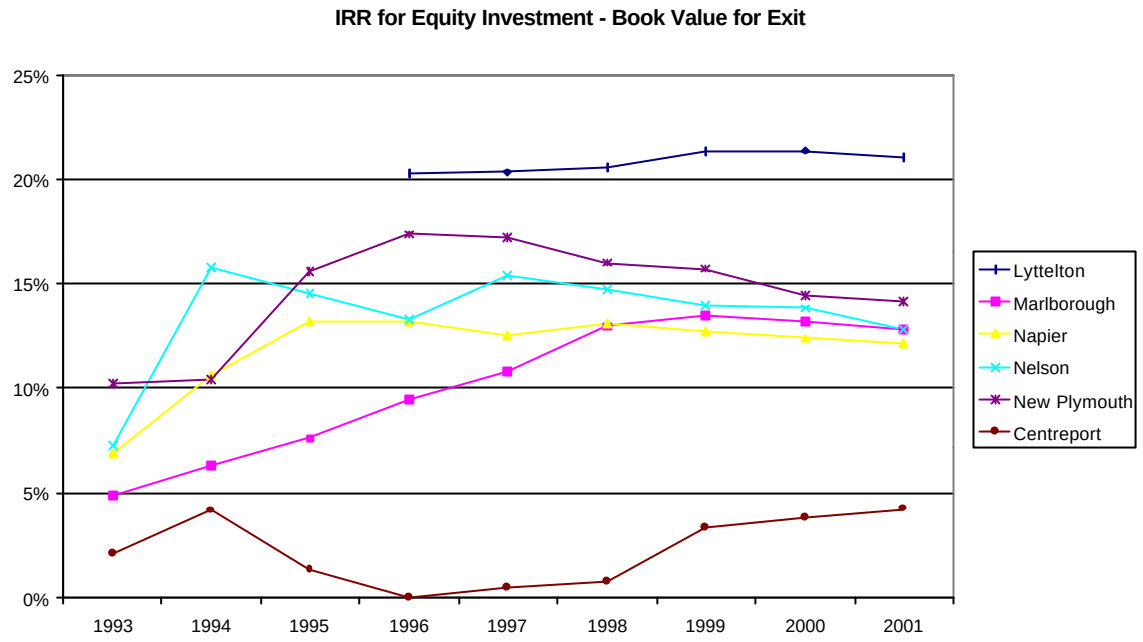
The full calculations are shown in Appendix J, however the results are summarised in the following charts.

[26] "Appraisal of the Valuation of the Assets of Port of Wellington Limited" KPMG report dated 23/9/88 prepared for the Ministry of Transport.



Because these are returns to the equity investors we would not expect them to closely follow the trajectory of the IRRs calculated for the entirety of the cashflows for each of the ports. The equity holders have a "residual" claim on the cashflows, i.e. they are entitled to whatever is left over after all other claims on the company have been met (operating costs, new investment, debt servicing and repayment, taxation, etc). In addition, the pattern of the IRRs over time will be quite dependent on each company's dividend policy. If directors or shareholders placed great importance on smooth dividend flow then the company may alter its debt:equity ratio throughout the period in order to smooth out any cashflow variations. Alternatively, there may be a choice to pay minimal or even no dividend in favour of reinvesting cash in the company. However, we would expect to see some similarities and, indeed, with the exception of Lyttelton, the equity-only IRRs appear to show a general convergence in the later periods that is reflective of the IRRs calculated from the full cashflows.

Regarding the magnitude of the equity-only IRRs, in general it would be expected that they would be higher than the whole cashflow IRRs in recognition of the risk/reward trade-off that equity investors seek. However, precisely because of the risks faced by equity investors, there will be instances where companies perform below expectations or overpay for acquisitions with the possible consequences of depressed equity returns.



Being returns to the equity holders, we can directly compare the IRRs in 2001 with the returns calculated later in section 4.1.1 for an investment in an NZSE40 portfolio. With the sole exception of Centreport, the 2001 IRR is a considerable margin above the 9.3% IRR calculated for the NZSE40 portfolio whether net book value of fixed assets or estimated market value is used as the exit value.

While this simple method of cross-checking the results from the full cashflow analysis is less informative, due to the effects of financing and dividend policy, the results do corroborate the duration and magnitude of the full cashflow-derived IRRs. Furthermore, these results indicate that the port company shareholders have been receiving these high returns.

4 Excess Returns

Section 3 sets out the IRRs achieved by six port companies under various assumptions regarding the value of the port businesses at 2001. To evaluate the significance of those results, we now compare these rates of return with relevant benchmarks.

4.1 Benchmark Comparisons

4.1.1 Sharemarket Returns

One way to construct a widely-applicable benchmark for the competitive return to capital over a period is to calculate the rate of return achieved by companies across the full range of investment opportunities listed on the local stock exchange. We do this by imagining a hypothetical investor purchasing a share package comprised of the NZSE40 stocks, and selling out at a later date having collected all declared dividends on those stocks over the period.

It is convenient to use a basket of the top forty stocks as a proxy for returns achieved by listed companies. The stocks comprising the basket are set in proportion to their weighting in the NZSE40 index. The real post-tax return on this investment, measured by the IRR, provides an indication of the rate of return actually available on a basket of investments that reflect market risk, i.e. companies with generally greater business risks than those confronting owners of infrastructure assets. Note that the returns observed on the stocks comprising the NZSE40 are *equity* returns.

The NZSE40 is a comparatively recent index with the series having commenced in June 1991. In obtaining the time series data from the New Zealand Stock Exchange we made enquiries as to whether comparable data had been synthesised for the period prior to the inception of the NZSE40. Unfortunately no such data is available from the NZSE as they have concerns about the reliability of the calculations underpinning earlier index data. Therefore, using NZSE-sourced data we are only able to calculate average share market returns for June years over the period 1991 to 2001.

The following table shows the returns available to an investor taking up an NZSE40 portfolio and disposing of the holding in June 2001. If that investor enters at the end of June 1991 (i.e. the end of the first June year following commencement of index data) and exits at the end of June 2001, the real post tax return is 9.3%. A potential shortcoming of this benchmark is that utility companies with natural-monopoly network activities have substantial weight both in the index and in the declared dividends to a representative portfolio. Concerns have been raised regarding the extent to which a range of network utility companies have been able to use the ODV valuation methodology to underpin pricing for services and the comparatively high returns that those organisations have achieved. For example, Auckland International Airport, NGC and Enerco (until 1999) are included in the NZSE40. AIAL was found by the Commerce Commission to be overcharging for airfield

services and NGC and Enerco's respective rates of return were found to be excessively high by STA.[27]

Table 4-1: New Zealand Sharemarket Returns 1991 Through 2001[28]

	Year ended										
	Jun-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Nominal terms											
Purchase Price	100.00										
Selling Price		105.97	117.12	139.16	141.47	146.08	174.36	136.91	148.88	143.67	145.37
Dividend Stream		5.84	7.78	7.92	9.14	12.19	11.56	9.20	9.69	10.07	7.54
Real Terms											
Purchase Price	115.34										
Selling Price		120.01	129.32	151.29	152.56	156.57	186.68	144.69	157.66	143.67	134.46
Dividend Stream		6.66	8.66	8.64	9.87	13.08	12.37	9.77	10.27	10.28	7.08
Cash Flow	-115.34	6.66	8.66	8.64	9.87	13.08	12.37	9.77	10.27	10.28	141.54
Internal Rate of Return		**9.3%**									

Stock market returns are equity returns and, therefore, cannot be directly compared with the overall return on asset figures calculated in section 3 above. To estimate a comparable figure requires derivation of a return on investment figure that accounts for not only the return to equity holders but also the return to debt-holders. Returning briefly to the IRRs derived in section 3.3, those returns calculate a completely ungeared return on the assets, i.e. interest charges are not deducted from the cash flows. Therefore, derivation of a comparable figure for our stockmarket portfolio requires estimation of the gross (i.e. pre-tax) cost of debt. To do this would require calculation of the weighted average for each of the companies in the index of their interest rate on term debt. The weighted average debt figures would then need to be combined with the (equity) IRR calculated above to give an overall return on assets. To combine these figures they would each be weighted by the leverage of the portfolio.

Estimating the weighted average, for each of the companies in the index, of debt/equity ratio and interest rate on term debt is beyond the scope of this study. Instead we have assumed parameters of 30:70 and 12% (9.8% real) respectively. Using those parameters yields an estimated observed market return on assets of 8.5% for 1991-2001. This is likely to be above the appropriate rate of return for port companies because the latter have lower risk than the NZSE 40 group of companies as a whole. However, the following table compares this investment opportunity to the IRRs calculated for each port company. Each port is well above this benchmark, except for Centreport. Four of the six are roughly double the sharemarket return when a market value is assumed for 2001.

27 Another major utility sector company with substantial weight in the share market index has been Telecom New Zealand Ltd, a network operator subject to information disclosure and "light-handed regulation".

28 Source: New Zealand Stock Exchange annual indices.

Port	Benchmark Return	Estimated Outturn	Difference
Lyttelton	8.5	14.8 – 19.7	6.3 - 11.2
Marlborough	8.5	12.9 - 16.6	4.4 - 8.1
Napier	8.5	12.4 - 17.4	3.9 – 8.9
Nelson	8.5	10.7 – 11.1	2.2 – 2.6
Westgate	8.5	14.1 – 17.1	5.6 – 8.6
Centreport	8.5	5.4 – 8.2	-4.1 – -0.3

4.1.2 Expectations at Vesting

In terms of expectations held at the time the port companies were established, the following real Internal Rates of Return were foreshadowed in port plans. Again, the actual performance has typically been far ahead of this benchmark.

Port	Rate of Return %	Period
Gisborne	9	1989-2004
Auckland	8.5	?1989-2004?
Northland	7.5	1989-2004
Otago	9.5	
Nelson	9.82	
Napier	9	n.a.
Centreport	6.0 cashflow IRR 6.21 equity IRR	1989-2003
Lyttelton	8.08 cashflow IRR 9.0% equity IRR	1989-1998

Sources: Auckland from "Port Company Plan for Ports of Auckland", July 1988, p11.
Northland from "The Plan for the Establishment of Northland Port Corporation (NZ) Ltd", July 1988, p.9.Gisborne from "Port Company Plan: Port Gisborne Ltd", July 1988, p.5.
Otago from "Report of the Otago Harbour Board and the Establishment Unit to the Minister of Transport Pursuant to Section 22(2) of the Port Companies Act 1988" p.23.
Napier from "Port Company Plan: Port of Napier Ltd", July 1988, p.8.
Centreport from Port of Wellington Ltd Financial Model 27 July 1988 Appendix to Section 5, "Value of Undertakings", spreadsheet.
Lyttelton from Arthur Young, "Port of Lyttelton – Revised Valuation", 12 October 1988, attached spreadsheet.
Nelson from "Port Nelson Ltd – Establishment Plan", Financial Model p.10.

4.1.3 Benchmark WACC

Perhaps the most common benchmark is a comparison to the weighted average cost of capital (WACC) that port companies could be expected to have held. This is the measure

used by the Commerce Commission to assess excess returns. As the Commission notes, "An actual return in excess of the appropriate target WACC over time would suggest that the entity was earning an excessive or monopoly return".[29]

At the time of corporatisation in 1988, the Ministry of Transport specified 8% as the real post-tax WACC to be used to value the port companies.[30] Correspondence from the Ministry to the various ports emphasized the Ministry's view that 8% real was the appropriate rate.

Also of note is that the Commerce Commission undertook a detailed study of the appropriate WACC for a natural monopoly service provider as part of its study into airfield pricing.[31] Significantly, the asset beta is taken as the midpoint of the average for regulated US utilities and the average for regulated UK utilities. That is, the figure is the "average of the averages" of a range of regulated entities. The nominal after-tax WACC derived by the Commission to assess the profitability of Auckland and Christchurch International Airports was 8-8.5%; the estimated WACC for Wellington Airport was 7.57-7.97%.[32] (Though the vesting dates for these airports were a little later than that for the port companies, it does not appear that the parameters driving the WACC calculation altered greatly during this time.)

In the table below we compare the realised IRRs for our six ports against an 8% benchmark rate.

Port	Benchmark Return	Estimated Outturn	Difference
Lyttelton	8.0	14.8 - 19.7	6.8 – 11.7
Marlborough	8.0	12.9 - 16.6	4.9 - 8.6
Napier	8.0	12.4 - 17.4	4.4 - 9.4
Nelson	8.0	10.7 – 11.1	2.7 – 3.1
Westgate	8.0	14.1 – 17.1	6.1 – 9.1
Centreport	8.0	5.4 – 8.2	-3.6 – 0.2

4.1.4 Would the Commerce Commission Recommend Regulation?

A key question is whether the above returns are sufficiently high to persuade the Commerce Commission to recommend regulation.

Price Control Study of Airfield Activities at Auckland, Wellington and Christchurch International Airports – Draft Report, Commerce Commission, July 2001, para 8.83, p 125. .

30 Ministry of Transport, "Port of Lyttelton" 1988 states that all ports had been valued using an 8% real discount factor, and the $53 million valuation reached in the accompanying spreadsheet used an 8.08% real IRR post-tax discount factor. Taylor, R.N., *Ports Study: Final Draft*, March 1999 p.5 paragraph 3.4 also reports general use of 8% at that time.

31 *Price Control Study of Airfield Activities at Auckland, Wellington and Christchurch International Airports – Draft Report*, Commerce Commission, July 2001.

32 Ibid. Chapter 8 Table 38.

An immediate precedent is the issue of airfield charges, which was referred to the Commission in 1997 and was the subject of a major draft report and conference in 2001. (The Commission's final report and recommendations are expected later this year.)

The Commission's approach to analysing excess returns at airfields closely matches the analytical approach we have taken in the present study, starting from establishment values, building warranted-revenue estimates on historic-cost book values of assets through the post-corporatisation period, and using these to calculate excess profits over the full period.

The Commission took the view that Auckland International Airport, with a nominal after-tax rate of return of 13.47% and Christchurch International Airport, with a rate of return of 11.65%, compared with nominal after-tax WACC of 8.0-8.8%[33], had "used their market power in airfield activities by raising prices above the competitive level in a sustained fashion."[34] The Commission therefore signalled its intention to recommend in its final report that "there is evidence that it is necessary or desirable for the prices of the airfield activities supplied by AIAL and CIAL to be controlled in accordance with the Commerce Act in the interests of the acquirers of airfield activities."[35]

Both the rates of return and the margins over WACC which we have found for four of the six port companies are higher than the levels which, in the Commission's view, provided clear justification for the imposition of price control.

Our rates of return are in real rather than nominal terms and so must be adjusted upwards to include inflation before comparing them with the Commission's airfields figures. Both the rates of return and the proportional excess above WACC which we have reported for port companies would be larger if expressed in nominal terms, which would strengthen the inference that the Commission, on the basis of its airfields precedent, would have no hesitation in recommending the imposition of price control on at least five of our six port companies, subject to the usual proviso that the expected costs of regulation should not exceed the anticipated benefits.

The results of the analysis reported here would seem to provide clear *prima facie* evidence of the sustained exercise of market power by port companies.

4.2 Estimated Excess Returns

In this section we estimate the sums of money involved in the wealth transfers from port customers to port owners, resulting from the recovery of excess profits. For each port we have calculated a path for nominal revenue (i.e. revenue in dollars of the day) that would have been consistent with recovery of an 8% real, after tax, internal rate of return, starting from establishment value and the actual initial-year revenue levels. By subtracting this "warranted revenue" estimate for each year from the actual revenue, we obtain a year-by-year series for excess recoveries across the six ports studied. Adding up these annual

33 Commerce Commission, *Price Control Study of Airfield Activities at Auckland, Wellington and Christchurch International Airports – Draft Report*, July 2001, pp.17 and 20.

34 Ibid p.21.

35 Ibid p.28.

excess recoveries we obtain a figure of between $200 million and $300 million of over-recoveries to date, making no adjustment for the dates at which transfers occurred. Results from the last few years of the modelling exercise suggest that excess revenues are currently running in the vicinity of $30 million per year.

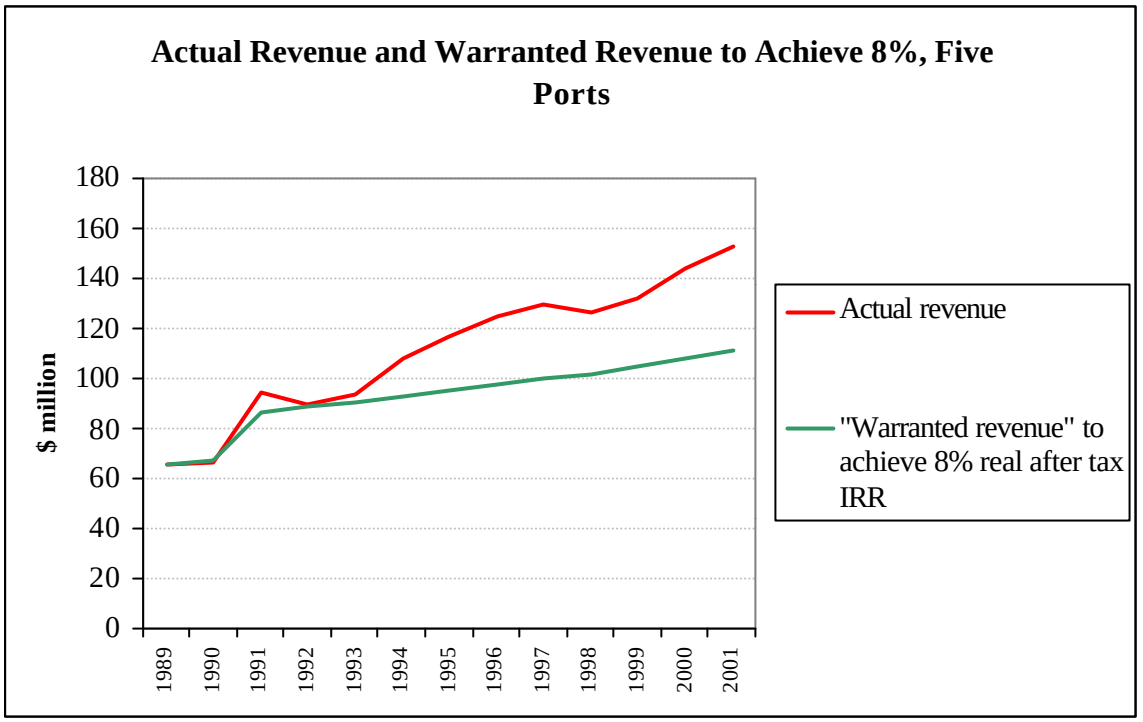
Applying an 8% nominal interest rate[36], we have compounded the year-by-year estimated excess revenues forward to 2001, to obtain a present-valued estimate of the total wealth transfer to date, which turns out to lie in the vicinity of $300 million.

An issue which had to be resolved in preparing these estimates was whether to include the results for Centrport. Because the model in book-value-exit mode calculates negative excess revenues for Centreport, its inclusion would mask the extent of over-recovery by other ports, while presenting difficulties in giving an economic interpretation of the results.

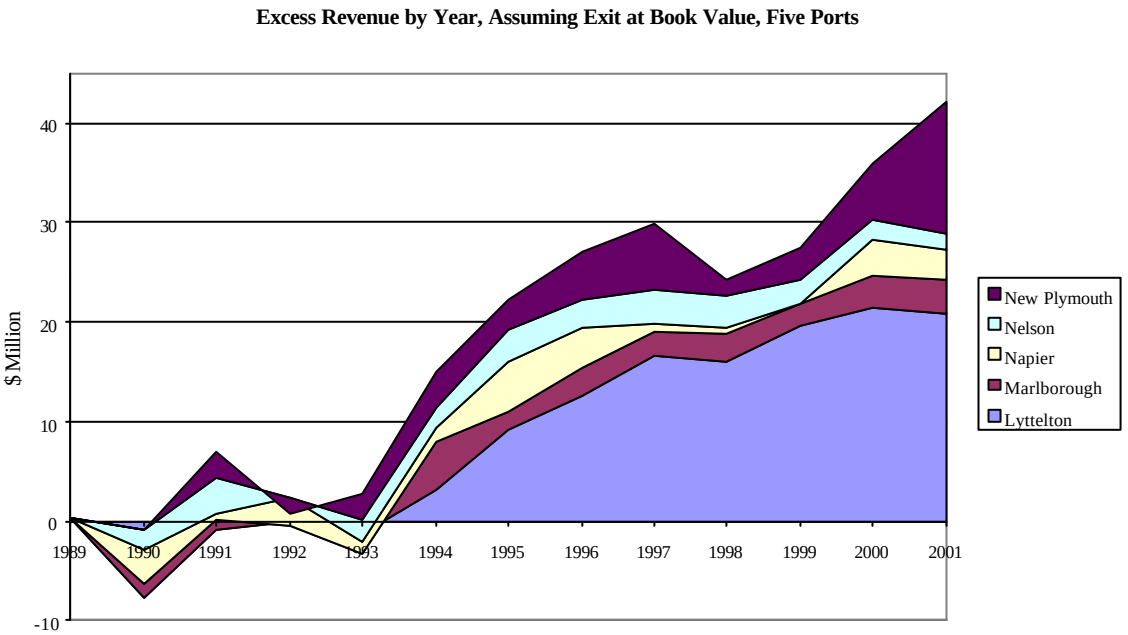
The results presented below are therefore those for the other five ports, with Centreport excluded. The exclusion reflects our judgement that here is no useful sense in which under-recovery at one port can be treated as an offset for over-recovery at others, in the absence of horizontal integration of the industry. Regulatory concern about excess profit-taking by one enterprise is not diluted by the existence of other less profitable firms, unless there is clear evidence of strong competitive disciplines to drive out monopoly rents. The stability of the long-run IRRs presented in the previous section gives no sign that Centreport has provided sufficient competition to drag other ports down to a competitive long-run return.

Taking the remaining five ports in our sample, the first of the two charts below shows their "warranted revenue" compared with actual revenues recovered. The second chart plots excess revenue as the difference between the two lines. The table sets out, for each port, the warranted and actual revenue streams and the estimate of excess recoveries. Figures for Centreport, calculated on the same basis, are shown separately in the table.

[36] We have confirmed, by experimenting with actual market bond yields over the twelve years, that a constant 8% nominal interest rate applied throughout the period closely matches the result that would have been obtained using contemporary market rates. The additional work involved in constructing a more sophisticated compounding factor was therefore not undertaken for the present report.



Note: the jump in both series in 1991 is due to the late entry of Westgate which commenced trading as a port company only in October 1990.



Actual Revenue, $ million

	Lyttelton	Marlbor-ough	Napier	Nelson	New Plymouth	Five ports total	Wellington
1989	36.2	6.4	15.5	7.4	0.0	65.5	25.1
1990	28.3	7.9	19.7	10.1	0.0	66.0	30.7
1991	35.1	7.6	17.7	12.4	21.0	93.8	32.7
1992	35.9	6.2	20.9	9.6	16.7	89.3	22.6
1993	34.7	4.8	20.0	12.8	21.1	93.3	24.8
1994	39.1	11.7	21.1	13.4	22.3	107.6	30.4
1995	45.0	8.8	25.9	15.7	21.4	116.8	31.9
1996	48.5	9.9	25.8	16.4	23.4	124.0	42.9
1997	52.6	9.6	23.6	18.3	25.1	129.2	41.5
1998	52.1	10.0	24.7	19.4	20.1	126.2	38.8
1999	55.5	9.7	25.2	20.1	21.7	132.1	40.2
2000	57.4	10.8	30.1	21.1	24.1	143.5	38.4
2001	56.8	11.0	31.0	22.4	31.7	152.9	37.8

Warranted Revenue, $ million

	Lyttelton	Marlbor-ough	Napier	Nelson	New Plymouth	Five ports total	Wellington
1989	35.9	6.4	15.5	7.4	0.0	65.3	25.1
1990	35.9	6.5	16.3	8.1	0.0	66.8	26.7
1991	35.9	6.6	17.1	8.8	18.5	86.9	28.4
1992	35.9	6.7	17.9	9.6	18.5	88.7	30.2
1993	35.9	6.8	18.8	10.5	18.5	90.5	32.1
1994	35.9	6.9	19.8	11.4	18.5	92.5	34.1
1995	35.9	7.0	20.8	12.4	18.5	94.6	36.3
1996	35.9	7.1	21.8	13.6	18.5	96.9	38.5
1997	35.9	7.2	22.9	14.8	18.5	99.3	41.0
1998	35.9	7.3	24.1	16.1	18.5	101.9	43.6
1999	35.9	7.4	25.3	17.6	18.5	104.6	46.3
2000	35.9	7.5	26.5	19.2	18.5	107.6	49.3
2001	35.9	7.6	27.9	20.9	18.5	110.7	52.4

Excess Revenue, $ million

	Lyttelton	Marlbor-ough	Napier	Nelson	New Plymouth	Five ports total	Wellington
1989	0.3	0.0	0.0	0.0	0.0	0.3	0.0
1990	-7.6	1.3	3.4	2.0	0.0	-0.8	4.0
1991	-0.8	1.0	0.6	3.6	2.6	6.9	4.3
1992	0.0	-0.5	2.9	0.0	-1.7	0.7	-7.5
1993	-1.3	-2.0	1.2	2.3	2.6	2.8	-7.3
1994	3.2	4.8	1.3	2.0	3.8	15.1	-3.7
1995	9.1	1.8	5.1	3.3	2.9	22.2	-4.4
1996	12.6	2.8	4.0	2.8	4.9	27.1	4.4
1997	16.7	2.4	0.7	3.5	6.6	29.9	0.5
1998	16.1	2.7	0.6	3.3	1.6	24.3	-4.7
1999	19.6	2.3	-0.1	2.5	3.2	27.5	-6.1
2000	21.5	3.2	3.5	2.0	5.7	35.9	-10.9
2001	20.9	3.3	3.1	1.5	13.3	42.2	-14.6
Totals	**110.4**	**23.1**	**26.4**	**28.9**	**45.4**	**234.2**	**-45.9**

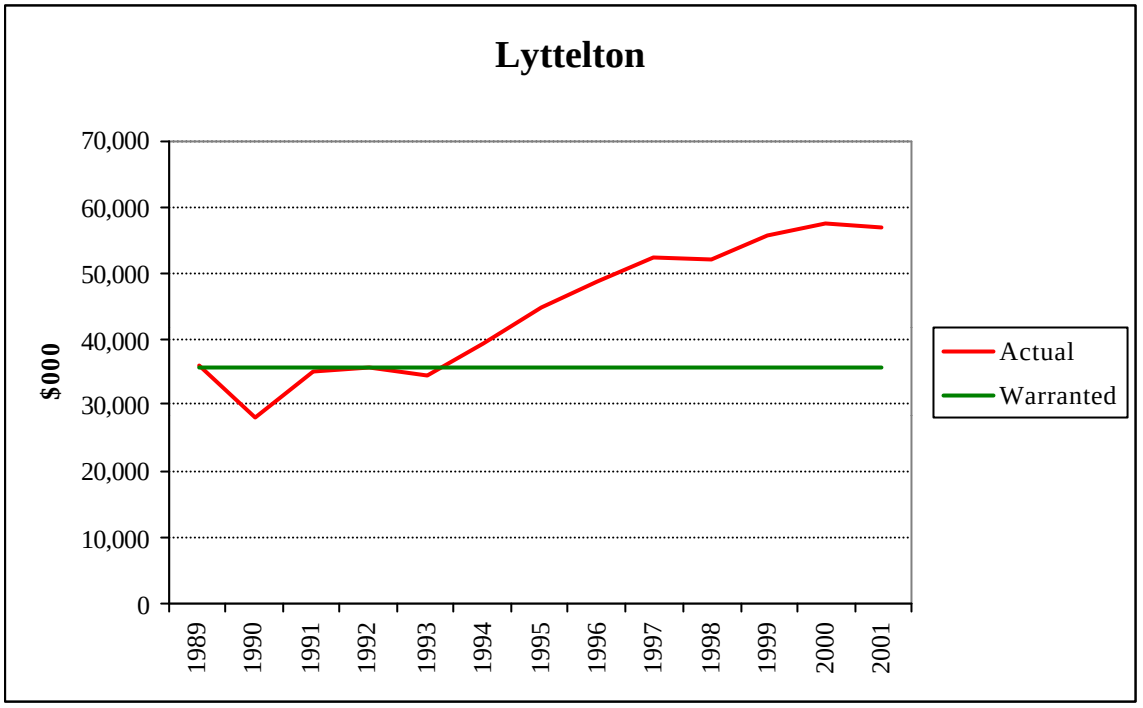
Over the last six years of the period analysed, 1996-2001, excess revenues across the five ports in the charts averaged $31 million per year, with a strongly rising trend in the last two years. The total over-recoveries shown in the table are $234 million. Note again that this represents the lower end of the possible range of estimates, because no account has been taken of the capital gains embodied in the goodwill component of estimated Market Value. Including in our model an allowance for the goodwill (premium above book value) which would be realised upon sale of the port businesses as going concerns would have the effect of reducing warranted revenue and hence increasing the estimate of excess revenue to date above the values shown in the table.

The table below shows the results from using an 8% nominal interest rate to compound all excess revenues to 2001. This present-value of past over-recoveries aggregates to $304 million for the five ports excluding Wellington. This figure again represents the lower end of a range of possible estimates.

Over-Recoveries Compounded to 2001 at 8% Nominal Interest Rate

	$ million
Lyttelton	127
Marlborough	31
Napier	42
Nelson	45
New Plymouth	59
Wellington	-55
All six	249
Excl Wellington	304

The charts below show the port-by-port model results.


Lyttelton
$000
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60,000
50,000
40,000
30,000
20,000
10,000
0
1989
1990
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1994
1995
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1997
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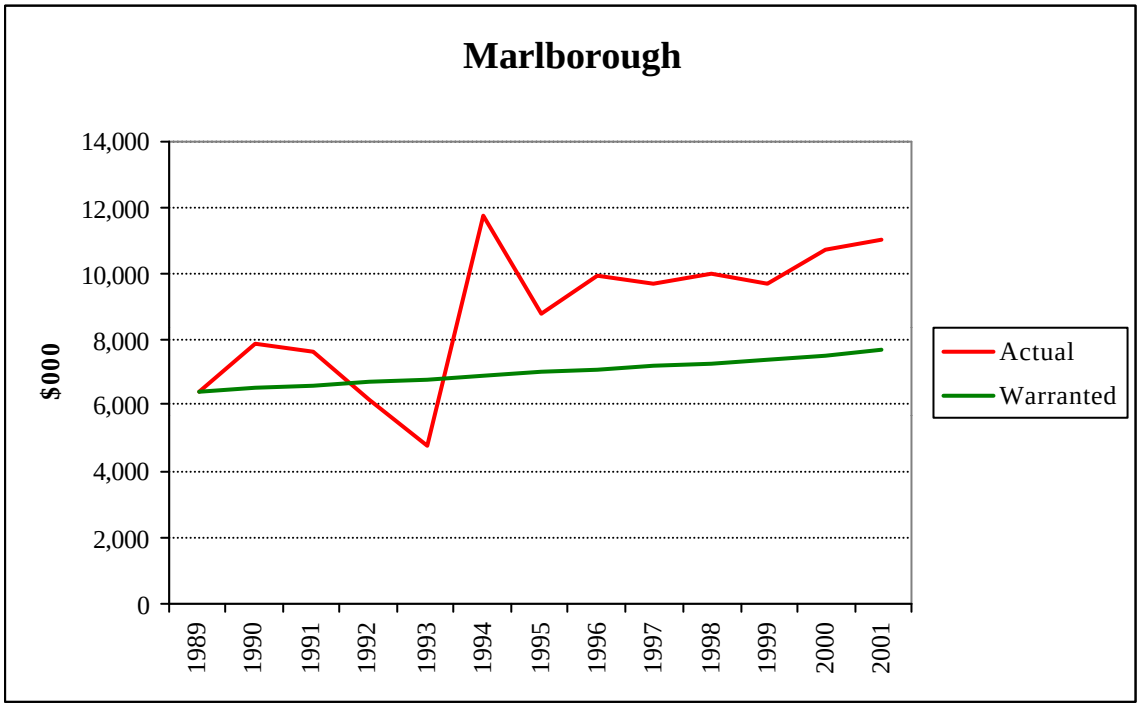
2000
2001
Actual
Warranted


Marlborough
$000
14,000
12,000
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4,000
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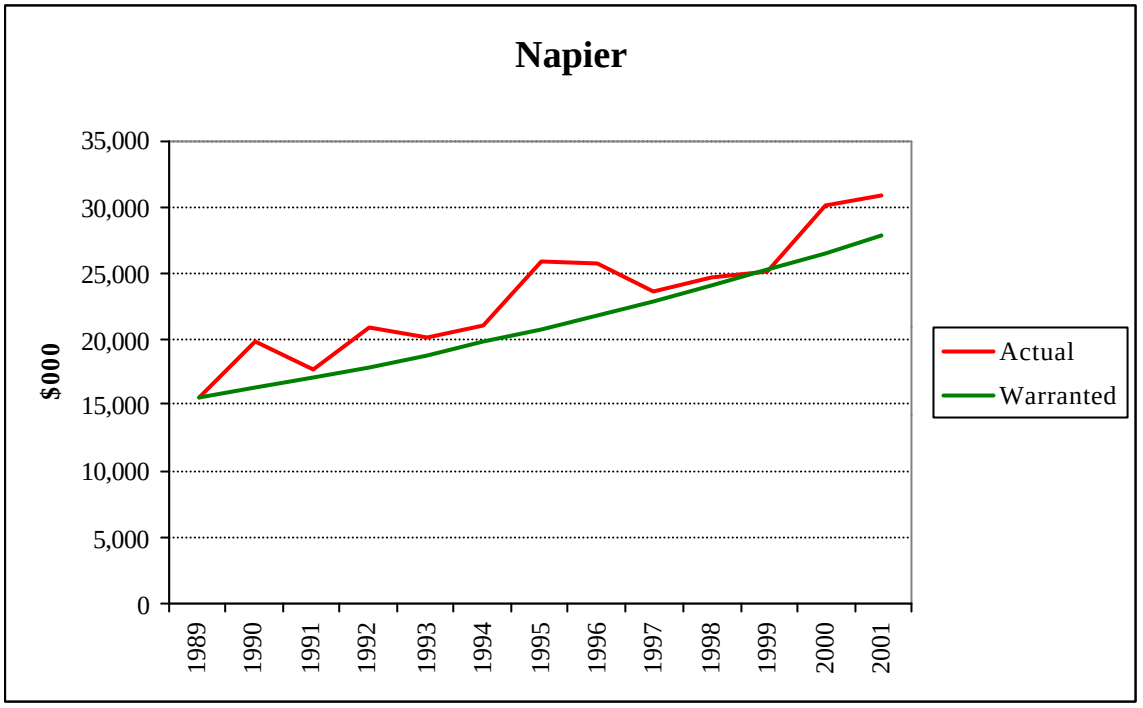
2001
Actual
Warranted


Napier
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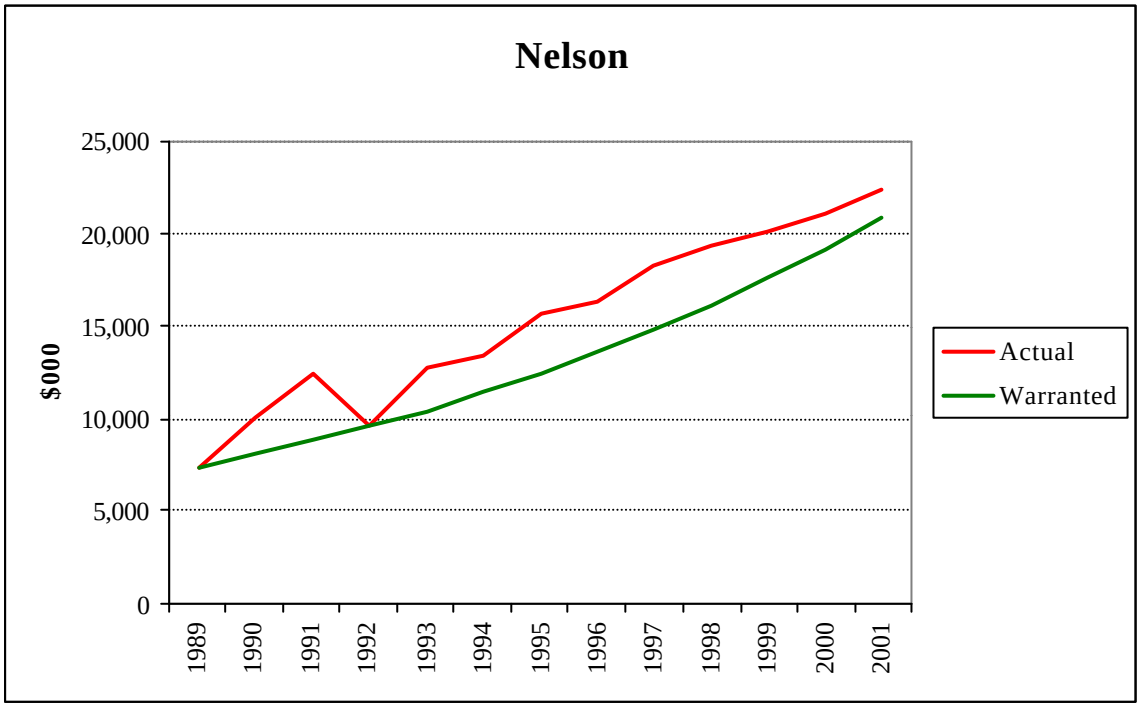
Actual
Warranted


Nelson
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20,000
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1989
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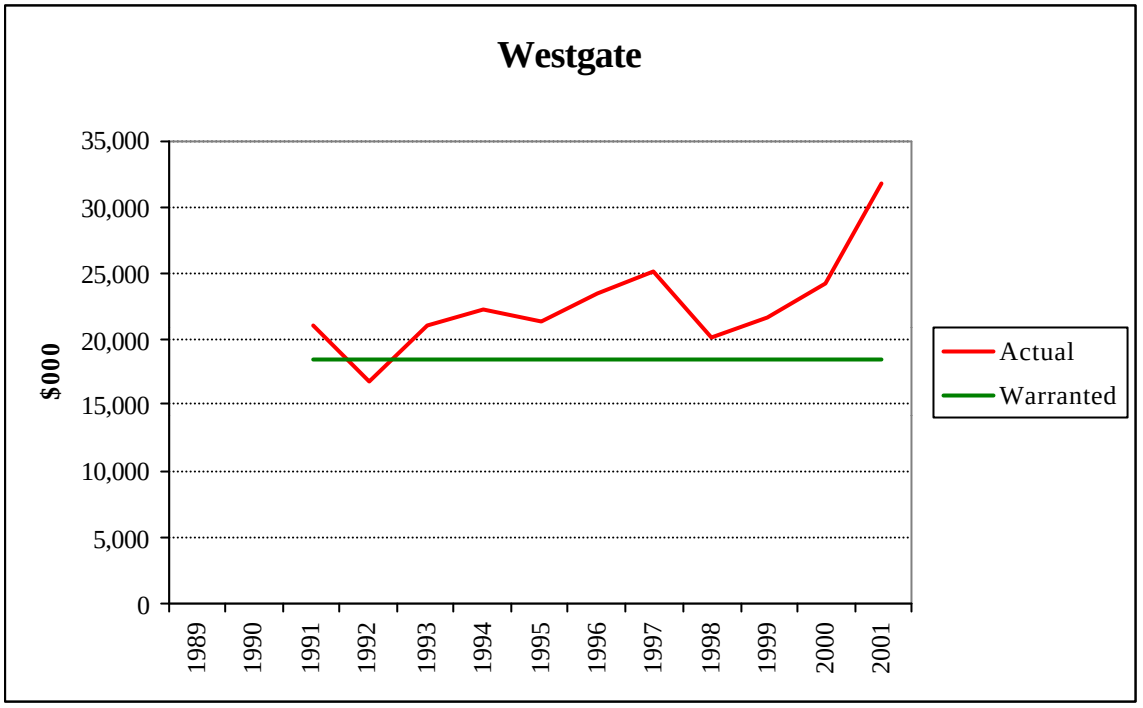
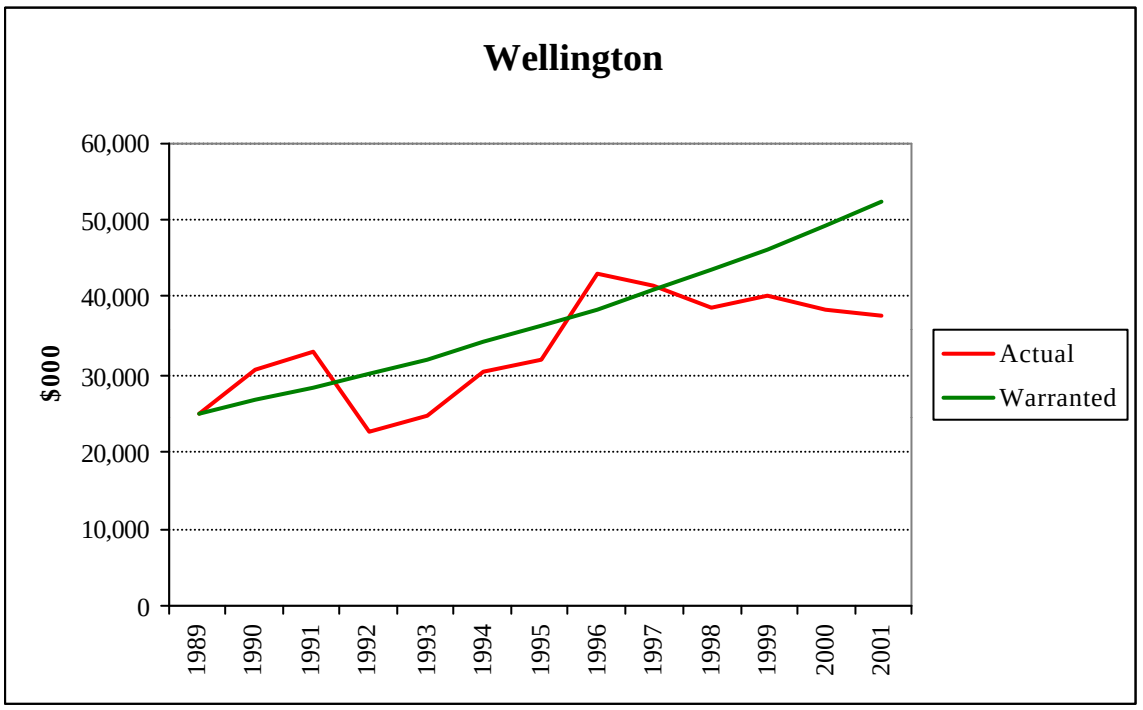
Actual
Warranted





4.3 The Present Value of Market Power

The present market value of port companies, which the present owners may choose to realise at any time by sales of their shares, rests heavily on the history of overcharging to date. In the event that one or more ports were to be sold by their present owners based on our estimates of Market Value, port users might well argue that the share of sale proceeds corresponding to present-valued past excess recoveries should fall to them rather than to the owners at the time of sale. Furthermore, insofar as the price paid for the assets by a new

owner would reflect expectations of future cashflows in excess of the warranted revenue which we have modelled, port users might also argue their right to be compensated up-front for such future excess revenues. The point here is the familiar one that any regulated activity, or activity subject to the type of scrutiny usually undertaken by regulators, should be expected to pay compensation to customer parties damaged by a mid-life change in asset valuation methodology (such as a switch from Establishment-Value-based historic cost to current Market Value).

Any new owner of a port company, having paid Market Value for it, would be likely to adjust the asset book values to reflect acquisition cost. This is effectively an asset revaluation, and would underpin subsequent justifications for continued high - and possibly even increased - charges. When such revaluations are undertaken unilaterally by the owners of an infrastructure monopoly, it is widely agreed that the amount of the revaluation should be rebated to customers, effectively purchasing from customers the future cashflow streams required to underpin the higher valuation. This same argument carries over to situations where revaluation is accomplished by sale rather than as a rewriting of the company books.

We have seen that the present value of over-recoveries to date by five ports (excluding Wellington) comes to roughly $300 million. The table below shows, for each of the ports analysed, our estimate of Market Value (based on EBITDA for the 2001 financial year) compared with book value, and the implied amount of potential windfall that would be realised by market sale of the businesses under present conditions. This potential windfall provides a guide to the order of magnitude of future anticipated over-recoveries relative to a competitive return on current book value.

Port	Book value 2001	Estimated Market Value	Windfall Gain	Lump sum rebate to reduce realised IRR to 8%
		$ million		
Lyttelton	65.2	200.9	135.7	230.0
Marlborough	35.2	63.9	28.8	51.7
Napier	49.9	127.9	78.1	114.1
Nelson	97.4	101.5	4.1	89.3
New Plymouth	61.4	101.8	40.4	85.3
Wellington	81.2	138.2	56.9	17.4
Total	390.33	734.30	343.97	587.76
Total excl Wellington	309.10	596.13	287.03	570.39

It can be seen that the potential windfall is just below $300 million for the five ports, or $344 million for the six ports including Wellington. Adding this to the $300 million of present-valued past over-recoveries indicates a total present-valued wealth transfer from users to owners at the five ports of roughly $600 million.

A cross-check on this estimate is provided by the right-hand column of the table above. Using our IRR model starting from establishment date of each port, we have asked: what

lump-sum payment (rebate) from the port to its customers as a group would suffice to bring the port's long-run IRR down to 8% real after tax, if all revenues and expenses to date are kept unchanged and the Market Value estimate is taken as a reasonable forward-looking view of expected profitability. The answer for the five ports is $570 million.

4.4 Impact of Port Charges on the Economy

To locate the seaport sector in the New Zealand economy as a whole we can begin with data from the 1996 inter-industry study. This shows total sales by the sector "sea, water and rail services" of $1,172 million[37], of which $562 million was to industry; $136 million of this was sales within the sector itself[38]. The largest item in this $136 million is likely to have been port charges to carriers.

Sales to	$m
Within-sector	136
Other industry	426
Exports	489
Household consumption	105
Total	1,172
Minus (indirect) taxes	16
Total net of taxes	1,156

Total value added in water transport (including shipping as well as ports) in 1996 was $877 million (1% of GDP) of which 55% went to labour and 30% to operating surplus.

	$ million	% of total
Compensation of employees	480	54.7
Operating surplus	263	30.0
Consumption of fixed capital	137	15.6
Other taxes on production	18	2.1
Subsidies	-22	-2.5
Value added	877	100.0

The area in which port costs were of most concern to the authors of the 1984 Onshore Cost Study, which was the trigger for port reform, was the incidence of port charges on the cost of New Zealand exports. The 1996 inter-industry tables show water transport costs around 2% of the total cost of inputs to export supply, taking account of both direct and indirect linkages ($965 million of a total $53,143 million).

In aggregate, therefore, port charges are a relatively small component of export costs and hence do not attain ready political visibility. Much the same applies to the incidence of port charges on import prices to consumers. It may be noted that in terms of total inputs to

[37] Statistics New Zealand, 126PubInd Table 1 row 162.

[38] Statistics New Zealand, 126PubInd Table 2 row 162 intersections with columns "Total Industry" and 81M.

export supply the industry sector "water and rail transport" at $575 million are only a quarter as important as the sector "air transport, services to transport and storage". (This may help to account for the decision to pass airfield charges to the Commerce Commission while seaport charges have been largely ignored by Government.)

To analyse the economy-wide impact of port charges fully would require use of a computable general-equilibrium model of the New Zealand economy, incorporating all inter-industry linkages, to trace the impacts on output, employment and international competitiveness. Such an analysis is beyond the scope of this report.

4.5 The Cost of Not Regulating

An important issue for policymakers faced with the decision whether to regulate an infrastructure monopoly is the balance of costs and benefits from regulation. In making such an assessment the matters to be weighed up include:

- Extent of damage to parties injured by the exercise of market power. (We estimate in this case $30 million per year for six ports – an estimate that needs to be expanded to take account of all fourteen port companies;
- Cost of developing and administering a regulatory regime. (The Commerce Commission, for example, has a budget of $4 million for targeted regulation of more than 35 electricity lines companies in the current financial year);
- Importance of ensuring that regulation is not implemented in a way which entails unnecessary compliance and deadweight costs, while still avoiding the opposite risk of failing to provide effective regulatory discipline.

In relation to the last of these points, the following comments from a recent leader in *The Economist* are apposite:

> *Rules for Regulators*
>
> As the regulators modernise, there are some simple lessons to draw on. First, though an unregulated market may sometimes be more efficient than a badly regulated one, a well-regulated one is superior to both…… Well-regulated markets are more efficient; that means they grow.
>
> *The Economist*, 3 March 2001 p.18

The original intent of port reform was to raise efficiency and reduce the cost of transporting goods, for the benefit of the New Zealand economy as a whole. To the extent that port companies are permitted to raise charges above competitive benchmark levels, this adversely affects the competitiveness of traded-goods producers in New Zealand. Hence the recovery of excess profits by ports is more than a simple wealth transfer from one group in society to another. It imparts a significant bias to the economy's relative-price structure

which will tend to divert investment resources from traded goods to sheltered (non-traded) activities.

The potential for economically inefficient outcomes is compounded when port charges are pitched at levels sufficient to trigger bypass of existing facilities by users. There is some evidence of excess capacity in New Zealand's existing port facilities, and bypass investment involves the diversion of scarce resources to duplicating assets which are already in place.

The evidence emerging from our study of port profitability provides a substantial *prima facie* case that market power has been both held and exercised by port companies, at the expense of users and ultimately of New Zealand's trading performance as a nation. The likely costs of regulation clearly lie far below the current level of excess profits. The case for proceeding to a Commerce Commission inquiry to verify the estimates presented in this report, to extend the analysis to all fourteen ports, and to recommend an appropriate regulatory response, is a strong one.

Indeed, a major conclusion of this study is that the real question is not whether a Commerce Commission inquiry is warranted but how to secure high-quality regulatory discipline on port pricing.

Appendix A. Total Cargo Tonnages by Port

Overseas Cargo: Exports

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Airports	57,437	58,303	59,118	59,936	60,974	62,304	62,932	63,684	64,336	65,618	67,971	68,903	68,648	69,025
Total Parcel Post	29	33	33	19	18	18	18	18	19	20	20	19	18	13
Auckland (sea)	1,255,038	1,254,207	1,246,356	1,257,001	1,274,343	1,279,047	1,278,273	1,271,083	1,251,997	1,263,060	1,238,898	1,289,994	1,330,649	1,343,363
Lyttelton (sea)	750,040	750,877	768,200	853,316	811,939	816,604	832,644	833,044	857,636	843,383	838,741	923,941	853,312	858,544
Port Chalmers (sea)	475,933	473,539	469,052	461,724	483,537	497,320	499,568	497,816	523,784	528,917	505,708	480,378	491,190	490,368
Gisborne (sea)	50,495	47,604	41,365	48,129	47,451	46,589	43,273	43,268	37,130	42,129	48,261	44,786	44,786	38,424
Bluff (sea)	595,394	580,812	596,430	566,841	559,625	615,439	588,361	619,661	621,733	590,156	607,341	607,387	623,595	649,661
Napier (sea)	756,429	751,369	752,188	741,481	764,105	771,996	737,704	738,861	707,863	702,461	760,739	755,928	802,659	829,520
New Plymouth (sea)	998,464	977,102	1,009,966	886,278	870,485	871,807	872,800	887,479	930,769	936,927	979,411	1,071,969	1,095,603	1,259,032
Nelson (sea)	603,825	664,505	617,041	608,817	619,469	676,242	651,325	644,189	664,447	660,849	659,027	666,430	677,517	620,674
Picton (sea)	5,938	4,631	5,587	7,081	6,069	4,400	4,716	4,736	3,658	4,597	4,597	3,740	3,740	3,740
Taharoa (sea)	1,465,265	1,465,265	1,460,810	1,572,409	1,570,619	1,570,619	1,236,254	1,458,866	1,341,920	1,339,528	1,339,528	1,219,318	1,329,368	1,329,368
Timaru (sea)	242,906	247,881	254,994	265,051	255,850	276,904	274,715	259,860	239,927	231,346	236,867	237,360	239,754	241,687
Tauranga (sea)	2,282,877	2,365,510	2,407,811	2,442,351	2,498,179	2,578,497	2,647,564	2,743,160	2,672,111	2,678,649	2,668,145	2,593,606	2,463,347	2,629,564
Wellington (sea)	501,816	505,246	496,327	512,407	518,724	515,765	511,244	506,480	492,452	492,509	483,749	490,206	484,455	476,639
Whangarei (sea)	345,095	373,791	443,740	487,275	371,472	417,721	443,408	497,084	509,651	532,441	494,013	619,104	615,979	661,125
Total Seaports	10,331,940	10,464,044	10,570,923	10,710,369	10,652,075	10,939,156	10,623,201	11,006,922	10,856,412	10,848,286	10,869,290	11,008,414	11,060,221	11,435,973
Total All Cargo	10,389,406	10,522,379	10,630,073	10,770,324	10,713,068	11,001,478	10,686,151	11,070,624	10,920,766	10,913,922	10,937,279	11,077,334	11,128,886	11,505,010

Overseas Cargo: Imports

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Airports	58,820	58,192	58,249	59,145	59,011	59,259	60,147	59,779	60,104	61,351	63,959	65,872	66,635	66,919
Total Parcel Post	483	463	470	468	437	439	316	278	285	280	281	291	294	290
Auckland (sea)	1,581,336	1,544,869	1,564,328	1,519,365	1,519,570	1,560,399	1,568,182	1,594,438	1,594,145	1,661,663	1,661,149	1,694,057	1,753,707	1,807,549
Lyttelton (sea)	442,672	412,173	396,753	431,162	434,252	432,700	415,368	413,655	428,020	420,312	464,661	494,159	498,358	531,153
Port Chalmers (sea)	105,599	97,294	83,927	88,341	96,667	109,690	106,440	100,298	100,787	110,189	118,908	132,533	130,760	126,636
Gisborne (sea)	7,986	7,986	8,424	8,812	8,812	8,812	8,537	2,052	2,291	2,135	2,158	2,171	2,171	2,171
Bluff (sea)	670,919	684,436	723,156	719,950	688,567	734,819	733,725	759,046	760,723	769,570	783,434	839,653	828,761	844,846
Napier (sea)	216,058	181,122	158,268	163,184	211,722	193,237	212,031	194,016	214,668	217,202	197,260	208,150	218,053	231,291
New Plymouth (sea)	128,024	118,612	114,137	118,013	143,034	144,834	153,442	161,617	145,135	177,572	192,018	203,285	201,574	202,442
Nelson (sea)	28,999	19,601	17,778	23,535	23,433	32,161	33,766	33,711	33,698	37,256	37,177	37,935	41,978	40,558
Picton (sea)	4,500	4,500	0	0	0	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925
Taharoa (sea)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Timaru (sea)	46,033	47,107	49,189	50,510	51,920	48,907	47,476	50,358	51,628	62,644	64,059	64,162	64,674	67,350
Tauranga (sea)	696,986	651,794	622,558	625,395	614,142	620,976	586,726	622,149	636,589	651,261	622,349	628,789	651,452	657,896
Wellington (sea)	443,225	432,551	444,992	458,305	484,413	476,242	473,613	495,678	495,401	502,811	486,781	503,499	504,581	522,862
Whangarei (sea)	2,530,646	2,342,248	2,565,236	2,621,688	2,622,663	2,647,783	2,735,047	2,949,937	3,003,471	3,087,698	2,886,460	3,221,107	3,207,024	3,528,752
Total Seaports	6,903,061	6,544,359	6,748,794	6,828,297	6,899,231	7,014,519	7,078,312	7,380,915	7,470,514	7,704,269	7,520,341	8,033,427	8,107,020	8,567,431
Total All Cargo	6,962,361	6,603,011	6,807,510	6,887,908	6,958,678	7,074,217	7,138,775	7,440,972	7,530,904	7,765,902	7,584,583	8,099,591	8,173,950	8,634,641

Coastal Cargo Total Tonnage

	1980	1984	1989	1990	1991	1992	1993	1994	1995
Whangarei	3,333,682	3,574,797	5,353,548	5,434,552	4,045,988	3,804,732	3,890,823	3,887,807	3,529,774
Auckland	1,171,089	1,325,081	596,963	716,837	639,124	1,000,558	1,096,258	1,073,260	949,243
Tauranga	848,342	542,292	484,239	569,319	590,755	688,242	674,493	651,611	673,193
Taharoa		0	0	0	0		0	0	0
Gisborne	25,160	20,714	61,415	73,726	69,137	155,785	152,507	158,399	53,526
New Plymouth	560,598	1,318,084	2,481,254	2,127,136	2,299,665	2,231,415	2,262,368	2,100,151	1,532,254
Napier	302,149	258,283	220,282	321,703	266,908	283,980	314,278	294,915	305,062
Wanganui	21,915	12,603	0	869	0	0	0	21,339	34,323
Waverley	0	0	0		0	0	0	0	0
Wellington	1,580,890	1,947,638	1,991,713	2,246,434	2,026,854	2,103,052	2,268,364	2,149,449	2,165,986
Other North Island	119,237	68,495							
Tarakohe	209,180	132,115	67,199				0	0	0
Nelson	188,220	266,621	216,050	243,778	277,781	293,655	360,528	369,119	445,102
Picton	996,527	1,359,869	1,283,806	1,452,282	1,361,970	1,478,336	1,500,042	1,374,988	1,304,889
Westport	127,728	304,060	282,087	325,279	324,155	387,648	374,878	459,918	421,208
Greymouth	0		28,376	3,940	0	0	0	0	42,475
Lyttelton	432,927	813,844	798,165	763,140	788,923	742,466	800,183	1,038,414	1,072,622
Timaru	179,487	131,084	163,896	176,014	168,972	158,410	169,302	204,533	221,532
Otago	177,665	282,565	229,033	233,993	255,961	270,509	282,813	281,003	282,781
Bluff	240,285	199,220	201,489	204,554	226,542	227,167	215,093	223,822	225,113
Chatham Islands	5,597	7,709	6,108	4,111	1,686	4,099	6,052	6,246	7,463
Other SI	4,829	4,677							
Total NZ	10,525,507	12,569,751	14,465,623	14,896,666	13,344,321	13,827,052	14,367,979	14,294,972	13,265,543
NI	7,963,062	9,067,987	11,189,414	11,490,576	9,938,431	10,267,764	10,659,091	10,336,931	9,243,361
SI	2,562,445	3,501,764	3,276,209	3,407,091	3,405,990	3,562,290	3,708,891	3,958,043	4,023,185

Appendix B. Captive and Dedicated Customers

B.1 Background

The December 1989 NZIER/Ernst & Young report "*Ports of New Zealand Review of Regulatory Issues*" (the "1989 Ports Review") covered a broad range of issues including an analysis of the extent to which cargo was flexible or captured by various ports. The field work undertaken in preparing the 1989 Ports Review involved a programme of consultation "*to obtain the views of as many industry participants as possible*".[39]

The 1989 Ports Review defined three measures of captivity:

- **Dedicated**: where there is specialist plant with a large capital value built near the port and where the plant and/or the wharf facility is owned by the shipper.
- **Captive**: this term generally applies to cargoes with a low value per tonne and where the cost of internal transport makes it unlikely that another port can be used without adversely affecting returns on the total operation.
- **Not as Captive**: defined as cargo which is neither dedicated nor captive.

In describing the definitions the Review also stated that "*it is important to note the following definitions are based more on opinion than empirical analysis*"[40]. The Review is not specific as to how the estimates of captive volumes were arrived at but it appears that the programme of consultation would have elicited information regarding the types of cargo that might be more or less captive and then the trade statistics were used to identify the volumes of such cargoes.

On the basis of those definitions the 1989 Ports Review reported that there were six ports with a large element of cargo capture. The Review stated that "*approximately 35% of trade by volume is captive in the short to medium term…a further 30% by volume is covered by dedicated facilities under the specific control of producers*".

Whangarei and New Plymouth had a high proportion of dedicated or captive cargo by virtue of the petroleum products being loaded or unloaded at these ports. Invercargill had a single large user in the form of Comalco which owns the loading and unloading facilities on the wharves.

Nelson, Picton and Wellington each had a high fraction of dedicated or captive cargo by virtue of their respective geographic locations. Shippers from Nelson do not have the benefit of being able to move cargo by rail. North Island shippers moving cargo to the South Island faced a high degree of captivity by Wellington. Picton was also viewed as having a strong element of captivity for inter-island cargo.

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39 "*Ports of New Zealand Review of Regulatory Issues*", NZIER and Ernst & Young, December 1989, page 2.

40 Ibid, page 38.

B.2 Estimating Captivity Today – Methodology and Data

In the limited time available it is not possible to repeat the analysis undertaken in the 1989 Ports Review. Undertaking an extensive programme of consultation with port users and port operators would be a lengthy process even if co-operation were assured. However, if we use the 1989 report as a means of identifying those cargoes that were dedicated or captive and then examine the extent to which those cargo types have moved among ports then we can make some inferences about the extent to which cargo captivity has changed in the thirteen years since deregulation.

It is important to note that there are a range of reasons why volumes of cargoes might shift among the ports and not all of them are necessarily reflective of competition. Furthermore, lack of movement of cargoes amongst ports is not necessarily proof that there is a lack of competition, it may be that ports have competed effectively to retain market shares. To obtain definitive evidence is beyond the scope of the current study.

The Statistics Department has provided volumes and values of overseas cargo loaded and unloaded at New Zealand ports each year from 1989. For each port the cargoes are broken down by the New Zealand Harmonised System Classification, specifically the HS2 codes which define 99 broad categories (refer Appendix L). Using these classifications we are able to track classes of cargo at each of the major ports for the years ended June 1989 through June 2001.

The last two years in the time series pose some difficulties as certain data is classed as confidential by those who provide the figures. For example, Solid Energy requires that the figures it provides for exports of bituminous coal are kept confidential for 24 months. Figures for methanol exports are kept confidential for a period of 12 months. In order for Statistics New Zealand to be able to report totals correctly it collects all confidential data together and reports it under category 97 "Works of art; collectors' pieces and antiques".[41]

The analysis in the following sections deals only with overseas cargo loaded/unloaded in New Zealand. Coastal cargo has not been analysed for two reasons. First, the coastal data was not readily available in electronic form. Secondly, Statistics New Zealand ceased recording the coastal cargo data after the year ended June 1995, thus the printed data that we do have only covers seven years. However, in order to provide a fuller picture (at least up until 1995) it would be possible to analyse the coastal data in the same way that we have examined the overseas data.

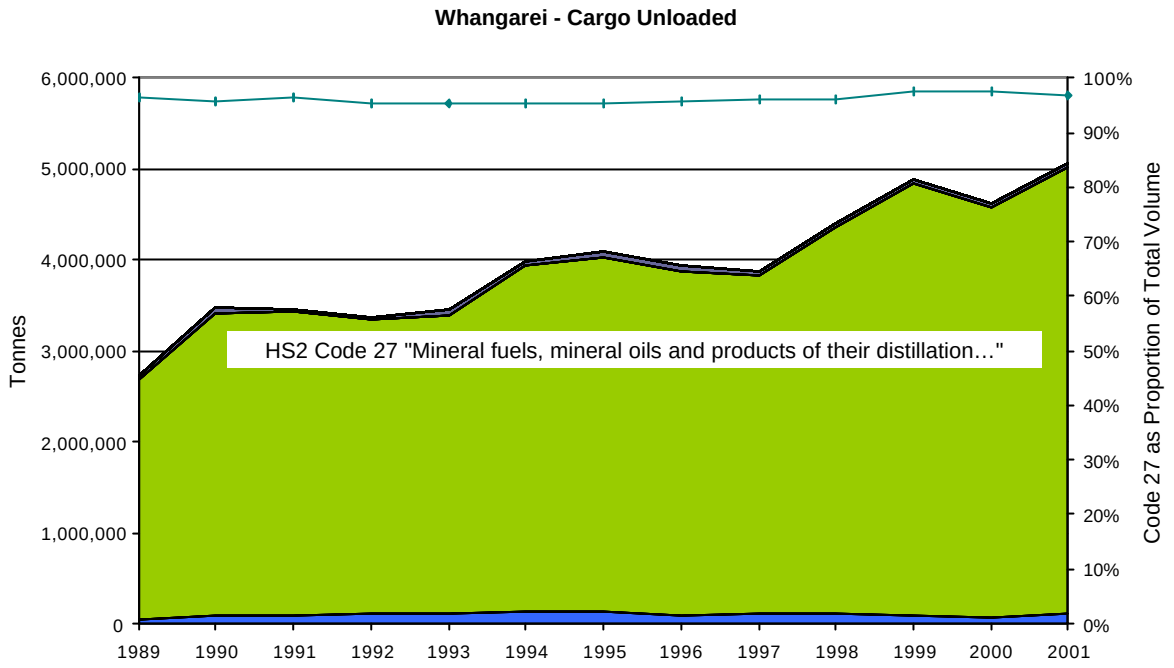
B.3 Overseas Unloaded Cargo Flexibility

B.3.1 Petroleum at Whangarei

The 1989 Ports Review stated that 98% by tonnage of cargo at Whangarei was dedicated or captive. Figure B.1 shows that the imports into Whangarei are dominated by category 27 (Mineral fuels). The line plotted at the top of the chart shows that petroleum imports make up at least 95% of import volumes at Whangarei every year for the past thirteen years.

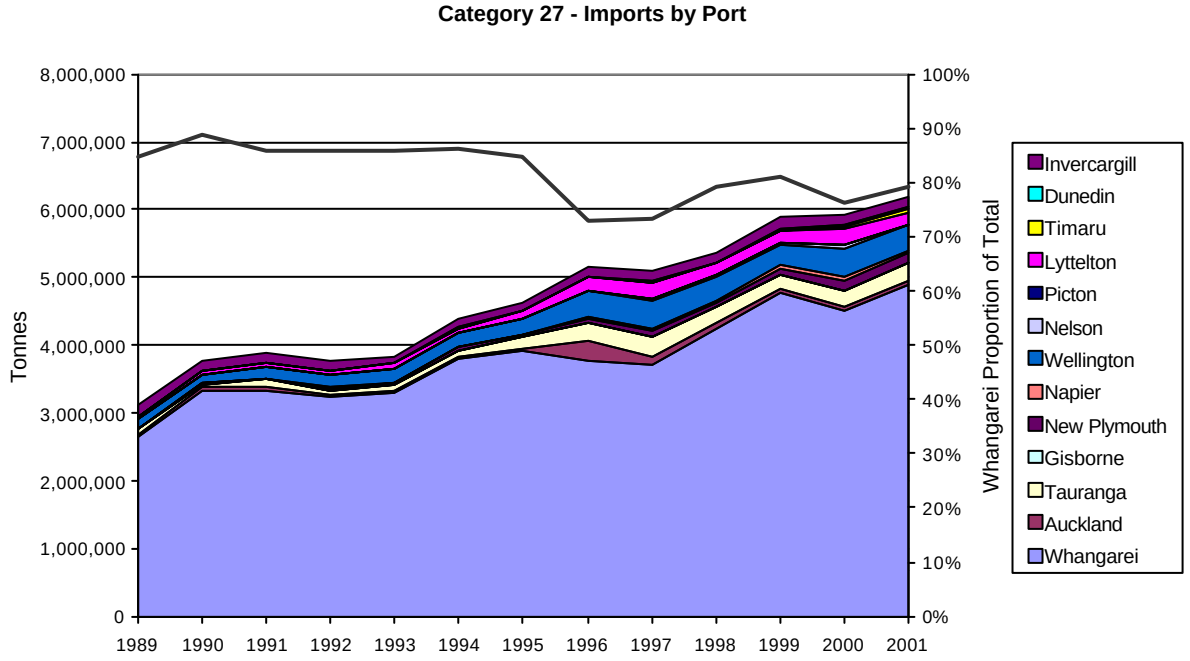
[41] See Appendix M for a list of the confidential items.

Figure B. 1



However, the question is whether the continued dominance of this category at the port means that this type of cargo is dedicated or captive? To identify that we need to consider how imports for category 27 have been shared among the ports. Figure B.2 shows the imports year by year for category 27 as a stacked chart. The bottom layer represents Whangarei and this comprises from 73% to 89% of the total each year (the heavy line in the chart shows Whangarei as a percentage of the total).

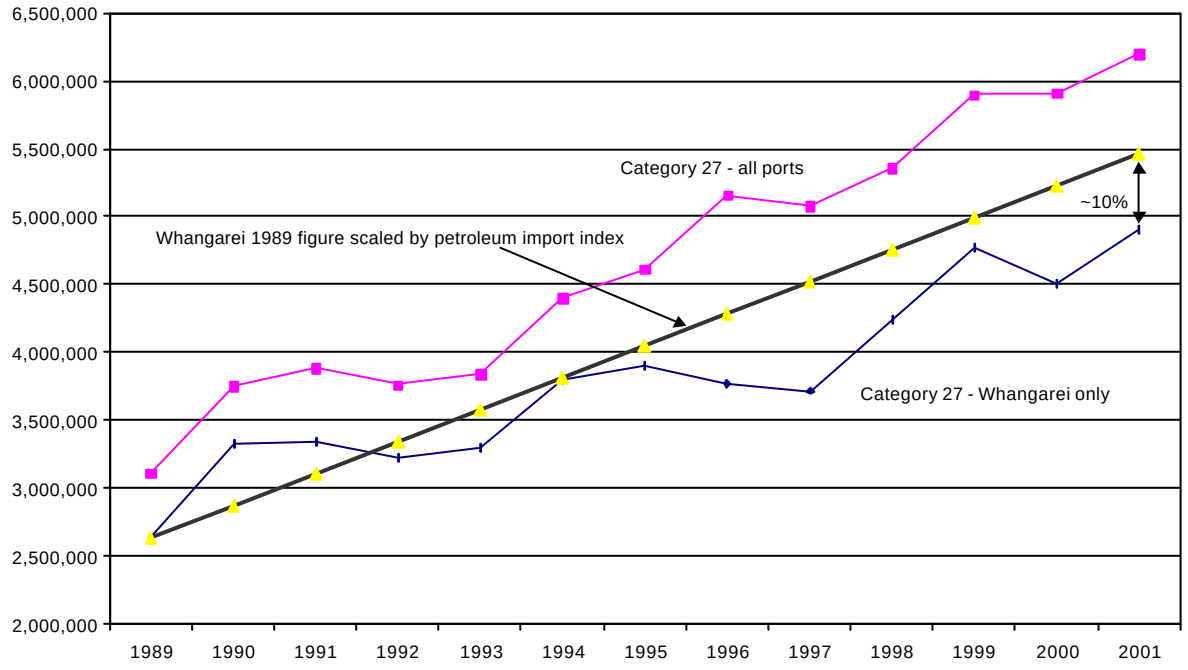
Figure B. 2



At first sight this might suggest that Whangarei has lost some market share to competing ports, but to explore this we need to examine the data further. Category 27 has the potential to be somewhat broad as "mineral fuels" can include such things as coal, for example. Lacking specific annual data for petroleum imports, we turn to merchant import volume indexes and values provided by Statistics New Zealand as a means of determining whether there are, indeed, non-petroleum items in the data. This data, despite being in detail for only a relatively short period, does have petroleum products separately identified. Taking the 1998 year (the earliest year for which we have the merchandise data) and accumulating import values for category 27 from our data series gives a total which is in excess of the 1998 figure for petroleum, suggesting that the category 27 data series does contain some non-petroleum volumes.

If we take the 1989 volume figure for Whangarei and then scale that by a year by year import volume index[42] for petroleum we can then compare the results with Whangarei's volumes in category 27 as shown in the following chart. This results in an estimate that by the end of the period, Whangarei's volumes are some 10% below what they would have been if that port had maintained the same share of petroleum imports that it had in 1989. However, the uncertainty surrounding this technique for deriving an estimate is likely to outweigh the apparent change in market share. It is reasonable to conclude that the data continues to show that the vast majority of petroleum imports are captive or dedicated to Whangarei.

Figure B. 3



At the time of the 1989 Ports Review it was noted that NZRC owns the wharves at Marsden Point and had a contract with Northland Port Corporation for ship handling and ancillary services. The contract was subsequently put up for competitive tender in 1999 and Northland

[42] Using the index base for 1989 and straight-line estimates for 1990-2001 based on the actuals for 1998-2000.

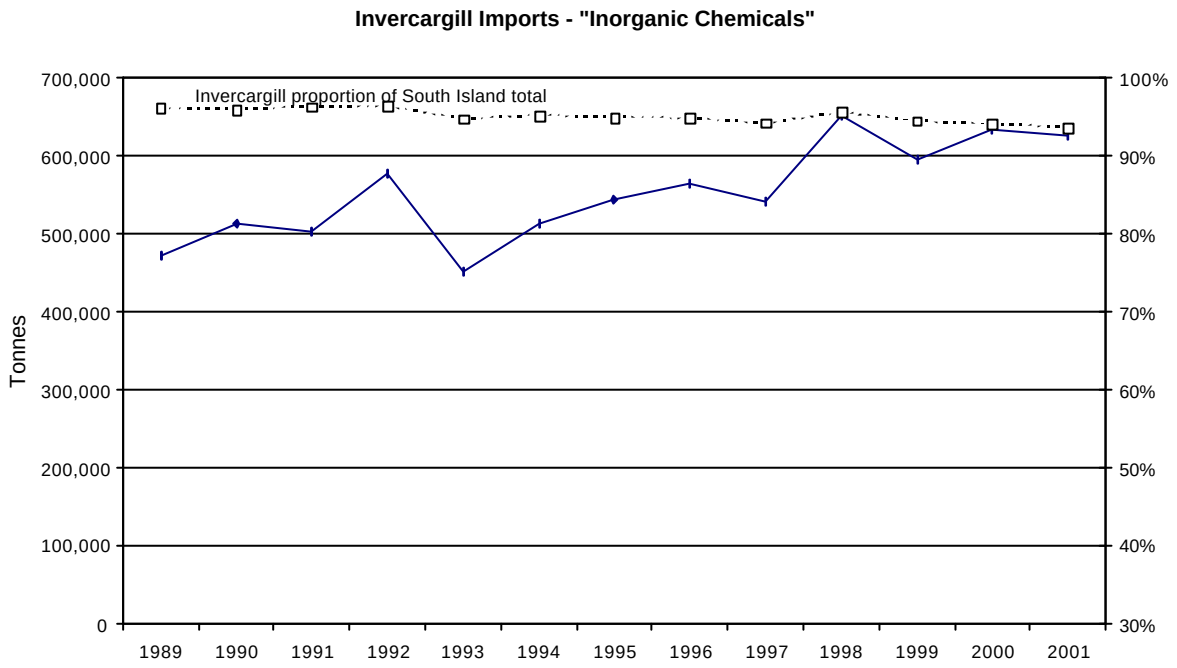
Port Corporation was unsuccessful. This demonstrates that, although the cargo is dedicated to the port at Marsden Point, it is not captive to the local port company.

B.3.2 Bauxite at Invercargill

Significant quantities of bauxite are used by the aluminium smelter at Tiwai Point. Bauxite is classified in group 28 ("*Inorganic chemicals; organic and inorganic compounds of precious metals; of rare earth metals, of radio-active elements and of isotopes*"). The 1989 Ports Review regarded this cargo as dedicated to the port at Invercargill. Figure B.4 shows the tonnage for category 28 unloaded at Invercargill . The graph also shows Invercargill's share of this category relative to the total category 28 tonnage unloaded by South Island ports and this is relatively steady at approximately 95% throughout the period.

Although the data does not allow us to separate out bauxite specifically, as discussed in section B.4.3 concerning aluminium exports, a cross-check between category 28 imports and aluminium exports from Invercargill shows a very close correlation.

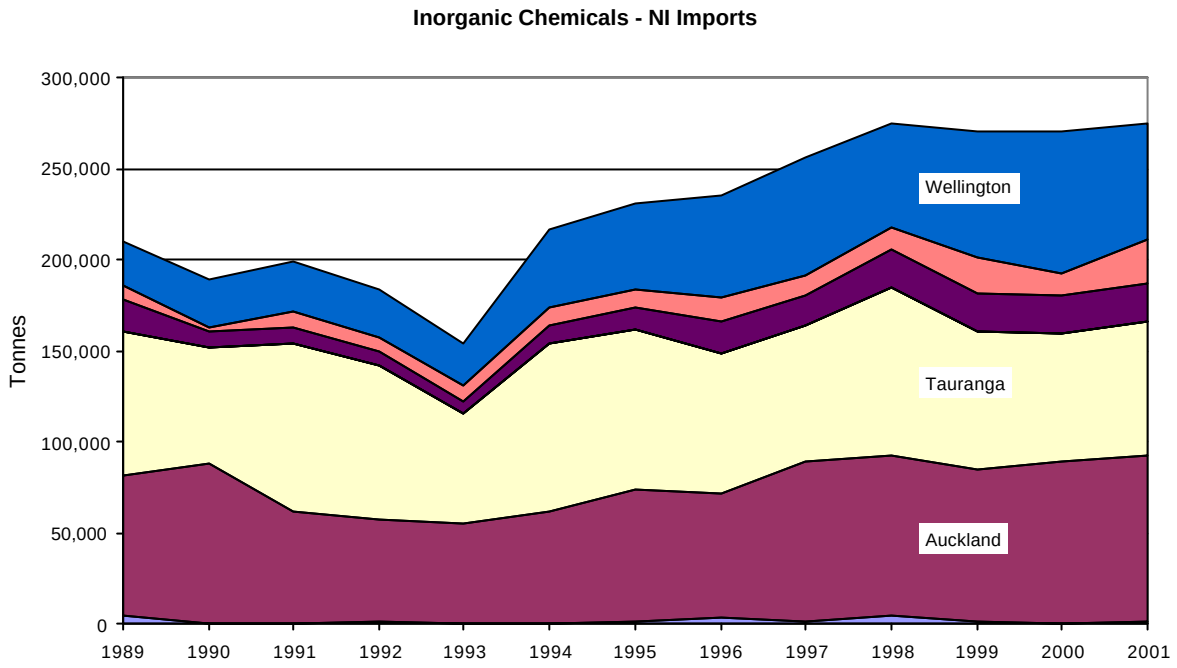
Figure B. 4



B.3.3 Inorganic Chemicals – North Island

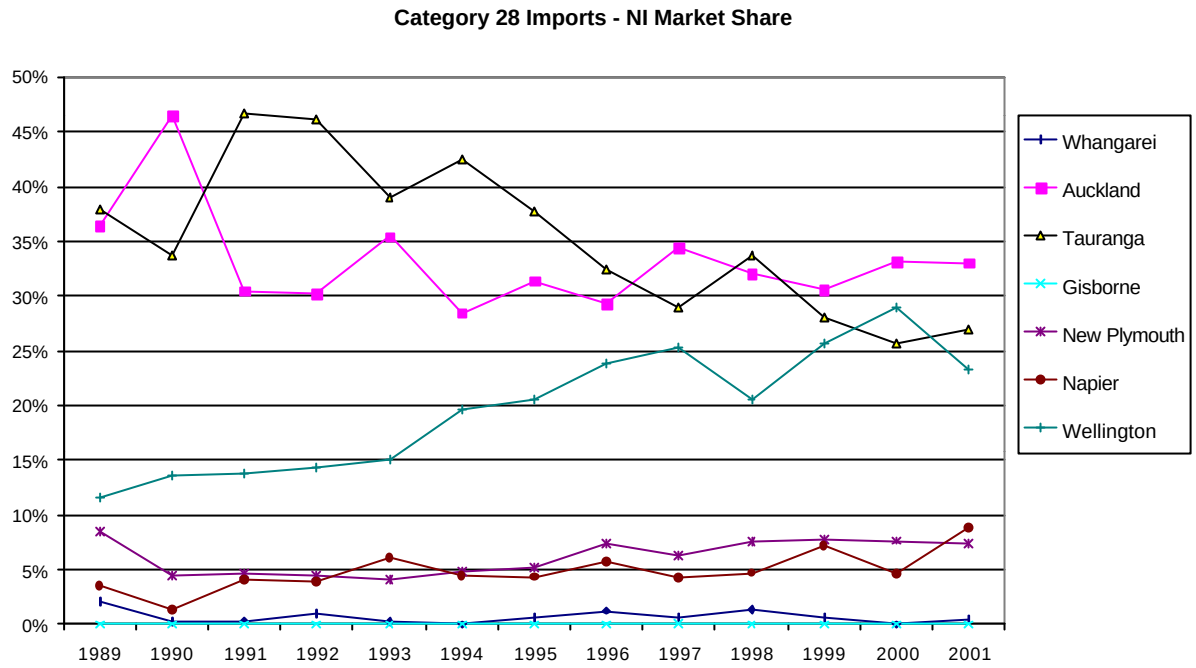
50% of inorganic chemicals at all ports excluding Invercargill were regarded as captive by the 1989 Ports Review. Figure B.5 shows the category 28 imports for North Island ports. With the exception of Whangarei and Tauranga, no port at the end of the period is unloading less volume than it was at the beginning, suggesting a good deal of captivity remains.

Figure B. 5



However, it is not possible to tell directly from the data whether the shifts in volume are due to cargoes moving between ports or simply caused by changes in import volumes. Clearly total imports of inorganic chemicals to the North Island have grown some 30% over the period. Assuming that such growth was distributed around the island, changes in market share for this category would give some indication of how flexible this cargo may be. Figure B.6 shows the North Island market share for each of the ports for category 28. Tauranga begins at 38%, reaches a peak of 46% and ends the period at 27%, i.e. it has maintained more than one-half of its initial market share (and, indeed, more than half of its peak market share). With the exception of a one-year peak, Auckland is relatively flat in the 30–35% range. It is interesting to compare the ebbs and flows of Auckland and Tauranga as, in the early years, they appear to offset each others respective gains/losses. Wellington, with a doubling over the period, has exhibited reasonably steady growth in market share. The data shows that no port has lost over 50% of its market share, the threshold that would need to be breached in order to conclude that the 50% captivity estimate in the 1989 Ports Review had changed.

Figure B. 6



B.3.4 Salt, Sulphur, Lime and Cement

Category 25 ("*Salt; sulphur; earths, stone; plastering materials, lime and cement*") is plotted in Figure B.7. 50% of "salt and minerals" was assumed to be captive. Gisborne, New Plymouth, Nelson and Picton have all lost over 50% of their tonnage since the beginning of the period (and in the case of Gisborne, Nelson and Picton they have lost their entire tonnage). Wellington has lost almost 40% of its original tonnage. Total imports for this category have more than doubled across the country (132% increase in the North Island, 100% in the South Island). If the demand were distributed across the country then this would imply that Wellington has also lost more than 50% of the cargo that it would have had had it continued to maintain its market share.

However, it is not possible to be definitive as to whether these shifts indicate that this cargo is not captive or whether the changes relate to geographical shifts in demand. Another possible factor to consider is that many of these cargoes are bulk or break-bulk and require appropriate handling and storage facilities – this may mean that there are scale economies that have effectively closed out those ports previously handling relatively small quantities.

Figure B. 7

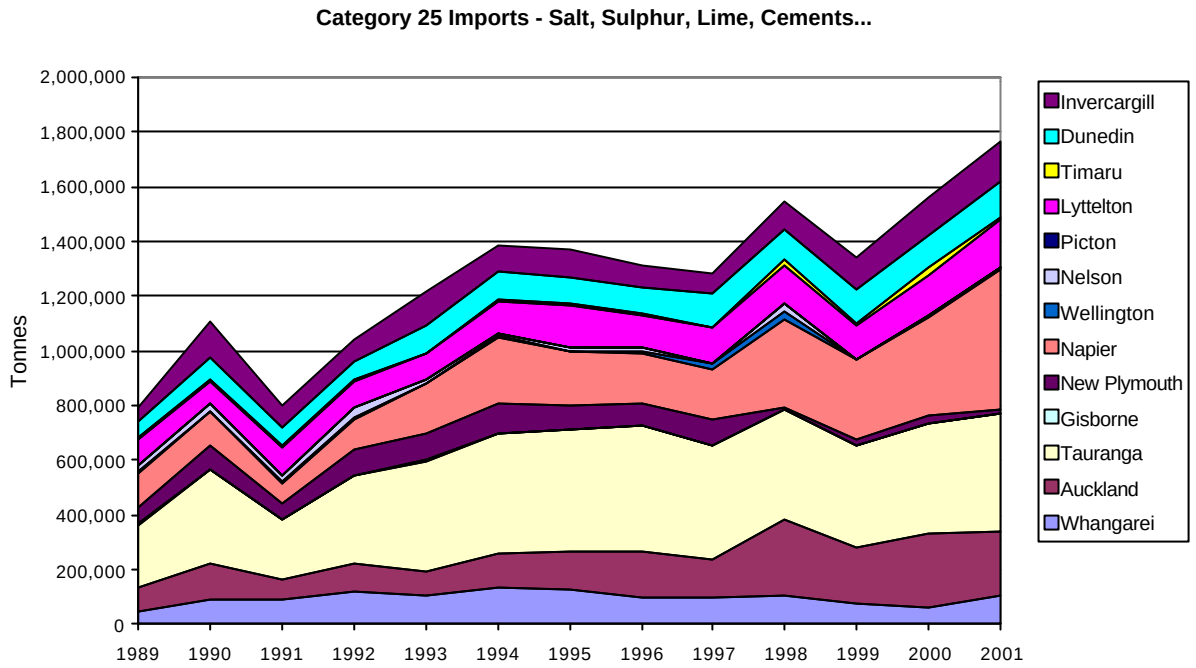
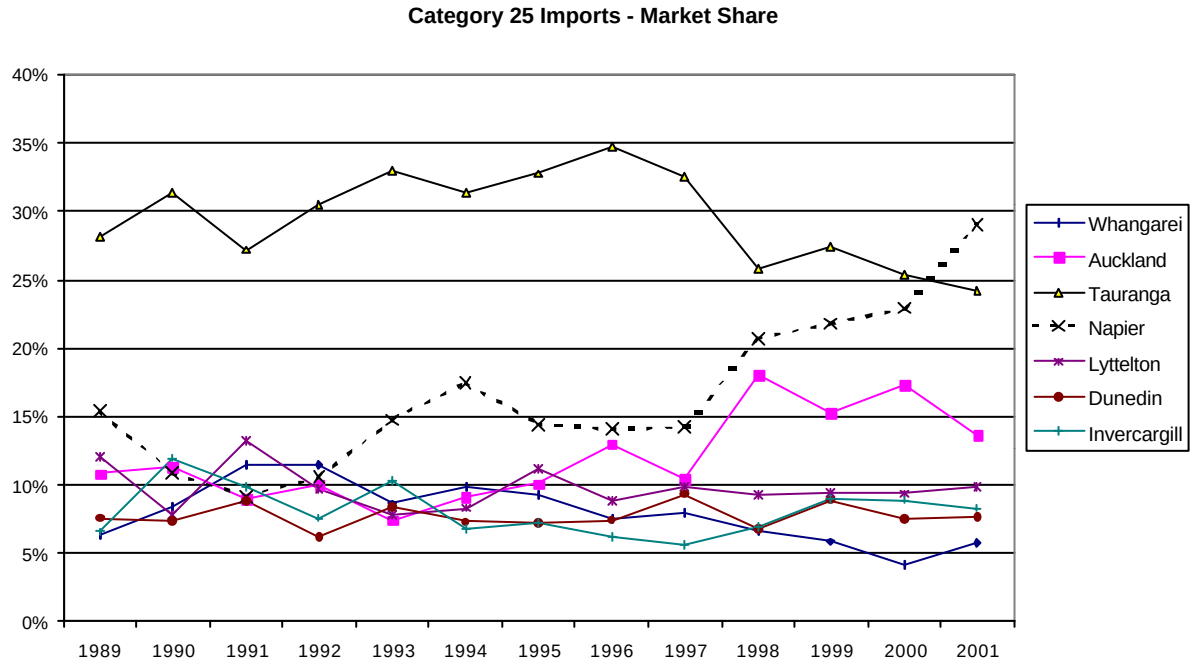


Figure B.8 provides market shares for each of the ports that have maintained volumes over the period. In general these either show relatively steady market share with the major exception being Napier which has virtually doubled over the period.

Figure B. 8



B.4 Overseas Loaded Cargo Flexibility

B.4.1 Fish at Nelson and Auckland

The 1989 Ports Review asserted that fish was assumed to be captive because of the usual associated fish processing and freezing plant adjacent to the ports. At that time approximately 48% of fish exports (by value) were loaded at Nelson and Auckland.

Figure B.9 shows fish and fish products exports from all ports, together with a line that uses the merchant export volume index (for fish and fish products) as an estimate of the total. Given the limitations of the least-squares method in producing straight-line estimates, we have broken the estimate line into two sections: 1989 through 1998; and 1998 through 2001. With the exception of the dip in South Island data in 1990 and 1991, the export volume index appears to be a reasonable estimator for the series.

The second chart, Figure B.10, shows fish and fish products exports for Nelson alone, compared with the merchant export volume index. There is a period through the mid-1990s when fish and fish products exports from Nelson lag behind the index by some 40-50%, although it is in line with the index by period end. To provide more insight, we have also plotted total fish and fish products exports from South Island ports together with a scaled merchant export volume index. This shows that, taken as a whole, South Island ports are well above the volume index for all years except for the two-year dip in the early 1990s. At the end of 2001, South Island ports collectively are 17% above the growth in export volume index over the thirteen year period.

This suggests a number of possibilities, including: either Nelson has lost market share for this cargo to other South Island ports; or production in that region has not kept pace with the growth in that sector elsewhere in the South Island over the period considered.

Figure B. 9

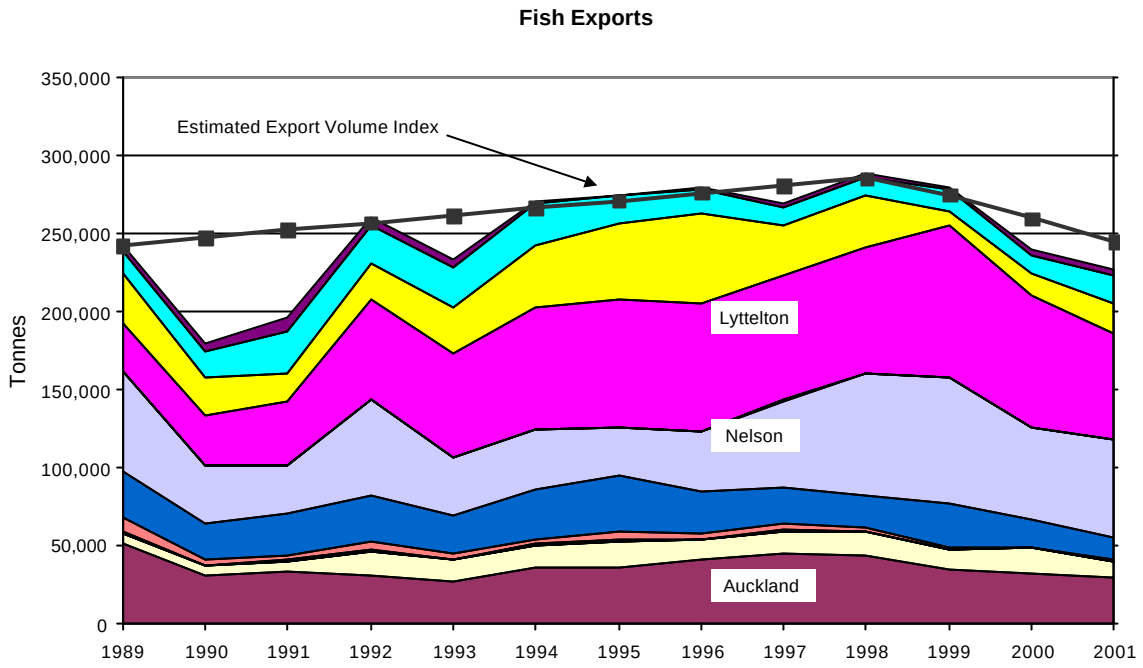


Figure B. 10

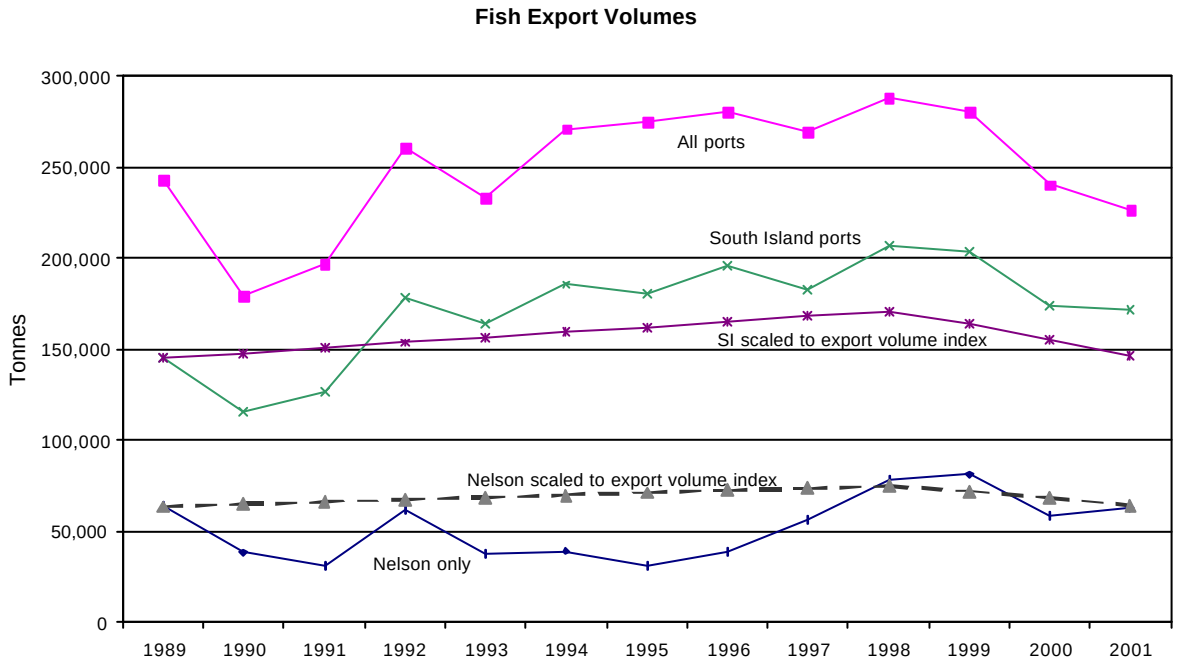
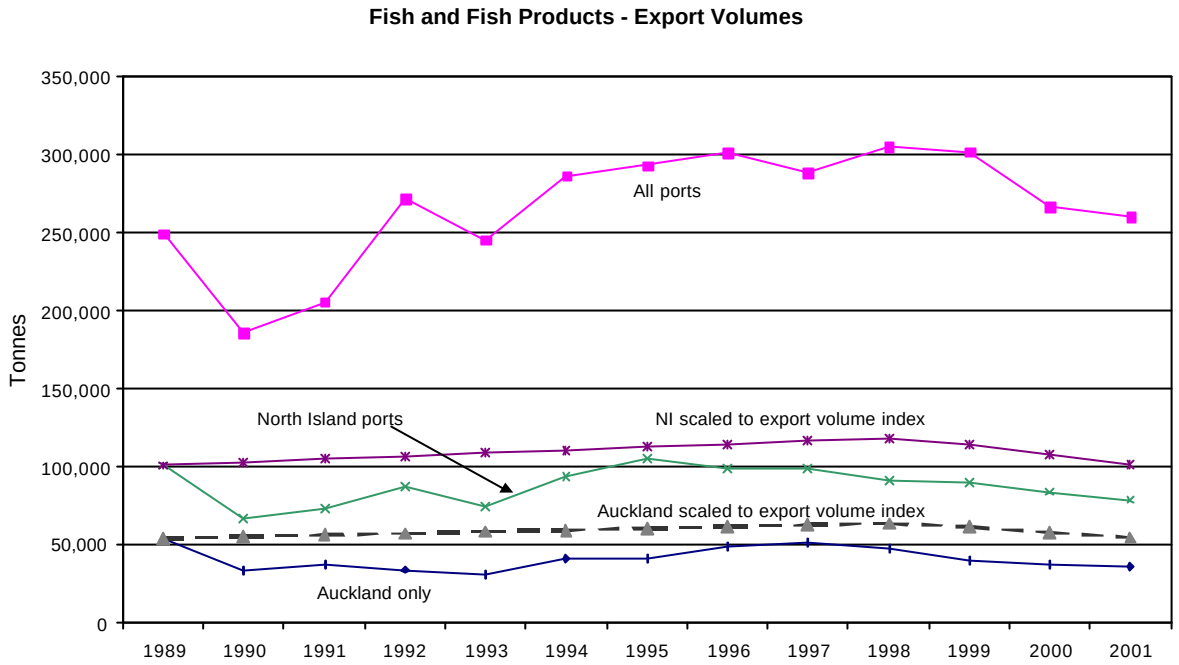


Figure B.11 compares Auckland's volumes with a scaled export volume index (and also shows total North Island fish exports). The graph shows that although Auckland's growth significantly lags the export volume index, it does show a similar pattern to the aggregate North Island data. Aggregate North Island data shows a decline in volume of some 42% over the period. This compares with a 44% decline at Auckland, suggesting that the decline in

volumes through Auckland is probably not due to volume being picked up elsewhere, i.e. the cargo remains captive to the port.

Figure B. 11



B.4.2 Wood at Nelson and Tauranga

Turning to wood exports, Figure B.12 shows exports from all ports of forest products, together with a merchandise export volume index estimate. In this case we see that the volume index is of little assistance to us in estimating total volumes as the end of period estimate, at 7.2 million tonnes is only 75% of the actual exports recorded through the ports. A request was made to Statistics New Zealand in January to explain this apparent anomaly, but at the time of writing we have not received a response.

Figure B. 12

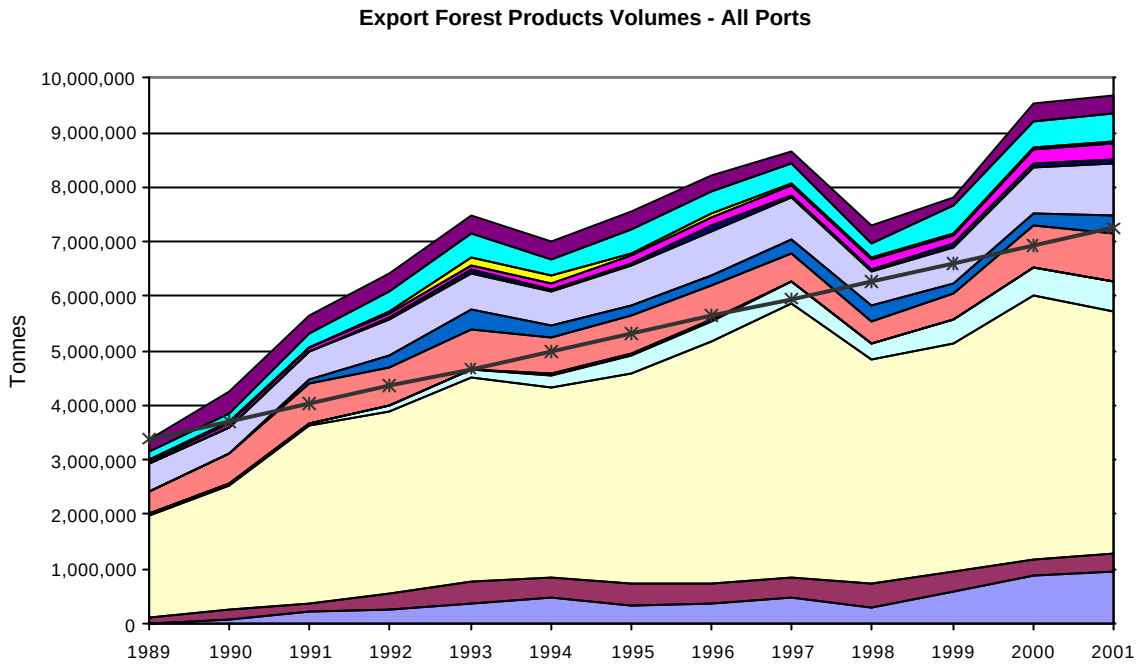


Figure B.13, below, shows exports of forest products for South Island ports only and that shows Nelson dropping from 51% of South Island volumes to 43% over the thirteen year period.

The 1989 Ports Review assumed that wood exports were captive to Nelson because of:

- the low value of the cargoes; and
- lack of alternative options due to there being no railway line into Nelson and limitations on road access due to the nature of the roads.

(For other ports it was assumed that 50% of wood exports were captive, i.e. that there was scope for exporters to move to other ports particularly Auckland.)

Picton, Lyttelton, Timaru and Dunedin all show percentage growth over the period in excess of 250%. Picton has virtually no wood exports at the beginning of the period and is loading 105,000 tonnes per annum by 2001. Whilst it is possible that Picton might have taken a proportion of trade from Nelson, even adding the Picton volume to Nelson's figures does not growth comparable with the higher-growth South Island ports. This suggests that the lack of comparable growth in exports from Nelson is more likely to be due to production factors rather than any change in captivity by the port. "Eyeballing" the data for the other South Island ports does not reveal any pattern of volume shifting from one port to another.

Figure B. 13

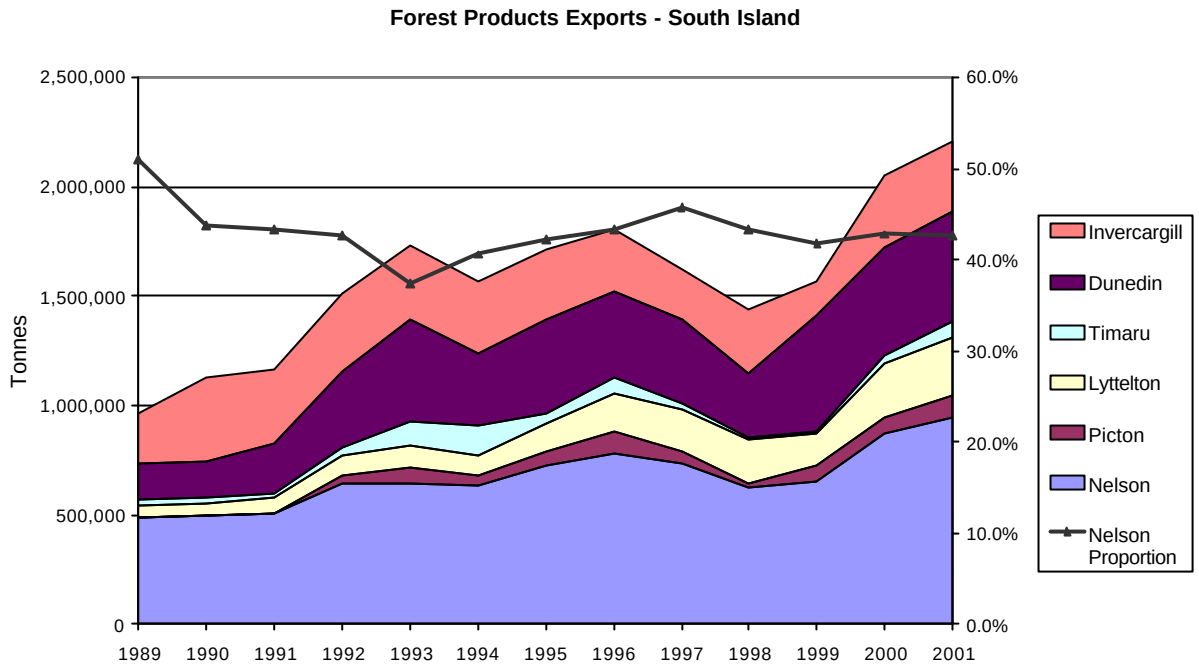


Figure B.14 charts the exports of forest products from the North Island and shows the continued dominance of that trade by Tauranga. The 1989 Ports Review classified wood exports other than at Nelson as 50% captive and the balance as "not as captive" and suggested that exporters could choose to move their wood from other ports.

Wellington has made a sustained effort to market itself as an exporter for logs, whilst Ports of Auckland has tended to focus on higher-value cargo such as lumber and pulp products. The graph shows that Whangarei, Auckland, Gisborne, Napier and Wellington have all increased the volume of forest products exports through their respective ports. Figure B.15 shows the same data plotted as percentages, i.e. each port's annual share of the market for exports of forest products. This shows Tauranga dropping from a high of 78% at the beginning of the period to 60% at period end. Auckland has shown shares in excess of 7% in some years but currently has less than 5%. Gisborne has grown steadily to its current level of 7%. Napier steadily lost market share, dropping from 16% to 7%, but has recently recovered to 12%. Wellington has hovered in the range of 3% to 5% for the last few years.

Although a number of other North Island ports have managed to gain market share, possibly at the expense of Tauranga, there is no doubt that Tauranga continues to load the vast majority of North Island forest products exports.

Figure B. 14

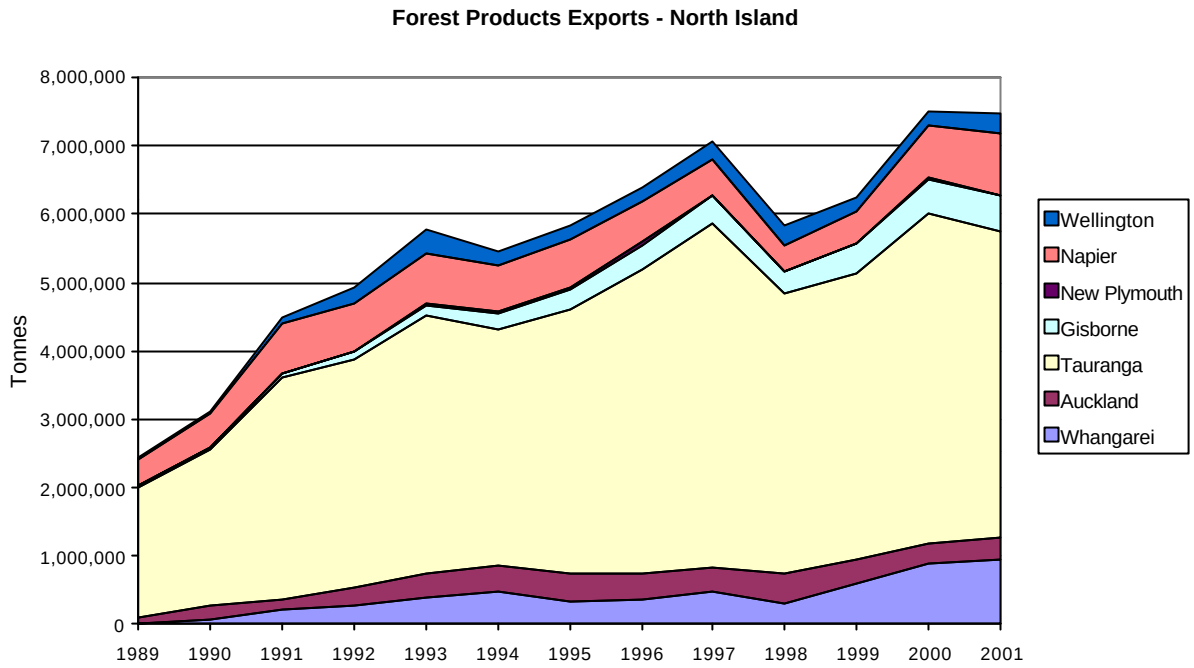
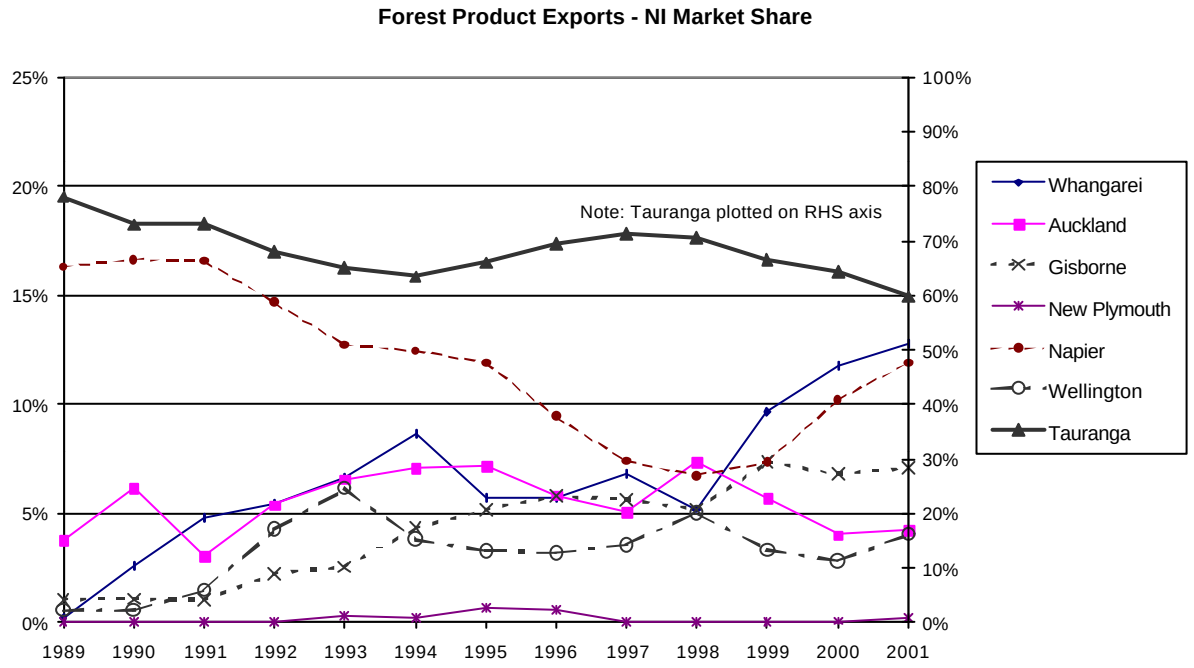


Figure B. 15

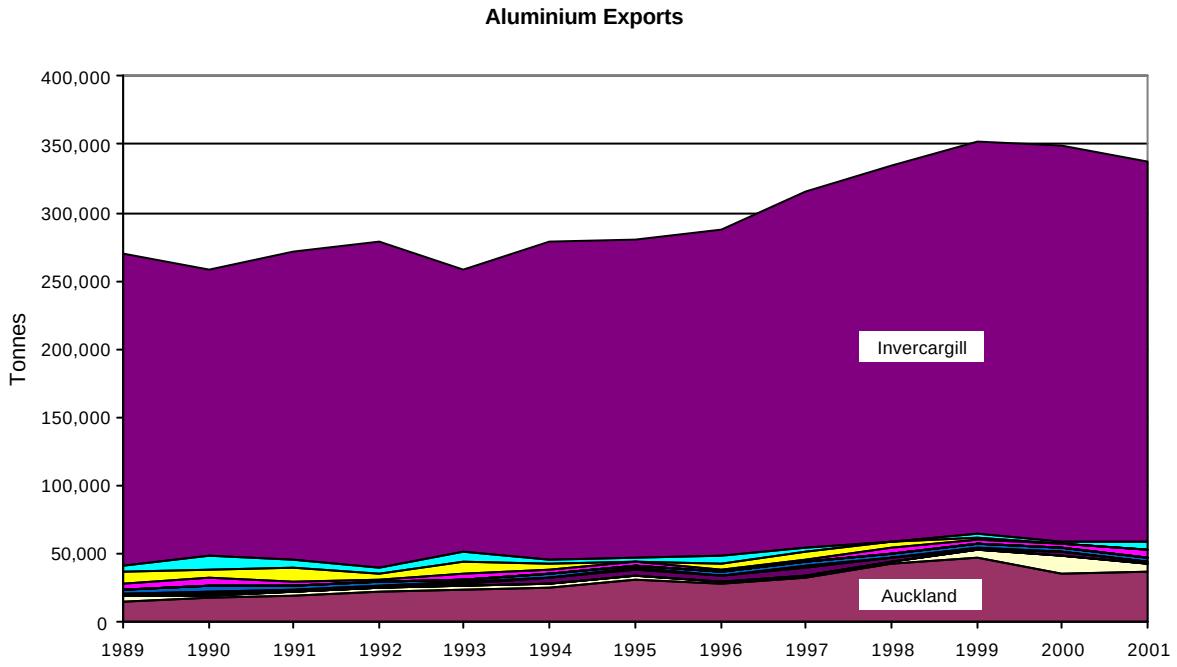


B.4.3 Aluminium Exports from Invercargill

As would be expected, aluminium exports are dominated by the production from the Comalco smelter at Tiwai Point. Figure B.16 charts the export data for category 76 *"Aluminium and articles thereof"* and shows that Invercargill loads some 80% of that cargo and has continued to do so since 1989.

As the data does not separate out raw aluminium from manufactured products it is not possible to be certain that all raw aluminium flows out of Invercargill. However, the data for Invercargill shows an increase in tonnage from 228 kT in 1989 to 277 kT in 2001. If we consider the raw materials unloaded at Invercargill, specifically category 28 (Inorganic chemicals, etc and assume that ***all*** of this tonnage relates to the smelter) we can calculate an average ratio of raw material per kg of aluminium produced and use that ratio to smooth the series to reduce the effects of inventory variations. We then find that the increase in raw material imports over the thirteen year period is 22% which is virtually the same as the increase in category 76 exports at Invercargill.

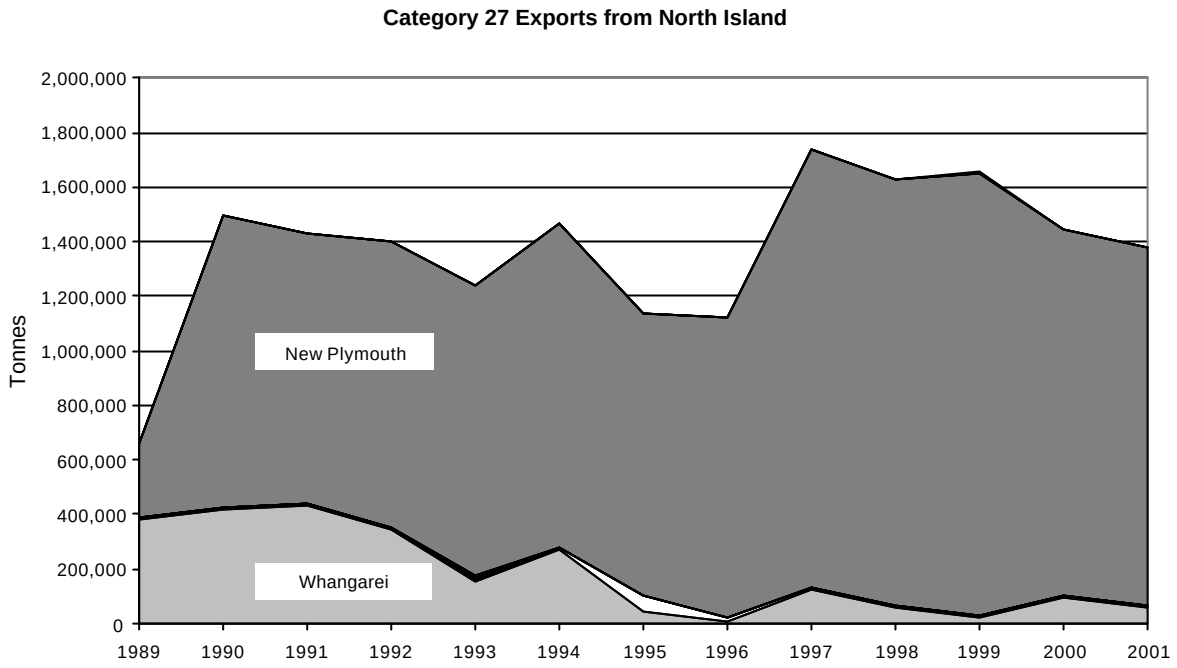
Figure B. 16



B.4.4 Petroleum Exports at Taranaki

Petroleum exports from New Plymouth were assumed to be captive cargoes by the 1989 Ports Review. North Island exports for category 27 ("*Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes*") which includes petroleum are shown in Figure B.17. The graph clearly shows exports from New Plymouth growing over the period and this clearly suggests that this trade has continued to be captive to the port at New Plymouth..

Figure B. 17

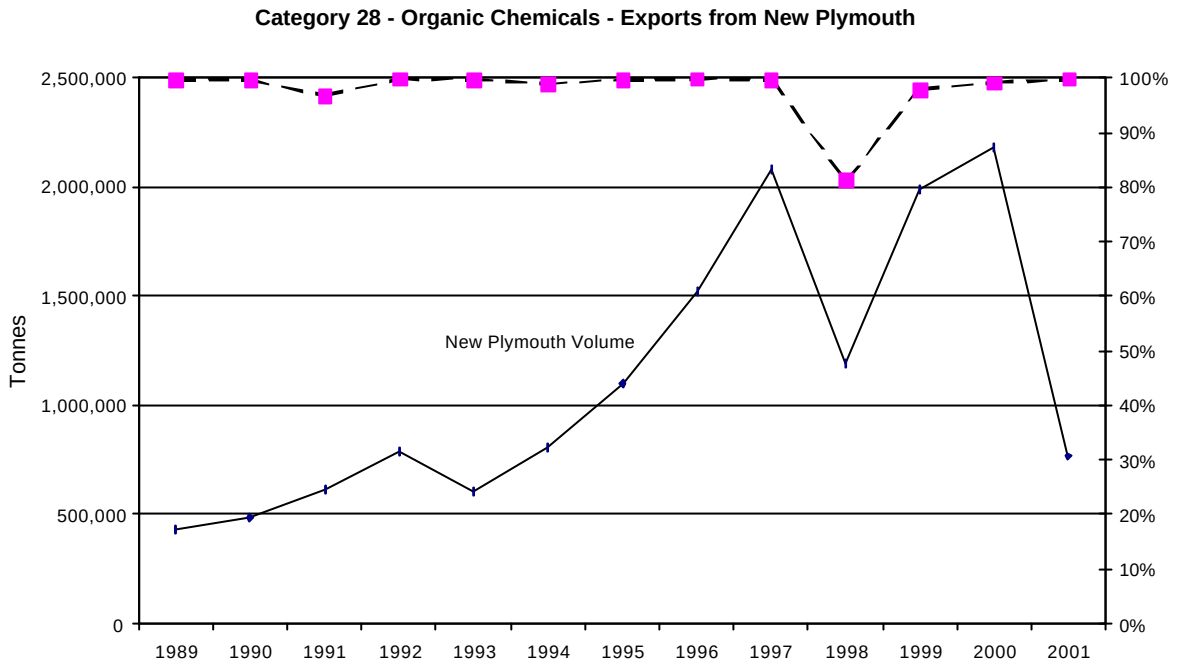


B.4.5 Organic Chemicals from Taranaki

Figure B.18 shows exports for category 28 ("*Organic chemicals*") from New Plymouth. Primarily this is chemical methanol. The dip in 1998 is assumed to be due to a drop in production while the dip in 2001 is due to the fact that methanol exports are kept confidential for a period of twelve months from the end of the period and, therefore, the 2001 figure will only be for six months' exports.

The graph also shows New Plymouth's volume as a percentage of total North Island exports for this category which shows that for every year except for the dip in 1998 New Plymouth accounts for almost all exports in this category.

Figure B. 18

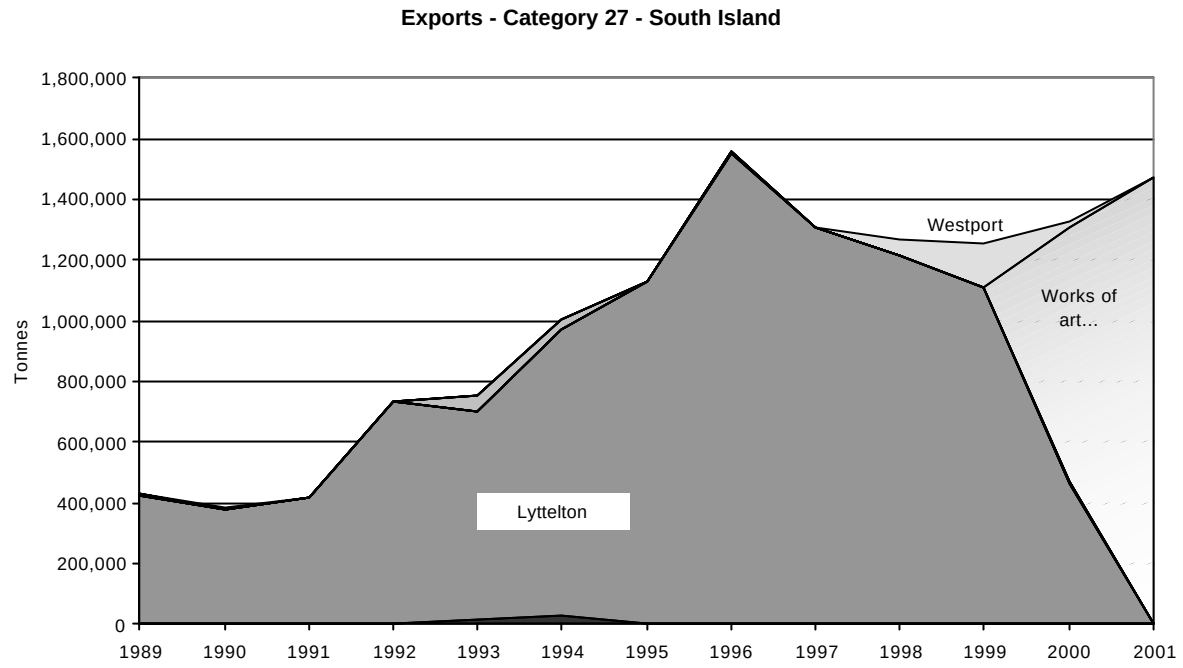


B.4.6 Coal from Lyttelton

Solid Energy exports significant amounts of coal from the South Island, primarily coking coal for steel mills but there are also thermal and specialty coals exported. For over a decade there has been continual discussions and negotiations between Solid Energy, TranzRail and Port of Lyttelton regarding the cost of transporting and loading this export coal. Solid Energy has even considered alternatives such as barging coal from the West Coast where it is mined either direct to customers or to an alternative deep water port for loading onto ships. The company has also investigated the construction of a deep water jetty on the West Coast. Despite some small scale trials (note the quantities shipped from Westport in the late 1990s), the vast majority of export coal from the West Coast has continued to be shipped from Lyttelton.

The exports from Lyttelton appear to drop in the last two years of the period, in fact this is not the case. The graph (Figure B.19) also plots category 97, titled "*Works of art; collectors' pieces and antiques*" which as well as the eponymous items is also used as a catch-all for confidential items – statistics for bituminous coal being required by Solid Energy to be kept confidential for 24 months after the end of the period. The sum of categories 27 and 97 from Lyttelton gives a much smoother series. This series is confirmed by reference to Solid Energy's web-site where the confidential volumes are given.

Figure B. 19



B.4.7 Fruit and Vegetables

The 1989 Ports Review classed fruit and vegetable exports through Tauranga, Napier and Nelson as captive and 50% of fruit and vegetables through other ports as captive. Figure B.20 plots classifications 7 and 8 ("*Vegetables and certain roots and tubers; edible*" and "*Fruit and nuts, edible; peel of citrus fruit or melons*") as a proxy for fruit and vegetable exports. The graph shows that the five ports of Auckland, Tauranga, Napier, Nelson and Lyttelton load most of the fruit and vegetable exports for the country. Figure B.21 shows the proportion that Auckland, Tauranga and Napier each hold of the North Island exports for this market and the proportion that Nelson and Lyttelton each hold of the South Island market. Also plotted is the aggregate of these ports for their respective islands.

Figure B. 20

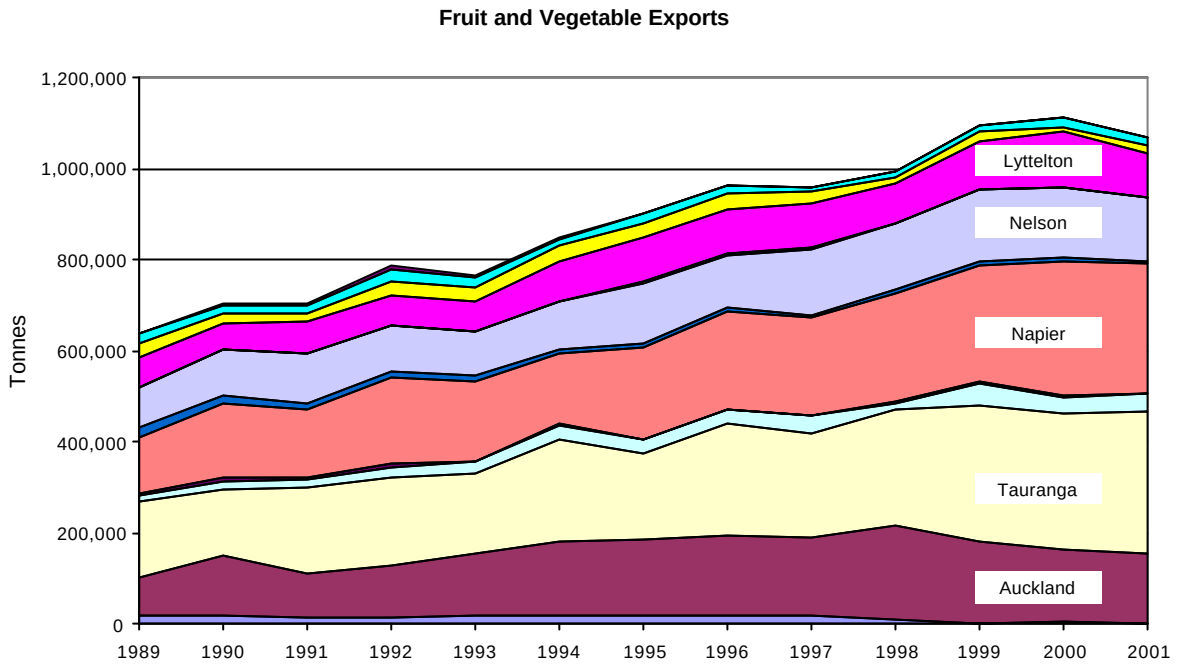
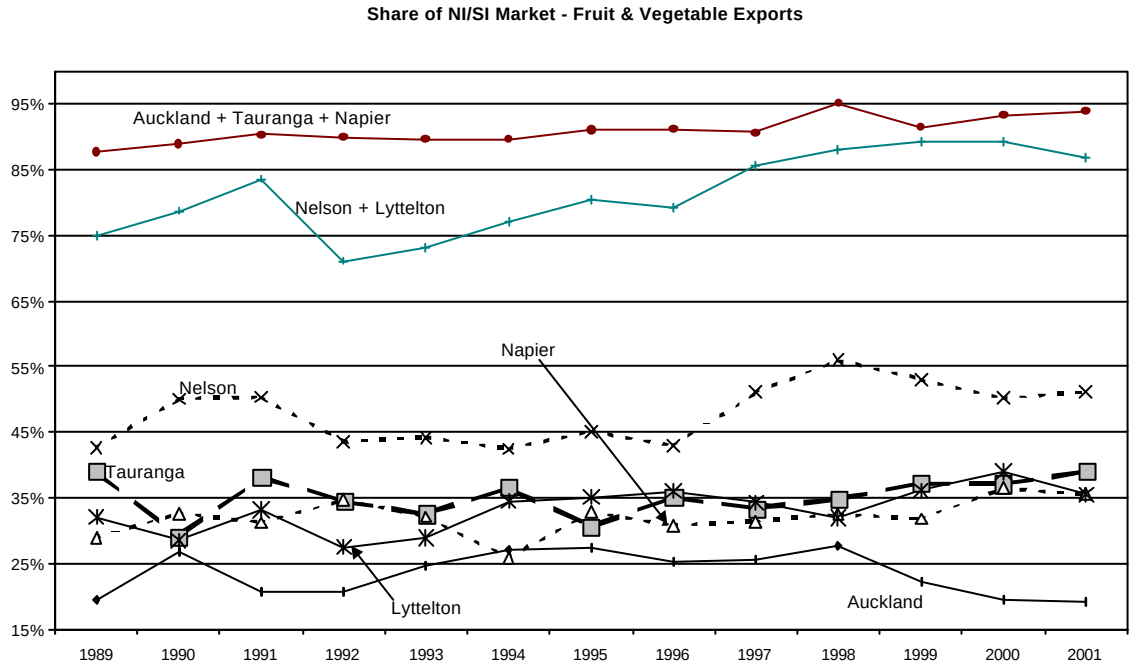


Figure B. 21



Appendix C. CentrePort Wellington

C.1 Historical Background

Port of Wellington Limited (POWL) commenced operations on 1 October 1988. The Company was created to take over the commercial operations of the Wellington Harbour Board (WHB). As required by the Port Companies Act, an Establishment Plan was prepared and, subject to modifications, subsequently approved by the (then) Minster of Transport.

The entire commercial undertaking transferred to POWL was valued at $72.5 million. This comprised shares in Port of Wellington (1988) Limited, a company previously established by WHB, and land transferred directly to POWL. The shares were purchased by POWL at the value of the underlying port assets ($30.7 million) and the land was acquired for $41.8 million.

POWL paid for the bulk of the assets it acquired from WHB by issuing 51 million, fully-paid, one-dollar shares. The balance of the transaction was settled by a loan from WHB to POWL of $21.5 million. For the purposes of analysis below the establishment transaction is treated as an up-front purchase outlay of $72.5 million.

C.2 Notable Items from Annual Reports

C.2.1 Capital Reductions

A capital reduction of $5 million was made in the period ended June 1992. This was achieved by cancelling 5 million ordinary shares and paying shareholders for their cancelled shares at $1.00 per share. Shares were cancelled pro rata to shareholders' holdings. The reason for the capital reduction was that the Company was experiencing continued improvements in profitability and was likely to find itself in the position of having no borrowings. This was considered inappropriate in the light of the decline in domestic interest rates at the time and, therefore, POWL approached the High Court for permission to reduce its capital. Post the capital reduction, shareholders' funds represented 82% of total assets.

A second capital reduction of $26 million occurred in the year to June 1995. This was executed by cancelling 26 million shares at $1.00 per share. At the same time the shareholders subscribed for a total of $10 million worth of convertible notes proportionate to their respective shareholdings. The convertible notes were able to be repaid or converted to ordinary shares at the option of the Company and had a redemption date of 28 June 1998. The redemption date was subsequently amended to extend the life of the notes by one year and in June 1999 the notes converted, one for one, into ordinary shares.

C.2.2 Fixed Assets and Land

Land was carried at $41-43 million in the books for the first four years and then, in the year to June 1993, the freehold land item in the fixed assets dropped to $35.5 million. This drop is unexplained in the 1993 *Annual Report*. However, the Government Valuation for the land fell

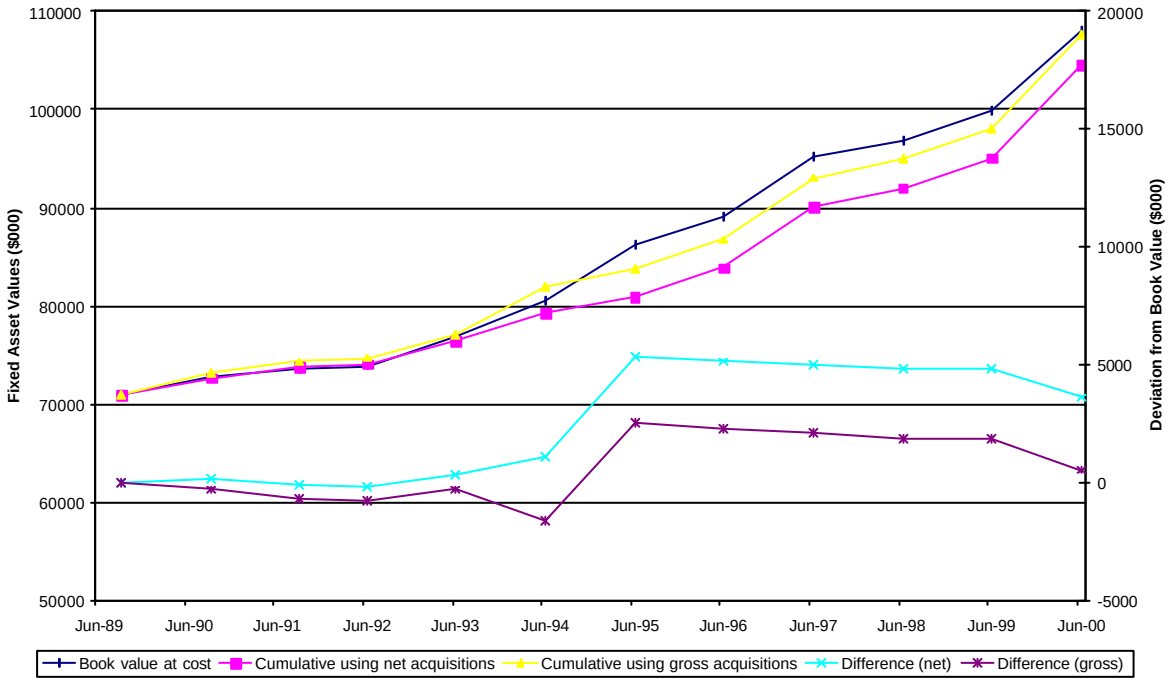
from $73.3 million in the 1989 accounts to $35 million in the 1992 accounts. In each of the 1991, 1992 and 1993 accounts there is a note regarding land values that "*The Directors have determined that as there is no permanent impairment in land values no revaluation will be taken into account this year*."

It is interesting to note that the 1993 Annual Report records freehold land at a value of $35.5 million for both the 1993 and 1992 years, and yet the 1992 Annual Report records the freehold land value as $43.3 million. There is no mention of any land being disposed of, nor is there any suggestion of a revaluation.

"Buildings, Wharves and Paving" in the 1993 accounts are shown at cost of $28.7m with a comparative figure of $27.6m for the 1992 year. The 1992 accounts had shown an entry for "Buildings and Wharves" at a cost of $19.8m. The apparent anomaly regarding the unexplained change in the freehold land value might be the result of a re-classification of a portion of the "Freehold Land" item to "Paving".

This explanation is supported by the following chart which shows a comparison of total fixed assets as recorded in the accounts with totals calculated by using the opening book figure and cumulatively adding:

(a) fixed asset purchases as recorded in the cashflow statements; or
(b) fixed asset purchases less fixed asset disposals.



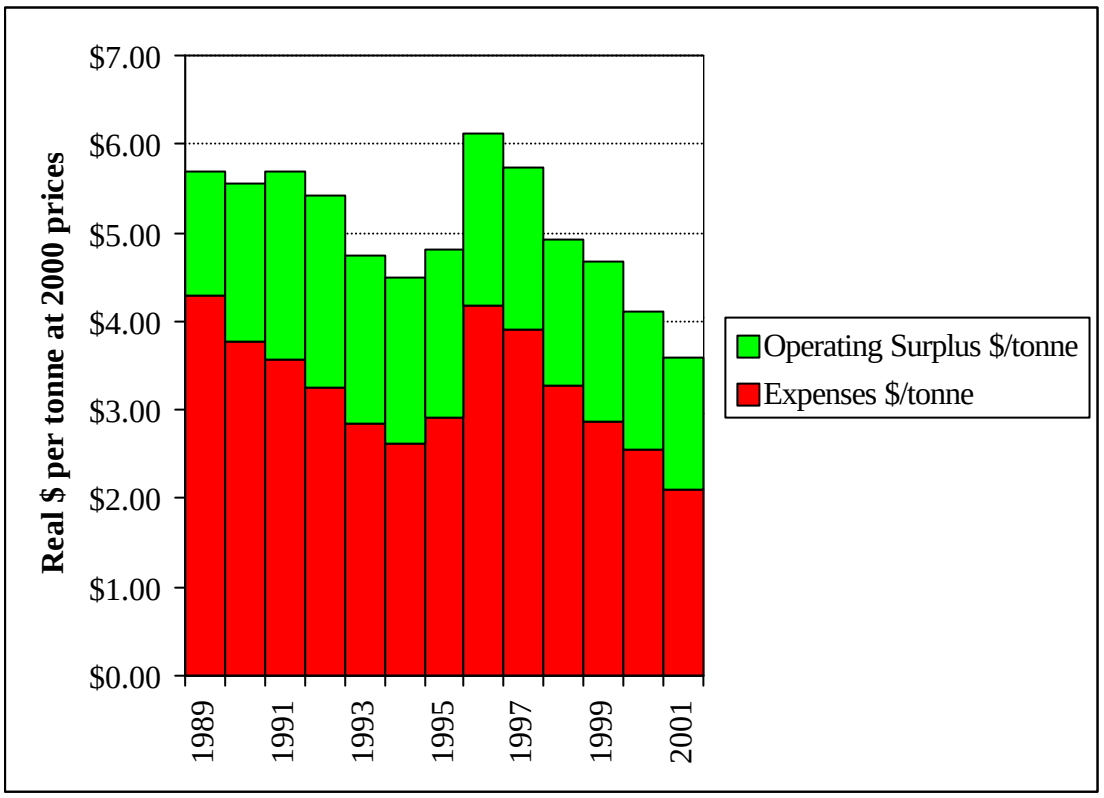
C.2.3 Taxation Dispute

The tax payment of $5.7 million in 1997 includes a deposit of $2.95 million paid in respect of a dispute with IRD (representing one-half of the amount of tax in dispute).

IRD subsequently refunded approx $1 million in 1998

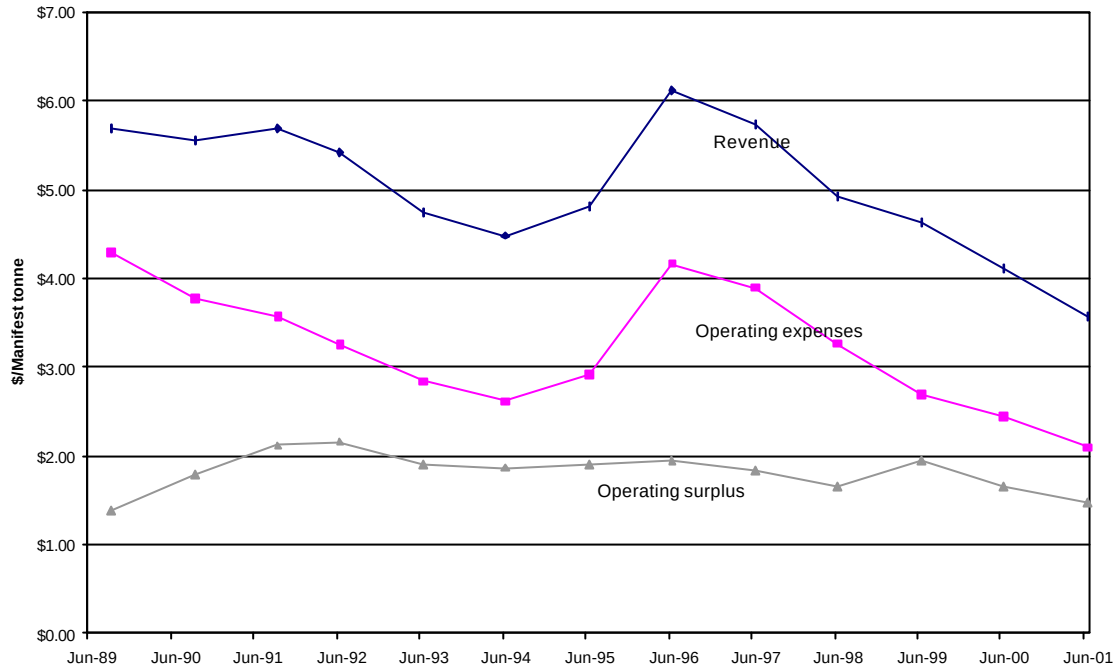
C.2.4 Operating Revenues and Expenses

A cursory analysis of the pattern of revenues and expenses compared with gross tonnage through the port shows a long-term declining trend (in real terms) in both revenue and operating expenses per tonne of cargo, broken by a sharp increase in expenses (passed through to revenue) in 1996 due apparently to inclusion of the container terminal in the port's operating figures as Container Terminals Ltd was absorbed.



The chart below compares revenue per manifest tonne and operating expenses (costs excluding interest and depreciation) per manifest tonne. Also shown is the operating surplus per manifest tonne (simply the difference between revenue and operating expenses) and it can be seen that the operating surplus per tonne has shown a downward trend in real terms, again broken by the restructuring of the accounts with absorption of the container terminal in 1996.

Centreport Average Revenue Broken Down Between Operating Cost and Surplus



C.3 The IRR Calculation

The IRR calculation assumes a hypothetical investor acquiring the assets of POWL at the time of establishment (1 October 1988) for a price of $72.5 million, i.e. the price paid by WHB which owned the shares at the time. That investor is then assumed to hold the assets for periods of from one to twelve years. During the period of ownership, the hypothetical investor receives any free cash flow from the company. When exiting the investment, the assets are sold at a value equating to the underlying book value of the fixed assets of the business.

The analysis is conducted in real terms by converting all monies to June-year 2000 dollars using the PPI Inputs deflator. Net book value less any term debt outstanding at the end of the period is used for the selling price in June 2001. It is unlikely that a natural monopoly business such as a port company would change hands for less than the book value of its assets where that book value is derived from historical acquisition cost less depreciation. Transactions involving infrastructure assets in New Zealand's light-handed regulatory environment have been notable for sale prices that have been based on depreciated ***replacement*** cost or greater. Accordingly, the use of net book value for selling price is almost certainly conservative.

POWL changed its reporting period from a year end of 30 September to a period-end of 30 June in 1992. This means that the accounts for the period ending 30 June 1992 are only for nine months. For the purposes of calculating the IRR we have treated that nine-month period as if it were a full year, this has the effect of slightly understating the IRR.

The following tables show the data used for the calculation

Port of Wellington / CentrePort

As at / Period ended	**Sep-89**	**Sep-90**	**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Months in period	12	12	12	9	12	12	12	12	12	12	12	12	12
P&L Data from Annual Reports													
Total Income	28242	28990	30044	22234	27348	28122	32519	42574	40974	38737	40784	38582	38344
Interest Earned	883	221	232	95	111	181	278	279	32	43	206	94	36
Total Expenses	24274	23379	21706	15100	19086	19102	22470	34698	33697	32989	30485	28119	28428
Interest Paid	2697	1699	913	361	379	64	26	2418	2328	1958	1590	951	1203
Depreciation	905	2145	2079	1434	2412	2735	2971	3447	3575	3675	3873	3383	3602
Loss on Sale of Fixed Assets				-12	-10	1395		69	51	87	-7	170	-31
EBDIT	6687	9234	11098	8834	10942	11638	12768	13462	13148	11338	15556	14703	14685
Abnormal Items													
- restructuring costs			3600	1818	155		2360			3510	753		
- write-offs						250	2118						
- (gain)/loss on asset sales						-1395							
NPBT	3968	5611	4738	5316	8107	10165	5571	7876	7277	2238	9546	10463	9916
Taxation	0	0	0	0	0	3208	1097	2545	2290	1903	3223	3300	3157
NPAT	3968	5611	4738	5316	8107	6957	4474	5331	4987	335	6323	7163	6759
Share of Profit/Loss from Associate		-35	29	18	-15	83	44	-8	-21	17	-30	80	143
Surplus Attributable to Shareholders		5576	4767	5334	8092	7040	4518	5323	4966	352	6293	7243	6902
Dividends													
Paid		500	750	0	2500	2001	1450	1500	1220	0	9000	4150	3900
Declared	1000	1000	1250	1875	2315	949	1550	1500	1265	0	1647	200	200
Derived P&L Data for Analysis													
Revenue excluding interest	27359	28769	29812	22139	27237	27941	32241	42295	40942	38694	40578	38488	38308
Expenses excluding interest, depreciation and losses on asset sales	20672	19535	18714	13317	16305	14908	19473	28764	27743	27269	25029	23615	23654
Gross operating surplus before tax	6687	9234	11098	8822	10932	13033	12768	13531	13199	11425	15549	14873	14654

Cashflow Data from Annual Reports

Operating Activities													
Cash provided from:													
Cash from Customers	25086	30675	32705	22637	24791	30404	31892	42936	41529	38830	40218	38369	37787
Interest Received	293			72	123	206	306	220	32	34	472	7	36
Dividend Received							39	130	160	115	175	70	30
Taxation Dispute Refund											2532		
Cash disbursed to:													
Cash Paid to Suppliers & Employees	21880	20984	21428	19212	16821	16177	19838	31748	27310	28144	24792	23433	22501
Interest Paid	77			315	371	109	17	2320	2313	1702	1769	874	1222
Taxation Paid						2724	2450	2807	2700	1320	3100	3337	3491
Income Tax Dispute Deposit									2951				
Restructuring Costs										2589	697	689	286
Investing Activities													
Cash provided from:													
Fixed Asset Sales	117	478	77	60	67	2032	90	39	82	29	7	95	69
Sale of Investment									6		3		
Interest Received		816	232										
Repayment by Term Debtors	13												
Proceeds from Loan to Associate						117							
Cash acquired with subsidiary acquisition							1070						
Cash disbursed to:													
Fixed Asset Purchases	3668	2201	1214	375	2394	4939	1662	3063	6272	1939	3016	9575	9417
Interest Paid													
Loan to Associated Company		220			55	62					20	30	
Investment in Associate		210			250						2	55	
Investment in Patent						35		13	3				
Land Purchased from WHB	41781												
Shares in PoW (1988) purchased from WHB	30719												
Investment in subsidiary							4000						
Shareholder Subvention Advance											319		

Cashflow items (continued)

Financing Activities													
Cash provided from:													
Borrowings	21500	37403	8932	18936	20788	1108	15025		4000			5400	2950
Convertible Note Issue							10000				-10000		
Share Issues	51000			0							10000		
Cash disbursed to:													
Loan Repayments	223	40258	16769	15839	21169	5405	986	2000		2750	800		
Capital reduction				5000			26000						
Interest Payments (financing)	2211	1633	979										
Dividend Payments		1500	1750	1250	4375	4316	2399	3050	2720	1265	9000	5797	4100
Derived Cashflow data for analysis													
Operating revenue excluding interest	25086	30675	32705	22637	24791	30404	31892	42936	41529	38830	40218	38369	37787
Operating expenses excluding interest	21880	20984	21428	19212	16821	16177	19838	31748	27310	28144	24792	23433	22501
Gross operating surplus	3206	9691	11277	3425	7970	14227	12054	11188	14219	10686	15426	14936	15286
Income tax paid	0	0	0	0	0	2724	2450	2807	5651	1320	568	3337	3491
Comparison item: tax provision from P&L	0	0	0	0	0	3208	1097	2545	2290	1903	3223	3300	3157

Fixed Assets													
Freehold Land													
Cost/Valuation	41781	41781	43331	43331	35539	35539	35539	35539	35539	35539	35539	35539	35539
Accumulated depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Book Value	41781	41781	43331	43331	35539	35539	35539	35539	35539	35539	35539	35539	35539
Buildings & Wharves													
Cost/Valuation	19684	21210	20455	19789	28703	32213	33237	34634	37160	38096	39325	44677	52767
Accumulated depreciation	244	1003	1848	2315	3643	5168	6968	8802	10528	12345	14208	15983	18111
Net Book Value	19440	20207	18607	17474	25060	27045	26269	25832	26632	25751	25117	28694	34656
Floating Plant & Cranes													
Cost/Valuation	5744	5737	5721	5735	6673	5813	5868	5846	5938	6179	6193	8105	9219
Accumulated depreciation	263	642	1018	1303	1686	1797	2157	2474	2701	2903	3127	3348	3687
Net Book Value	5481	5095	4703	4432	4987	4016	3711	3372	3237	3276	3066	4757	5532
Plant, Vehicles & Equipment													
Cost/Valuation	3689	4057	4129	5035	5850	6359	11054	13018	16468	16999	18759	19772	18079
Accumulated depreciation	385	1168	1944	2564	3212	4004	7651	8764	10281	11822	13427	13753	12578
Net Book Value	3304	2889	2185	2471	2638	2355	3403	4254	6187	5177	5332	6019	5501
Work in Progress													
Cost/Valuation	0	0	0	0	0	507	488	0	0	0	0	0	0
Accumulated depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Book Value	0	0	0	0	0	507	488	0	0	0	0	0	0
Totals													
Cost/Valuation	70898	72785	73636	73890	76765	80431	86186	89037	95105	96813	99816	108093	115604
Accumulated depreciation	892	2813	4810	6182	8541	10969	16776	20040	23510	27070	30762	33084	34376
Net Book Value	70006	69972	68826	67708	68224	69462	69410	68997	71595	69743	69054	75009	81228
CAPEX and Fixed Asset Stocks analysis													
Book value at cost	70898	72785	73636	73890	76765	80431	86186	89037	95105	96813	99816	108093	115604
Year-by-year increase in book value		1887	851	254	2875	3666	5755	2851	6068	1708	3003	8277	7511
Asset purchases less disposals (from c/f stmt)	3551	1723	1137	315	2327	2907	1572	3024	6190	1910	3009	9480	9348
Gross asset purchases (from c/f stmt)	3668	2201	1214	375	2394	4939	1662	3063	6272	1939	3016	9575	9417
Cumulative using net acquisitions	70898	72621	73758	74073	76400	79307	80879	83903	90093	92003	95012	104492	113840
Cumulative using gross acquisitions	70898	73099	74313	74688	77082	82021	83683	86746	93018	94957	97973	107548	116965
Difference (net)	0	164	-122	-183	365	1124	5307	5134	5012	4810	4804	3601	1764
Difference (gross)	0	-314	-677	-798	-317	-1590	2503	2291	2087	1856	1843	545	-1361

Cargo Statistics													
Total (tonnes)		5808517	5911920	5885352	4555625	6231283	6638794	7056000	7249000	7456000	8148000	9022000	9348000	9800000
Revenue excl. interest		27359	28769	29812	22139	27237	27941	32241	42295	40942	38694	40578	38488	38308
Expenses excl. interest & depreciation		20672	19535	18714	13317	16305	14908	19473	28764	27743	27269	25029	23615	23654
EBDIT		6687	9234	11098	8822	10932	13033	12768	13531	13199	11425	15549	14873	14654
Average P&L Revenue $/tonne		$4.71	$4.87	$5.07	$4.86	$4.37	$4.21	$4.57	$5.83	$5.49	$4.75	$4.50	$4.12	$3.91
Average P&L Expenses $/tonne		$3.56	$3.30	$3.18	$2.92	$2.62	$2.25	$2.76	$3.97	$3.72	$3.35	$2.77	$2.53	$2.41
Average P&L Surplus $/tonne		$1.15	$1.56	$1.89	$1.94	$1.75	$1.96	$1.81	$1.87	$1.77	$1.40	$1.72	$1.59	$1.50
PPI (Inputs)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
average for year ending June	795	841	900	919	929	952	972	982	988	991	999	1000	1039	1130
average for year ending September	805	857	907	922	934	959	975	983	989	992	1001	1003	1060	1147
average for nine months ending June	799	848	905	922	931	955	973	982	989	991	1000	999	1046	1139
for September quarter	822	885	912	921	943	968	980	986	990	995	1003	1016	1101	1169
for June quarter	810	863	913	919	936	960	975	983	989	990	1003	1001	1060	1146

IRR analysis using Cashflow Accounts

Book value of fixed assets													
Opening		72500											81228
Closing		70006	69972	68826	67708	68224	69462	69410	68997	71595	69743	69054	75009	81228
		25086	30675	32705	22637	24791	30404	31892	42936	41529	38830	40218	38369	37787
Revenue excl interest		25086	30675	32705	22637	24791	30404	31892	42936	41529	38830	40218	38369	37787
Operating expenditure excl interest		21880	20984	21428	19212	16821	16177	19838	31748	27310	28144	24792	23433	22501
Gross operating surplus		3206	9691	11277	3425	7970	14227	12054	11188	14219	10686	15426	14936	15286
Cash purchases of fixed assets and acquisitions, gross		3668	2631	1214	375	2699	5036	5662	3076	6275	1939	3357	9660	9417
Cash purchases of fixed assets and acquisition, net of disposals		3538	2153	1137	315	2632	2887	4502	3037	6187	1910	3347	9565	9348
Net surplus pre-tax and pre-rebates, using net capex		-332	7538	10140	3110	5338	11340	7552	8151	8032	8776	12079	5371	5938
Cash income tax		0	0	0	0	0	2724	2450	2807	5651	1320	568	3337	3491
Net surplus after tax		-332	7538	10140	3110	5338	8616	5102	5344	2381	7456	11511	2034	2447

Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	91,595													
Real net cash surplus, pre-tax		-411	8,814	11,664	3,550	5,942	12,373	8,156	8,743	8,593	9,317	12,807	5,482	5,571
Real cash income tax paid		0	0	0	0	0	2,972	2,646	3,011	6,046	1,401	602	3,406	3,275
Post-tax real cashflow to owners		-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	2,076	2,296
Real exit price (book value including revaluations)		83,849	81,327	79,213	76,109	74,708	75,132	74,619	73,876	76,272	73,706	72,045	72,216	73,654
Real cash stream for exit at end of financial year:														
1990	**-91,595**	-411	90,142											
1991	**-91,595**	-411	8,814	90,877										
1992	**-91,595**	-411	8,814	11,664	79,658									
1993	**-91,595**	-411	8,814	11,664	3,550	80,650								
1994	**-91,595**	-411	8,814	11,664	3,550	5,942	84,533							
1995	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	80,129						
1996	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	5,510	79,608					
1997	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	78,819				
1998	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	81,622			
1999	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	84,249		
2000	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	74,292	
2001	**-91,595**	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	2,076	75,950
Exiting at:			**Sep-90**	**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:			**-1.0%**	**2.8%**	**2.3%**	**2.9%**	**4.3%**	**4.5%**	**4.7%**	**4.9%**	**5.0%**	**5.6%**	**5.5%**	**5.4%**

IRR Analysis using P&L Accounts for operating surplus

Book value of fixed assets													
Opening	72500												
Closing	70006	69972	68826	67708	68224	69462	69410	68997	71595	69743	69054	75009	81228
Revenue excl interest	27359	28769	29812	22139	27237	27941	32241	42295	40942	38694	40578	38488	38308
Operating expenditure excl interest, depreciation, asset sales	20672	19535	18714	13317	16305	14908	19473	28764	27743	27269	25029	23615	23654
Gross operating surplus	6687	9234	11098	8822	10932	13033	12768	13531	13199	11425	15549	14873	14654
Cash purchases of fixed assets and acquisitions net of disposals	3538	2153	1137	315	2632	2887	4502	3037	6187	1910	3347	9565	9348
Net surplus pre-tax using net capex	3149	7081	9961	8507	8300	10146	8266	10494	7012	9515	12202	5308	5306
Income tax provision	0	0	0	0	0	3208	1097	2545	2290	1903	3223	3300	3157
Net surplus after tax	3149	7081	9961	8507	8300	6938	7169	7949	4722	7612	8979	2008	2149

Data deflated to June 2000 dollars														
Assets at acquisition on 1 October 1988	91,595													
Real net surplus pre-tax		3,895	8,280	11,458	9,709	9,239	11,070	8,927	11,256	7,502	10,101	12,937	5,418	4,978
Real income tax provision		0	0	0	0	0	3,500	1,185	2,730	2,450	2,020	3,417	3,368	2,962
Post-tax real cash surplus to owners		3,895	8,280	11,458	9,709	9,239	7,570	7,742	8,526	5,052	8,081	9,520	2,050	2,016
Real exit price (net book value)		83,849	81,327	79,213	76,109	74,708	75,132	74,619	73,876	76,272	73,706	72,045	72,216	73,654
Real cash stream for exit at end of financial year:														
1990	-91,595	3,895	89,607											
1991	-91,595	3,895	8,280	90,672										
1992	-91,595	3,895	8,280	11,458	85,818									
1993	-91,595	3,895	8,280	11,458	9,709	83,947								
1994	-91,595	3,895	8,280	11,458	9,709	9,239	82,702							
1995	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	82,362						
1996	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	7,742	82,402					
1997	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	7,742	8,526	81,324				
1998	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	7,742	8,526	5,052	81,787			
1999	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	7,742	8,526	5,052	8,081	81,565		
2000	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	7,742	8,526	5,052	8,081	9,520	74,265	
2001	-91,595	3,895	8,280	11,458	9,709	9,239	7,570	7,742	8,526	5,052	8,081	9,520	2,050	75,670
Exiting at:			**Sep-90**	**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:			**1.1%**	**4.2%**	**5.0%**	**5.9%**	**6.5%**	**6.8%**	**7.1%**	**7.3%**	**7.3%**	**7.5%**	**7.3%**	**7.2%**

IRR analysis using Cashflow Accounts and EV/EBITDA for Exit Price

Opening Value of fixed assets		72500												138,170
Exit price						90,109	119,090	126,181	101,230	152,385	99,702	165,017	126,747	138,170
using EV/EBITDA multiple of						8.2x	9.1x	9.9x	7.5x	11.5x	8.7x	10.6x	8.5x	9.4x
Net Surplus after Tax		-332	7538	10140	3110	5338	8616	5102	5344	2381	7456	11511	2034	2447
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	91,595													
Real net cash surplus, pre-tax		-411	8,814	11,664	3,550	5,942	12,373	8,156	8,743	8,593	9,317	12,807	5,482	5,571
Real cash income tax paid		0	0	0	0	0	2,972	2,646	3,011	6,046	1,401	602	3,406	3,275
Post-tax real cashflow to owners		-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	2,076	2,296
Real exit price (EV/EBITDA basis)					0	98,673	128,811	135,651	108,387	162,340	105,368	172,164	122,027	125,286
Real cash stream for exit at end of financial year:														
1993	-91,595	-411	8,814	11,664	3,550	104,615								
1994	-91,595	-411	8,814	11,664	3,550	5,942	138,212							
1995	-91,595	-411	8,814	11,664	3,550	5,942	9,401	141,161						
1996	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	114,119					
1997	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	164,887				
1998	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	113,283			
1999	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	184,369		
2000	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	124,103	
2001	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	2,076	127,582
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**7.6%**	**11.8%**	**11.5%**	**8.4%**	**11.7%**	**7.6%**	**11.3%**	**8.4%**	**8.2%**

IRR analysis using Cashflow Accounts and Price:Book for Exit Price

Opening Value of fixed assets	72500													
SHF from balance sheet						62547	66637	52155	44478	46959	47311	52957	55850	58652
Core debt						5657	1139	15000	23759	27000	24250	13478	18850	21822
Exit price						63,927	105,707	112,644	128,500	197,705	171,127	163,825	160,526	168,842
using Price:NBV multiple of						0.9x	1.6x	1.9x	2.4x	3.6x	3.1x	2.8x	2.5x	2.5x
Net Surplus after Tax		-332	7538	10140	3110	5338	8616	5102	5344	2381	7456	11511	2034	2447
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	91,595													
Real net cash surplus, pre-tax		-411	8,814	11,664	3,550	5,942	12,373	8,156	8,743	8,593	9,317	12,807	5,482	5,571
Real cash income tax paid		0	0	0	0	0	2,972	2,646	3,011	6,046	1,401	602	3,406	3,275
Post-tax real cashflow to owners		-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	2,076	2,296
Real exit price (Price:Book basis)						70,586	114,923	121,467	137,725	211,684	180,852	173,481	160,526	156,171
Real cash stream for exit at end of financial year:														
1993	-91,595	-411	8,814	11,664	3,550	76,528								
1994	-91,595	-411	8,814	11,664	3,550	5,942	124,324							
1995	-91,595	-411	8,814	11,664	3,550	5,942	9,401	126,978						
1996	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	143,457					
1997	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	214,232				
1998	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	188,767			
1999	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	185,686		
2000	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	162,602	
2001	-91,595	-411	8,814	11,664	3,550	5,942	9,401	5,510	5,732	2,547	7,915	12,205	2,076	158,467
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**2.0%**	**10.1%**	**10.1%**	**10.9%**	**14.4%**	**12.0%**	**11.3%**	**10.2%**	**9.5%**

Appendix D. Lyttelton

D.1 Background

The 1988-90 Port Plan provided an estimated value of the "port related commercial undertakings" as at 30 September 1988 of $34 million, representing the fixed assets, investments and net working capital.[43] The valuation "has been carried out on the assumption that the port activity will continue and utilising the 'business worth' approach based on the stream of income arising from the port company. The value has been determined using a discounted cash flow methodology."

The Port Plan further noted that "the price to be paid to the Harbour Board by the port company for the identified and agreed port-related commercial undertakings will be based on the valuation of $34 million adjusted for the audited assets and liabilities as at 30 September 1988".[44] The anticipated arrangement was that the price would be met by the issue of approximately $25 million of debt securities and approximately $9 million of equity securities, giving a debt/equity ratio of 74%/26%. The target ratio of shareholders' equity to total assets (fixed assets + investments + current assets) was 50%.[45]

The objective of the company was set out on p.2 of the Port Plan: "to operate a successful business as an efficient transport link providing service to our customers for the benefit of the region, the shareholders and employees". Of the five means set out to achieve this, none specifically mentions minimising the costs to port users, although one does refer to "undertaking the Port operations in a cost efficient and effective manner" and another refers to "being responsive to the requirements of Port users and potential customers". The second of these clearly warrants bypass (limit) pricing, but only indirectly and by inference could one argue that the company objective required the passing-through to users of cost savings, whether due to volume growth or to rationalisation.

The three named groups of beneficiaries (region, shareholders and employees) are rivals for shares of the pie as well as joint beneficiaries from growth in the pie. The Port Plan left unresolved the issue of how distributional conflicts ought to be resolved. It also left open the interpretation which local authorities would tend to adopt, that the interests of "the region" ought to be identified with revenues for local authorities to flow through to rates relief, as an alternative to lower transport costs flowing through to regional export and import-dependent enterprises.

The Lyttelton Port Company Ltd commenced operations from 1 October 1988. Due to delays in approval of the Port Plan, shares were not issued until 1990. Authorised share capital was $20 million, made up of

- 20.4 million Class A 50-cent shares which "must be held by Harbour Boards, Territorial Authorities, Regional Councils or United Councils, or any combination of these"[46];
- 19.6 million ordinary 50-cent shares, which rank equally with Class A shares in respect of voting and dividend rights.

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43 Lyttelton Port Company Ltd Establishment Unit, *Port Company Plan* p.1.
44 Lyttelton Port Company Ltd Establishment Unit, *Port Company Plan* p.1.
45 Lyttelton Port Company Ltd Establishment Unit, *Port Company Plan* p.3.
46 Annual Report 1989 p.5.

Initially only $2,000 of capital was issued (2,091 A shares and 2,009 ordinary shares).

On 12 January 1990, an issue of 10.3 million 50 cent shares at a premium of 50 cents per share was made to the Lyttelton Harbour Board in consideration for the transfer of port related commercial undertakings to the company as at 1 October 1988.[47] The share issue comprised a proportional bundle of Class A and ordinary shares. The Government subsequently removed the requirement for at least 51% of shares to be owned by local authorities, and in the 1991 accounts the Class A share category was dropped and all issued shares were listed as ordinary shares.

The Lyttelton Harbour Board shares were owned by 6 local territorial authorities; as of June 1991, shareholders were:

	%
Ashburton District Council	15.38
Banks Peninsula District Council	7.69
Christchurch City Council	53.85
Hurunui District Council	7.60
Selwyn District Council	7.69
Waimakariri District Council	7.69
Total	100.00

In January 1991 the company issued $10 million of mandatory convertible unsecured and subordinated convertible notes to three shareholders which between them held a controlling interest in the Port. The notes were held through a nominee company with shareholding as follows:[48]

	%
Christchurch City Council	77.8
Hurunui District Council	11.1
Waimakariri District Council	11.1
Total	100.0

The notes were convertible to ordinary shares on 30 November 1995 or earlier at the shareholder's request. The notes were in due course so converted, increasing issued share capital to 20,304,100 ordinary shares of 50 cents each.[49]

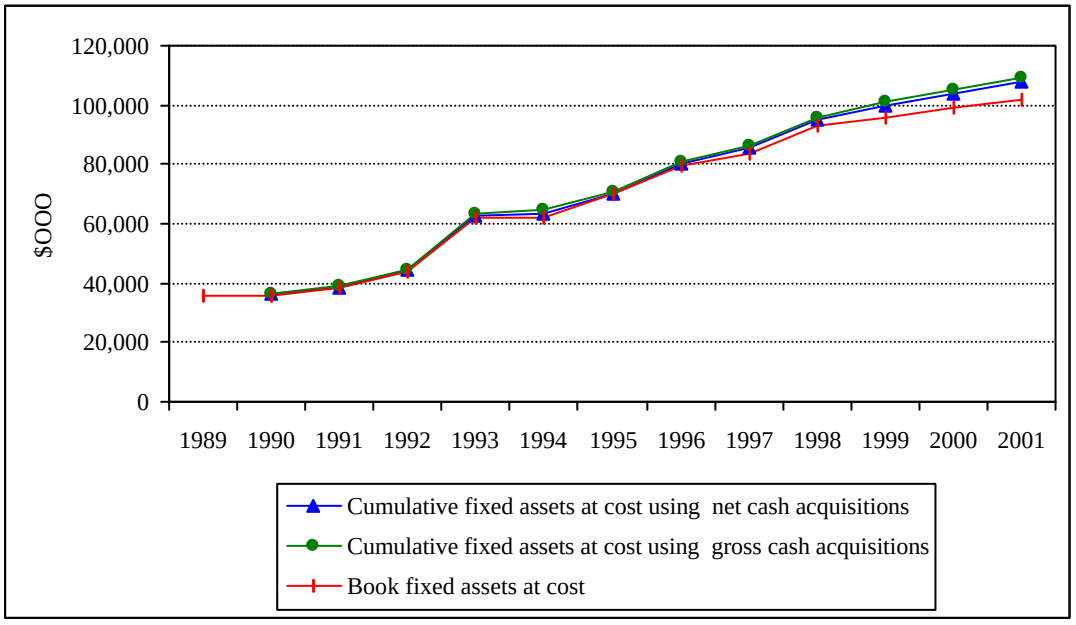
On 28 June 1996 19,036,210 fully-paid ordinary shares were offered for sale at $1 per share by the Hurunui, Selwyn and Waimakariri District Councils. 82,484,290 shares remained under the ownership of Ashburton District, Banks Peninsula District, Christchurch City and Waimakariri District Councils.[50]

47 Annual Report 1990 , "Directors' Report" p.2.
48 Annual Report 1991 p.15 Note 4.
49 Prospectus p.39.
50 Prospectus p.7.

D.2 Fixed Asset Values

Lyttelton has not revalued any assets to date - at least not upward. The value of fixed assets at cost has actually risen by slightly less than the reported cash acquisition of fixed assets, though the divergence is not huge (a discrepancy of $6 million on assets of $100 million), indicating some asset write-downs. The chart below shows the close match between a capex-based asset inventory and the book values at cost recorded in Annual Reports. The series diverge only on the last three years.

	(1) Total fixed assets at cost, from balance sheet $000	(2) Increase in "fixed assets at cost" [from (1)] $000	(3) Cash spent on fixed assets net of cash from disposal of fixed assets, $000	(4) Cash spent on fixed assets, gross $000	(5) Cumulative fixed assets at cost using net cash capex [from (1) and (3)] $000	(6) Cumulative fixed assets at cost using gross cash capex [from (1) and (4)] $000
1989	35,402		1,448	1,499		
1990	36,011	609	921	1,014	36,323	36,416
1991	38,241	2,230	2,291	2,503	38,614	38,919
1992	43,597	5,356	5,575	5,782	44,189	44,701
1993	62,008	18,411	18,585	18,665	62,774	63,366
1994	62,337	329	930	1,086	63,704	64,452
1995	69,919	7,582	6,565	6,640	70,269	71,092
1996	79,799	9,880	10,011	10,077	80,280	81,169
1997	83,509	3,710	5,162	5,283	85,442	86,452
1998	92,727	9,218	9,354	9,385	94,796	95,837
1999	95,842	3,115	5,237	5,386	100,033	101,223
2000	98,972	3,130	4,092	4,146	104,125	105,369
2001	101,747	2,775	3,559	3,934	107,684	109,303



The potential for a revaluation to replacement cost clearly exists and is fully appreciated by the port's owners and management. In 1997, when "fixed assets at cost" were recorded as $83.5 million (see table above), NZ First Capital (in *From the Crow's Nest* p.25) estimated the replacement cost as $313.7 million – i.e. a multiple of nearly four (and land seems to

have been excluded from the estimate, which means the potential for upward revaluation is even greater[51]).

In the 1998 Annual Report p.31 an ODV (evidently basically a DRC) valuation was included in the notes to the financial statements, with results summarised in the table below:

	At original cost $000	Book value $000	ODV $000
Freehold land	8,818	8,818	20,000
Buildings	4,069	3,502	6,967
Harbour structures	33,837	26,561	58,168
Plant, equipment and vehicles	42,013	25,500	28,872
Vessels	3,551	1,947	8,708
Resource consents	439	328	328
Total	92,727	66,656	123,043

Thus an ODV exercise could be expected to double the asset base, or more than double it if land were to be valued at reclamation cost.

In the 1999 *Annual Report* p.10 and 2000 *Annual Report* p.4 Chairman Brent Layton mentioned in passing "the approximately $130 million it would cost to replace the company's infrastructure in its current state" and commented on the realised rate of return using this denominator.

D.3 3. Revenues and Expenses

Revenue growth has been driven by volume growth rather than by price increases.

The two key series for our analysis are *revenue excluding interest and other investment income*, and *expenditure excluding depreciation and interest*.

		Gross Revenue	Of which, interest income	Revenue excluding interest received	Expend-iture excluding interest	Deprec'n	Expend-iture excluding deprec'n and interest
Year to September	1989	36,722	232	36,490	30,344	1,620	28,724
9 months to June	1990	28,628	147	28,481	22,485	1,246	21,239
Year to June	1991	34,799	165	34,634	29,137	1,729	27,408
Year to June	1992	35,426	136	35,290	27,068	1,904	25,164
Year to June	1993	34,073	88	33,985	23,589	2,295	21,294
Year to June	1994	39,699	11	39,688	25,902	3,004	22,898
Year to June	1995	46,304	15	46,289	31,322	3,120	28,202
Year to June	1996	48,599	28	48,571	32,882	3,783	29,099
Year to June	1997	52,256	143	52,113	33,008	4,520	28,488
Year to June	1998	53,000	111	52,889	33,381	4,897	28,484

[51] The 1993 *Annual Review* p.3 stated that "[t]he flat land within the harbour basin has all arisen from past reclamation. Today, the cost of reclaiming more land is prohibitively expensive, in the vicinity of $3,000,000 per hectare". The total "freehold land at cost" in the fixed-assets table was about $6.3 million at that time, for land which was certainly far more than 2 hectares! (The coal stockpile alone occupies 5 hectares – *Annual Report 2001* p.13.)

Year to June	1999	55,274	51	55,223	33,644	4,659	28,985
Year to June	2000	58,069	2	58,067	34,892	4,580	30,312
Year to June	2001	58,255	0	58,255	36,152	4,462	31,690

Deflated using the PPI Inputs (December 1997=1000) the key series can then be divided by total cargo volume to show the radical reduction over the period in revenues and costs per tonne:

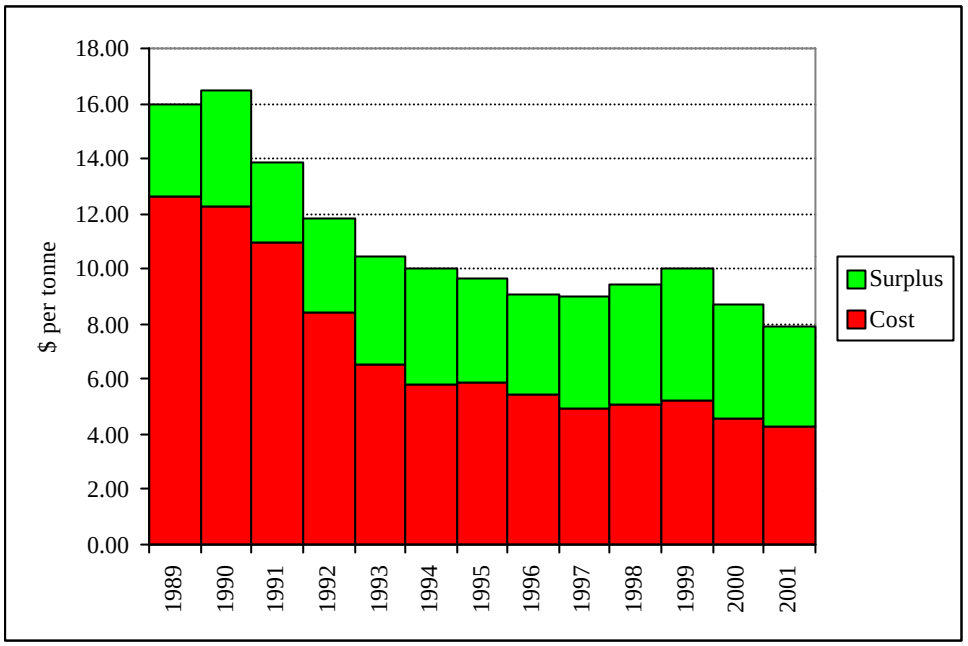
		PPI Inputs Dec 1997 =1000	Revenue excl interest, deflated $000	Expenditure excl interest and depreciation, deflated $000	Total cargo through port, 000 tonnes	Overseas cargo through port, 000 tonnes	Average revenue, $ per 1,000 tonnes	Average cost, $ per 1,000 tonnes
Year to September	1989	857	42,579	33,517	2,661	1,248	16.00	12.60
9 months to June	1990	905	31,482	23,477	1,915	1,225	16.44	12.26
Year to June	1991	919	37,676	29,816	2,720	1,317	13.85	10.96
Year to June	1992	929	37,997	27,094	3,208	1,689	11.85	8.45
Year to June	1993	952	35,689	22,362	3,420	1,684	10.44	6.54
Year to June	1994	972	40,852	23,570	4,074	2,058	10.03	5.79
Year to June	1995	982	47,161	28,734	4,880	2,516	9.66	5.89
Year to June	1996	988	49,148	29,445	5,398	3,043	9.10	5.45
Year to June	1997	991	52,600	28,754	5,823	2,979	9.03	4.94
Year to June	1998	999	52,968	28,527	5,632	2,906	9.40	5.07
Year to June	1999	1000	55,237	28,992	*5,513**	2,844	10.02	5.26
Year to June	2000	1039	55,914	29,188	*6,424**	3,314	8.70	4.54
Year to June	2001	1130	51,565	28,050	*6,523**	3,366	7.90	4.30

* Estimated using the trend in overseas trade tonnage from Statistics New Zealand data.

This gives us the following breakdown of revenue between costs and surplus, showing the gross margin rising from 21.3% in 1989 to 45-48% in the last five years, while holding very little changed the amount of surplus extracted per tonne of cargo:

		Average revenue, real, $ per 1,000 tonnes	Average cost, real, $ per 1,000 tonnes	Average surplus, real, $ per 1,000 tonnes	Surplus as % of revenue
Year to September	1989	16.00	12.60	3.41	21.3
9 months to June	1990	16.44	12.26	4.18	25.4
Year to June	1991	13.85	10.96	2.89	20.9
Year to June	1992	11.85	8.45	3.40	28.7
Year to June	1993	10.44	6.54	3.90	37.3
Year to June	1994	10.03	5.79	4.24	42.3
Year to June	1995	9.66	5.89	3.78	39.1
Year to June	1996	9.10	5.45	3.65	40.1
Year to June	1997	9.03	4.94	4.10	45.3
Year to June	1998	9.40	5.07	4.34	46.1
Year to June	1999	10.02	5.26	4.76	47.5
Year to June	2000	8.70	4.54	4.16	47.8
Year to June	2001	7.90	4.30	3.60	45.6

Lyttelton average revenue broken down between costs and gross margin



D.4 Whole-Port Rate of Return

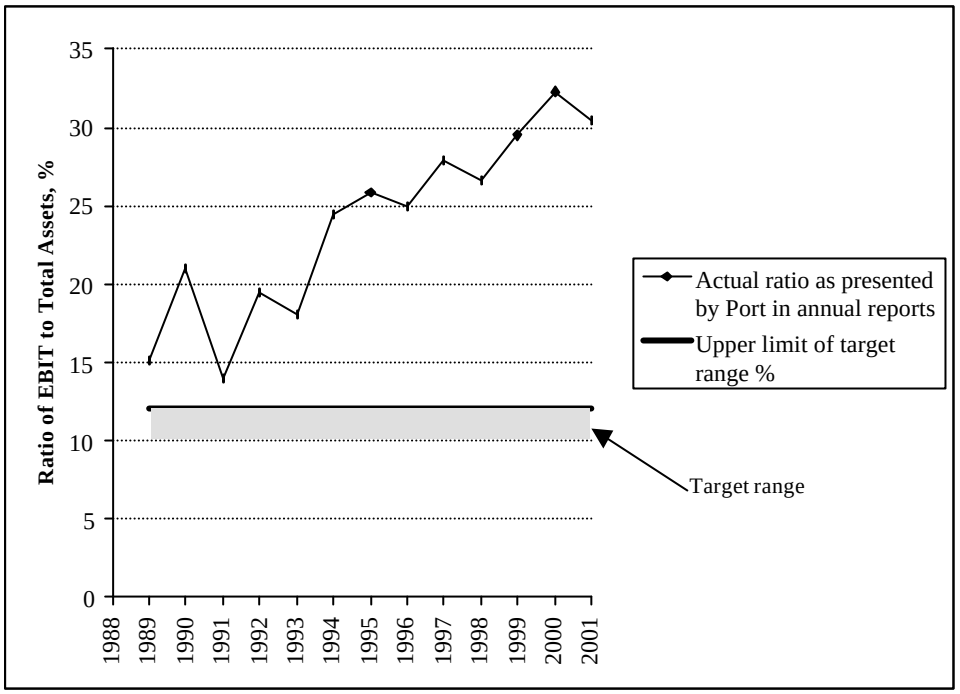
The 1988 Port Plan included a section (6.5) specifying expected financial performance as follows:[52]

> 6.5 <u>The performance targets and other measures by which the performance of the company may be judged in relation to its objectives</u>
>
> A number of performance measures will be used for the company but in the financial sense the two rates of return are:-
>
> - pre interest, pre tax income / total assets 10-12%
> - post tax income / shareholders' funds 11-13%

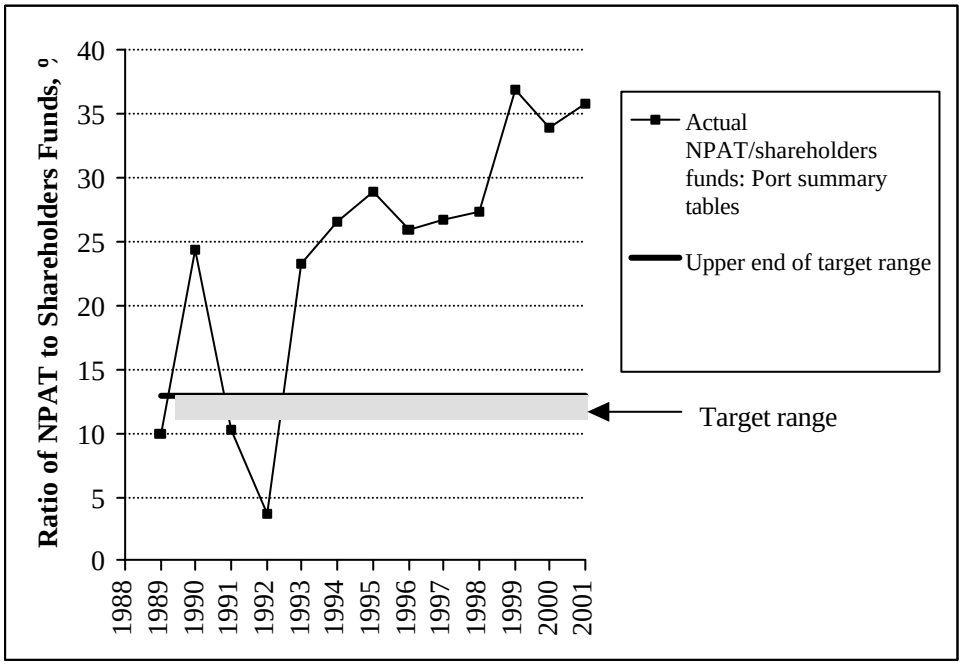
As a preliminary indication of the port's financial performance since corporatisation, it is worth tracing the two ratios specified in the port plan. Data is summarised in the table below.

In the chart below the 12 % upper end of the target range for EBIT return on assets is compared with the actual result as stated in the summary tables presented in the Port Company's annual reports. Clearly the port performed extremely high relative to expectations, with the target range exceeded in every year and the ratio rising above 30% by 2000.

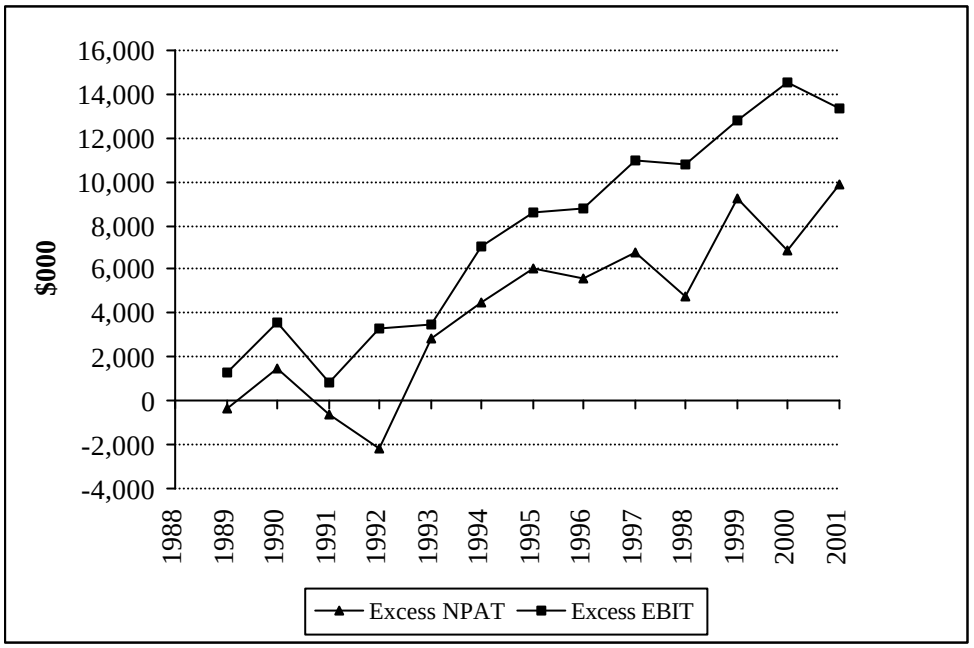
[52] Lyttelton Port Company Ltd Establishment Unit, *Port Company Plan* p.3.



The chart below shows the same comparison for the ratio of NPAT to shareholders funds (defined to include convertible notes prior to 1995). Again the same overall pattern is observed, although in the first couple of years profitability on this measure fell short of target.



Using the gap between actual ratios and the port plan targets enables us to calculate the extent to which the port's profit stream exceeded that which would have been consistent with the upper end of the target ranges. This in turn gives an upper limit of the amount of revenue which could hypothetically have been rebated to users, had the port been operated with the actually-realised cost-efficiency gains but with shareholders accepting no more than target rates of profit.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Excess NPAT
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	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Months in period	12	9	12	12	12	12	12	12	12	12	12	12	12
Performance Measured by EBIT and Total Assets													
Total assets at end of period $000	42,182	39,323	42,072	43,748	57,797	56,207	61,710	67,684	68,977	73,853	73,232	71,653	72,621
Ratio EBIT / Total assets %	15.1	21.0	14.0	19.5	18.1	24.5	25.9	25.0	27.9	26.6	29.5	32.3	30.4
Port Plan target range for EBIT/assets ratio %	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%	10-12%
Excess % return over plan upper target	3.1	9.0	2.0	7.5	6.1	12.5	13.9	13.0	15.9	14.6	17.5	20.3	18.4
Implied excess EBIT $000	1,308	3,539	841	3,281	3,526	7,026	8,578	8,799	10,967	10,783	12,816	14,546	13,362
Performance measured by NPAT and Shareholders Funds													
Shareholders funds at end of period $000	11,387	12,772	23,584	23,558	27,808	32,813	37,825	43,012	49,214	32,788	38,527	32,994	43,272
Ratio NPAT / shareholders funds %	10.0	24.4	10.3	3.7	23.3	26.6	28.9	25.9	26.7	27.4	36.9	33.9	35.8
Port Plan target range for NPAT / equity ratio %	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%	11-13%
Excess % return over plan upper target	-3.0	11.4	-2.7	-9.3	10.3	13.6	15.9	12.9	13.7	14.4	23.9	20.9	22.8
Implied excess NPAT $000	-342	1,456	-637	-2,191	2,864	4,463	6,014	5,549	6,742	4,721	9,208	6,896	9,866

Months	1989 12	1990 9	1991 12	1992 12	1993 12	1994 12	1995 12	1996 12	1997 12	1998 12	1999 12	2000 12	2001 12
Target EBIT $000	5,062	4,719	5,049	5,250	6,936	6,745	7,405	8,122	8,277	8,862	8,788	8,598	8,715
Expenditure incl depreciation excl interest	30,344	22,485	29,137	27,068	23,589	25,902	31,322	32,882	33,008	33,381	33,644	34,892	36,152
gives Target Revenue	35,406	27,204	34,186	32,318	30,525	32,647	38,727	41,004	41,285	42,243	42,432	43,490	44,867
Actual revenue excl interest	36,490	28,481	34,634	35,290	33,985	39,688	46,289	48,571	52,113	52,889	55,223	58,067	58,255
Excess revenue	1,084	1,277	448	2,972	3,460	7,041	7,562	7,567	10,828	10,646	12,791	14,577	13,388
% overcharging	2.95	4.46	1.29	8.39	10.16	17.74	16.33	15.57	20.72	20.09	23.14	25.10	22.98
PPI Inputs	857	905	919	929	952	972	982	988	991	999	1000	1039	1130
Excess revenue, real 2000 dollars	1,429	1,595	551	3,615	4,105	8,188	8,704	8,650	12,347	12,045	14,454	15,857	13,388
Cargo tonnes 000	2,661	1,915	2,720	3,208	3,420	4,074	4,880	5,398	5,823	5,632	5,513	6,424	6,523
Excess revenue, real $ per tonne	0.54	0.83	0.20	1.13	1.20	2.01	1.78	1.60	2.12	2.14	2.62	2.47	2.05
Actual average revenue real $ per tonne	18.19	18.67	15.72	13.43	11.82	11.33	10.92	10.29	10.23	10.65	11.33	9.83	8.93

D.5 IRR calculation

The entry cost presents some problems. The 1989 *Annual Report* p.6 states that:

> Lyttelton Port Company Ltd purchased the commercial assets of the Lyttelton Harbour Board at an agreed price of $34,000,000. The total purchase price was allocated to the assets purchased in proportion to independently obtained 'in use' valuations, or in the case of land, Government valuation as at July 1 1988.

Because the shareholders of the new port company were the same as those of the old Lyttelton Harbour Board, no arms-length transaction took place at vesting, and delays in finalising Government approval of the port plan meant that the capital structure of ownership in the new company did not emerge clearly until 1991, at which stage the port shareholders held $10.3 million in shares and $10 million in convertible notes (which converted to ordinary shares in November 1995). (The remainder of the $34 million purchase price of the business was covered by term debt liabilities.)

On the assumption that an arms-length transfer to a new owner at vesting would have involved the same capital structure of $20.3 million of equity and the remainder in term debt, an entry cost of $20.3 million has been assumed at October 1988.

For an exit revenue entry there are two main choices: the net book value of fixed assets at June 2001 ($65.234 million), or the depreciated replacement cost (taken as $130 million). In the absence of revaluation, the former is preferred for our purposes.

One problem in setting up the calculation is the change in financial year from a September to a June basis between 1989 and 1990. This has been adjusted for by adding one-quarter of the figures for the September year 1989 onto the nine-month period to June 1990, and treating the remaining three-quarters of the September year 1989 as if it were a full June year. The effect again is to bias downward the IRR estimate, since the first year of positive cashflows is reduced by omission of one quarter's actual earnings.

Lyttelton Port Corporation

As at / Period ending	Sep-88	Sep-89	Jun-90	Jun-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Months in period	12	12	9	12	12	12	12	12	12	12	12	12	12	12
P&L data as shown in annual reports, $000														
Gross Revenue		**36,722**	**28,628**	**34,799**	**35,426**	**34,073**	**39,699**	**46,304**	**48,599**	**52,256**	**53,000**	**55,274**	**58,069**	**58,255**
of which investment income other than local body stock		155	90	158	136	88	11	15	28	143	111	51	2	6
investment income (local body stock)		77	57	7							525			
Capital gain on sale of fixed asset										7	9			
Expenditure (interest not included)		***30,344***	***22,485***	***29,956***	***32,992***	***23,589***	***25,902***	**31,322**	**32,882**	**33,008**	**33,381**	**33,644**	**34,892**	**36,152**
Loss on sale of fixed assets		-41	108	-13	77	-31	156	338		-8	88	-5	-4	-297
"Diminution of fixed assets"												248	474	0
Depreciation		1,620	1,246	1,729	1,904	2,295	3,004	3,120	3,783	4,520	4,897	4,659	4,580	4,462
Donations							3	19	0	15	30	33	55	63
Bad debts written off							1	0	395	51	65	178	2	3
Waterfront Industry Restructuring Authority payment					-330	136								
Gratuity allowance written off					-203									
Severance payments			0	832	6,390	-25								
Provision for doubtful debts							14	106	177	-2	106	-37	314	20
Stock obsolescence provision		0	189											
Freight station building write off provision		0	187											
EBIT		6,378	6,143	4,843	2,434	10,484	13,797	16,058	16,946	19,248	19,619	21,630	23,177	22,103
Interest		4,150	2,658	2,826	2,500	2,146	2,444	1,076	1,229	911	686	1,821	1,132	1,494
Net profit before taxation		2,228	3,485	2,017	-66	8,338	11,353	14,982	15,717	18,367	18,933	19,809	22,045	20,609
Taxation expense		428	431	432	-296	2,852	3,772	4,967	5,251	6,040	6,086	6,658	7,188	6,952
Net profit after taxation			3,054	1,585	230	5,486	7,581	10,015	10,466	12,297	12,847	13,151	14,857	13,657
Extraordinary: repayment of Waterfront Industry Commission loan		-516	-845											
Derived P&L Data for Analysis														
Revenue excluding interest		*36,567*	*28,538*	*34,641*	*35,290*	*33,985*	*39,688*	*46,289*	*48,571*	*52,106*	*52,880*	*55,223*	*58,067*	*58,249*
Expenses excluding interest and depreciation		*28,724*	*21,239*	*28,227*	*31,088*	*21,294*	*22,898*	*28,202*	*29,099*	*28,488*	*28,484*	*28,985*	*30,312*	*31,690*
Expenses excluding interest, depreciation & abnormals		*28,765*	*20,755*	*28,240*	*31,011*	*21,325*	*22,742*	*27,864*	*29,099*	*28,496*	*28,396*	*28,742*	*29,842*	*31,987*
Expenses excluding interest, depreciation, severance/restructuring & abnormals		*28,765*	*20,755*	*27,408*	*25,154*	*21,214*	*22,742*	*27,864*	*29,099*	*28,496*	*28,396*	*28,742*	*29,842*	*31,987*
Gross operating surplus excl abnormals but incl severance/restructuring		*7,802*	*7,783*	*6,401*	*4,279*	*12,660*	*16,946*	*18,425*	*19,472*	*23,610*	*24,484*	*26,481*	*28,225*	*26,262*
EBITDA		*7,998*	*7,389*	*6,572*	*4,338*	*12,779*	*16,801*	*19,178*	*20,729*	*23,768*	*24,516*	*26,289*	*27,757*	*26,565*

Cashflows Statement from annual reports													
Operating activities: cash provided from													
Receipts from customers	36,187	28,337	35,092	35,909	34,654	39,139	45,027	48,515	52,572	52,056	55,519	57,440	56,824
Interest received	126	127	165	136	88	11	15	28	143	109	44	7	6
Operating activities: cash applied to													
Payments to suppliers and employees	29,774	19,913	29,686	31,557	21,156	22,004	27,308	27,033	28,339	29,129	27,564	29,049	32,430
Interest paid	4,205	3,680	2,760	2,701	2,209	2,283	1,171	1,238	932	457	1,870	1,209	1,529
Taxes paid	0	254	448	0	3,625	3,691	4,956	3,502	5,923	5,749	6,491	8,122	6,992
Net cash flows from operating activities	*2,334*	*4,617*	*2,363*	1,787	7,752	11,172	11,607	16,770	17,521	16,831	19,638	19,067	15,879
Investing activities: cash provided from													
Proceeds from sale of fixed assets	51	93	212	207	80	156	75	66	121	31	149	54	375
Proceeds from sale of investments	804	694	390										
Investing activities: cash applied to													
Purchase of fixed assets	1,499	1,014	2,503	5,782	18,665	1,086	6,640	10,077	5,283	9,385	5,386	4,146	3,934
Interest paid and capitalised in fixed assets									0	184	49	71	0
Net cash flows from investing activities	*-644*	*-227*	*-1,901*			-930	-6,565	-10,011	-5,162	-9,538	-5,286	-4,163	-3,559
Financing activities: cash provided from													
Proceeds of short term debt		5,500	0										
Proceeds from long term debt	900												
Proceeds from bank bill debt				9,400	8,100								
Proceeds from Convertible Note issue		0	10,000										
Proceeds from Term Advances									0	21,366		8,053	0
Financing activities: cash applied to													
Repayment of short term debt		0	5,500										
Repayment of bank bill debt						5,500	500	0	5,000				
Repayment of long term debt		12,780	174	5,602	57	4,020	394						
Repayment of Term Advances											8,533	7,086	0
Dividend paid		515	258	515	618	1,133	3,675	5,419	5,791	29,222	6,396	8,172	20,590
Net cash from financing activities	*900*	*-7,795*	*4,068*	3,283	7,425	-10,653	-4,569	-5,419	-10,791	-7,856	-14,929	-15,258	-20,590
Net increase in cash held	1,149	-3,405	4,530	-505	-3,408	-411	473	1,340	1,568	-563	-577	-354	-217
Opening cash brought forward	-198	951	-2,454	2,076	1,571	-1,837	-2,248	-1,775	-435	1,133	570	-7	-361
Closing cash carried forward	951	-2,454	2,076	1,571	1,837	-2,248	-1,775	-435	1,133	570	-7	-361	-578

Derived Cashflow data for analysis													
Operating revenue excluding interest	*36,187*	*28,337*	*35,092*	*35,909*	*34,654*	*39,139*	*45,027*	*48,515*	*52,572*	*52,056*	*55,519*	*57,440*	*56,824*
Operating expenses excluding interest	*29,774*	*19,913*	*29,686*	*31,557*	*21,156*	*22,004*	*27,308*	*27,033*	*28,339*	*29,129*	*27,564*	*29,049*	*32,430*
Gross operating surplus	*6,413*	*8,424*	*5,406*	*4,352*	*13,498*	*17,135*	*17,719*	*21,482*	*24,233*	*22,927*	*27,955*	*28,391*	*24,394*
Income tax paid	*0*	*254*	*448*	*0*	*3,625*	*3,691*	*4,956*	*3,502*	*5,923*	*5,749*	*6,491*	*8,122*	*6,992*
Comparison item: tax provision from P&L	*428*	*431*	*432*	*-296*	*2,852*	*3,772*	*4,967*	*5,251*	*6,040*	*6,086*	*6,658*	*7,188*	*6,952*
Fixed Assets as per Annual Reports $000:													
Freehold land at cost	6,103	6,347	6,180	6,351	6,265	6,274	8,135	8,229	8,168	8,818	8,818	8,865	8,818
Freehold land accumulated depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0
Freehold land book value	6,103	6,347	6,180	6,351	6,265	6,274	8,135	8,229	8,168	8,818	8,818	8,865	8,818
Buildings at cost	3,284	3,362	3,330	3,324	3,657	3,588	3,787	3,828	3,854	4,069	4,083	3,931	3,980
Buildings accumulated depreciation	55	92	144	166	220	278	339	424	489	567	666	734	833
Buildings book value	3,229	3,270	3,186	3,158	3,437	3,310	3,448	3,404	3,365	3,502	3,417	3,197	3,147
Harbour structures at cost	11,237	11,496	13,076	15,638	19,831	20,024	20,675	25,603	27,951	33,837	36,380	39,056	39,493
Harbour structures accumulated depreciation	453	802	1,277	1,813	2,383	3,053	3,787	4,828	6,079	7,276	8,298	9,350	10,495
Harbour structures book value	10,784	10,694	11,799	13,825	17,448	16,971	16,888	20,775	21,872	26,561	28,082	29,706	28,998
Plant, equipment & vehicles at cost									39,584	42,013	42,537	44,068	46,341
Plant, equipment & vehicles accumulated depreciation									13,925	16,513	18,182	21,253	23,481
Plant, equipment & vehicles book value									25,659	25,500	24,355	22,815	22,860
Vessels at cost	3,394	3,394	3,394	3,666	3,548	3,502	3,502	3,539	3,539	3,551	3,583	2,613	2,653
Vessels accumulated depreciation	190	332	512	653	759	892	1,060	1,265	1,435	1,604	1,771	1,320	1,420
Vessels book value	3,204	3,062	2,882	3,013	2,789	2,610	2,442	2,274	2,104	1,947	1,812	1,293	1,233
Plant, equipment & furniture at cost	11,195	11,258	12,042	14,348	28,174	28,442	33,250	37,405					
Plant, equipment & furniture accumulated depreciation	889	1,567	2,478	3,304	4,650	6,332	8,495	10,852					
Plant, equipment & furniture book value	10,306	9,691	9,564	11,044	23,524	22,110	24,755	26,553					
Motor vehicles at cost	189	154	219	270	440	507	570	856					
Motor vehicles accumulated depreciation	33	56	93	131	138	181	193	277					
Motor vehicles book value	156	98	126	139	302	326	377	579					
Total tangible fixed assets at cost	35,402	36,011	38,241	43,597	62,008	62,337	69,919	37,371	79,242	88,219	95,401	98,533	101,285
Total tangible fixed assets accumulated depreciation	1,620	2,849	4,504	6,067	8,196	10,736	13,874	6,093	21,439	25,393	28,917	32,657	36,229
Total tangible fixed assets book value	33,782	33,162	33,737	37,530	53,812	51,601	56,045	31,278	57,803	62,826	66,484	65,876	65,056

Resource consents at cost									339	413	439	441	439	462
Resource consents accumulated depreciation									9	55	111	169	226	284
Resource consents book value									330	358	328	272	213	178
Total fixed assets at cost		35,402	36,011	38,241	43,597	62,008	62,337	69,919	79,799	83,509	92,727	95,842	98,972	101,747
Total fixed assets accumulated depreciation		1,620	2,849	4,504	6,067	8,196	10,736	13,874	17,655	21,983	26,071	29,086	32,883	36,513
Total fixed assets book value	34,000	33,782	33,162	33,737	37,530	53,812	51,601	56,045	62,144	61,526	66,656	66,756	66,089	65,234
Term debt	23,696	12,867	11,224	5,720	14,015	18,084	12,481	11,658	11,658	6,653	28,001	17,000	9,750	17,500
Book value minus term debt		20,915	21,938	28,017	23,515	35,728	39,120	44,387	50,486	54,873	38,655	49,756	56,339	47,734

Capex and Fixed Asset stocks analysis

Cash from disposal of fixed assets	51	93	212	207	80	156	75	66	121	31	149	54	375
Cash from sale of investments	804	694	390	0	0	0	0	0	0	0	0	0	0
Purchase of fixed assets	1,499	1,014	2,503	5,782	18,665	1,086	6,640	10,077	5,283	9,385	5,386	4,146	3,934
Interest paid and capitalised in fixed assets	0	0	0	0	0	0	0	0	0	184	49	71	0
Cash spent on fixed assets gross	*1,499*	*1,014*	*2,503*	*5,782*	*18,665*	*1,086*	*6,640*	*10,077*	*5,283*	*9,569*	*5,435*	*4,217*	*3,934*
Cash spent on fixed assets net of sales of fixed assets	*1,448*	*921*	*2,291*	*5,575*	*18,585*	*930*	*6,565*	*10,011*	*5,162*	*9,538*	*5,286*	*4,163*	*3,559*
fixed assets purchases net of sales and investments	*644*	*227*	*1,901*	*5,575*	*18,585*	*930*	*6,565*	*10,011*	*5,162*	*9,538*	*5,286*	*4,163*	*3,559*
Increase in "fixed assets at cost"	*1,402*	*609*	*2,230*	*5,356*	*18,411*	*329*	*7,582*	*9,880*	*3,710*	*9,218*	*3,115*	*3,130*	*2,775*
Cumulative fixed assets at cost using net cash acquisitions	*35,448*	*36,369*	*38,660*	*44,235*	*62,820*	*63,750*	*70,315*	*80,326*	*85,488*	*95,026*	*100,312*	*104,475*	*108,034*
Cumulative fixed assets at cost using gross cash acquisitions	*35,499*	*36,513*	*39,016*	*44,798*	*63,463*	*64,549*	*71,189*	*81,266*	*86,549*	*96,118*	*101,553*	*105,770*	*109,704*
Book fixed assets at cost	34,000	35,402	36,011	38,241	43,597	62,008	62,337	69,919	79,799	83,509	92,727	95,842	98,972	101,747

Port Statistics

Stats NZ export volume 000 tonnes June years		832	732	836	1,210	1,170	1,480	1,816	2,295	2,147	2,129	2,047	2,339	2,442
Stats NZ import volume 000 tonnes June years		415	493	481	479	514	578	700	748	832	776	797	975	924
Total overseas cargo volume from Stats NZ data		1,248	1,225	1,317	1,689	1,684	2,058	2,516	3,043	2,979	2,906	2,844	3,314	3,366
Total coastal cargo volume from Stats NZ data		798	763	789	742	800	1,038	1,073						
Total cargo tonnage through the port as per Annual Reports	*2,700*	2,661	1,915	2,720	3,208	3,420	4,074	4,880	*5,398*	*5,823*	*5,632*			
Implied coastal volume									*2,355*	*2,844*	*2,726*			
Revenue $ per tonne of total cargo		*13.60*	*14.80*	*12.90*	*11.19*	*10.13*	*9.61*	*9.23*	*8.99*	*9.03*	*9.24*			
Expenses excl deprec & interest, $ per tonne of total cargo		*11.19*	*10.40*	*10.91*	*9.84*	*6.19*	*5.40*	*5.60*	*5.01*	*4.87*	*5.17*			
Revenue $ per tonne of overseas cargo		*29.00*	*23.13*	*26.65*	*21.26*	*20.58*	*19.02*	*17.90*	*15.94*	*17.64*	*17.92*	*19.52*	*17.33*	*16.88*
Expenses excl deprec & interest, $ per tonne of overseas cargo		*23.86*	*16.25*	*22.55*	*18.68*	*12.56*	*10.69*	*10.85*	*8.88*	*9.51*	*10.02*	*9.69*	*8.76*	*9.64*
Stats NZ export value $million June years		1,172.21	1,120.90	1,143.26	1,353.46	1,447.88	1,586.83	2,002.36	2,020.57	2,260.14	2,439.21	2,613.45	2,721.04	2,902.82
Stats NZ import value $million June years		691.03	863.14	900.84	927.49	1,090.10	1,152.78	1,342.87	1,319.41	1,309.63	1,345.00	1,583.61	1,787.94	1,896.46
Port revenue $ per $000 of overseas trade value		*19.71*	*14.43*	*17.02*	*15.53*	*13.43*	*14.49*	*13.84*	*14.55*	*14.64*	*14.01*	*13.17*	*12.88*	*12.14*
Port expenses $ per $000 of overseas trade value		*16.29*	*11.33*	*14.25*	*11.87*	*9.29*	*9.45*	*9.36*	*9.84*	*9.25*	*8.82*	*8.02*	*7.74*	*7.53*
Number of ship visiting	727		920	1,029	1,064	1,146	1,318	1,484	1,603	1,726	1,607	1,559	1,528	1,450

Price Deflators (December quarter 1997=1000):

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PPI (Inputs) average for year ending June	795	841	900	919	929	952	972	982	988	991	999	1000	1039	1130
PPI (Inputs) average for year ending September	805	857	907	922	934	959	975	983	989	992	1001	1003	1060	1147
PPI (Inputs) average for nine months ending June	799	848	905	922	931	955	973	982	989	991	1000	999	1046	1139
PPI (Inputs) for September quarter	822	885	912	921	943	968	980	986	990	995	1003	1016	1101	1169
PPI (Inputs) for June quarter	810	863	913	919	936	960	975	983	989	990	1003	1001	1060	1146

IRR analysis using Cashflow Accounts

June years from 1991; September years to 1989	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Months in period	12	12	9	12	12	12	12	12	12	12	12	12	12	12
Book value of fixed assets $000	34,000	33,782	33,162	33,737	37,530	53,812	51,601	56,045	62,144	61,526	66,656	66,756	66,089	65,234
Revenue excl interest, asset sales and forex gains		36,187	28,337	35,092	35,909	34,654	39,139	45,027	48,515	52,572	52,056	55,519	57,440	56,824
Operating expenditure excl interest and depreciation incl expensed maintenance		29,774	19,913	29,686	31,557	21,156	22,004	27,308	27,033	28,339	29,129	27,564	29,049	32,430
Gross operating surplus		6,413	8,424	5,406	4,352	13,498	17,135	17,719	21,482	24,233	22,927	27,955	28,391	24,394
Cash purchases of fixed assets, gross		1,499	1,014	2,503	5,782	18,665	1,086	6,640	10,077	5,283	9,569	5,435	4,217	3,934
Cash purchases of fixed assets, net of disposals		1,448	921	2,291	5,575	18,585	930	6,565	10,011	5,162	9,538	5,286	4,163	3,559
Net surplus pre-tax using net capex		4,965	7,503	3,115	-1,223	-5,087	16,205	11,154	11,471	19,071	13,389	22,669	24,228	20,835
Cash income tax		0	254	448	0	3,625	3,691	4,956	3,502	5,923	5,749	6,491	8,122	6,992
Net surplus after tax		4,965	7,249	2,667	-1,223	-8,712	12,514	6,198	7,969	13,148	7,640	16,178	16,106	13,843

Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	47,401													
Real net cash surplus, pre-tax		6,639	9,505	3,883	-1,509	-6,122	19,116	13,023	13,302	22,059	15,367	25,985	26,736	21,135
Real cash income tax paid		0	322	559	0	4,363	4,354	5,787	4,061	6,851	6,598	7,441	8,963	7,093
Post-tax real cashflow to owners		6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	17,773	14,042
Real exit price (book value including revaluations)		43,745	41,625	42,070	45,950	64,238	60,651	65,338	72,009	71,221	76,159	76,426	71,451	65,234
Real cash stream for exit at end of financial year:														
1989	-47,401	50,384												
1990	-47,401	6,639	50,808											
1991	-47,401	6,639	9,183	45,395										
1992	-47,401	6,639	9,183	3,325	44,441									
1993	-47,401	6,639	9,183	3,325	-1,509	53,753								
1994	-47,401	6,639	9,183	3,325	-1,509	-10,485	75,413							
1995	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	72,575						
1996	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	81,250					
1997	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	86,429				
1998	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	84,928			
1999	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	94,971		
2000	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	89,224	
2001	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	17,773	79,276
Exiting at----------		**Sep-89**	**Jun-90**	**Jun-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR		**6.3%**	**10.8%**	**10.3%**	**9.3%**	**10.6%**	**11.8%**	**12.7%**	**13.8%**	**14.3%**	**14.6%**	**15.1%**	**15.2%**	**15.1%**

IRR Analysis using P&L Accounts for operating surplus

Book value of fixed assets $000	34,000	33,782	33,162	33,737	37,530	53,812	51,601	56,045	62,144	61,526	66,656	66,756	66,089	65,234
Revenue excl interest, asset sales and forex gains		36,567	28,538	34,641	35,290	33,985	39,688	46,289	48,571	52,106	52,880	55,223	58,067	58,249
Operating expenditure excl interest and depreciation incl expensed maintenance		28,765	20,755	28,240	31,011	21,325	22,742	27,864	29,099	28,496	28,396	28,742	29,842	31,987
Gross operating surplus		7,802	7,783	6,401	4,279	12,660	16,946	18,425	19,472	23,610	24,484	26,481	28,225	26,262
Cash purchases of fixed assets, gross		1,499	1,014	2,503	5,782	18,665	1,086	6,640	10,077	5,283	9,569	5,435	4,217	3,934
Cash purchases of fixed assets, net of disposals		1,448	921	2,291	5,575	18,585	930	6,565	10,011	5,162	9,538	5,286	4,163	3,559
Net surplus pre-tax using net capex		6,354	6,862	4,110	-1,296	-5,925	16,016	11,860	9,461	18,448	14,946	21,195	24,062	22,703
Income tax provision		428	431	432	-296	2,852	3,772	4,967	5,251	6,040	6,086	6,658	7,188	6,952
Net surplus after tax		5,926	6,431	3,678	-1,000	-8,777	12,244	6,893	4,210	12,408	8,860	14,537	16,874	15,751

Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	47,401													
Real net surplus pre-tax		8,497	8,693	5,124	-1,599	-7,131	18,893	13,848	10,971	21,339	17,154	24,296	26,553	23,030
Real income tax provision		572	546	539	-365	3,432	4,450	5,799	6,089	6,986	6,985	7,632	7,932	7,052
Post-tax real cashflow to owners		7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	4,882	14,352	10,169	16,664	18,621	15,978
Real exit price (book value including revaluations)		43,745	41,671	42,070	45,950	64,238	60,651	65,338	72,009	71,221	76,159	76,426	71,451	65,234
Real cash stream for exit at end of financial year:														
1989	-47,401	51,669												
1990	-47,401	7,924	49,817											
1991	-47,401	7,924	8,147	46,656										
1992	-47,401	7,924	8,147	4,585	44,716									
1993	-47,401	7,924	8,147	4,585	-1,234	53,675								
1994	-47,401	7,924	8,147	4,585	-1,234	-10,563	75,094							
1995	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	73,387						
1996	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	76,891					
1997	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	4,882	85,573				
1998	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	4,882	14,352	86,328			
1999	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	4,882	14,352	10,169	93,090		
2000	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	4,882	14,352	10,169	16,664	90,072	
2001	-47,401	7,924	8,147	4,585	-1,234	-10,563	14,443	8,048	4,882	14,352	10,169	16,664	18,621	81,212
Exiting at----------		**Sep-89**	**Jun-90**	**Jun-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR		**9.0%**	**11.2%**	**11.4%**	**10.4%**	**11.4%**	**12.4%**	**13.4%**	**13.8%**	**14.2%**	**14.6%**	**15.1%**	**15.2%**	**15.1%**

IRR analysis using Cashflow Accounts and EV / EBITDA for Exit Price

Fixed assets purchase price	34,000												
Gross operating surplus		6,413	8,424	5,406	4,352	13,498	17,135	17,719	21,482	24,233	22,927	27,955	28,391	24,394
Cash purchases of fixed assets, net of disposals		1,448	921	2,291	5,575	18,585	930	6,565	10,011	5,162	9,538	5,286	4,163	3,559
Net surplus pre-tax using net capex		4,965	7,503	3,115	-1,223	-5,087	16,205	11,154	11,471	19,071	13,389	22,669	24,228	20,835
Cash income tax		0	254	448	0	3,625	3,691	4,956	3,502	5,923	5,749	6,491	8,122	6,992
Net surplus after tax		4,965	7,249	2,667	-1,223	-8,712	12,514	6,198	7,969	13,148	7,640	16,178	16,106	13,843
Enterprise Value at Exit									151,016	233,874	159,643	180,306	183,976	200,891
using EV / EBITDA multiple of									7.3x	9.8x	6.5x	6.9x	6.6x	7.6x
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	47,401													
Real net cash surplus, pre-tax		6,639	9,505	3,883	-1,509	-6,122	19,116	13,023	13,302	22,059	15,367	25,985	26,736	21,135
Real cash income tax paid		0	322	559	0	4,363	4,354	5,787	4,061	6,851	6,598	7,441	8,963	7,093
Post-tax real cashflow to owners		6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	17,773	14,042
Real exit price (using EV/EBITDA)									174,989	270,727	182,403	206,425	198,902	200,891
Real cash stream for exit at end of financial year:														
1996	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	184,230					
1997	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	285,936				
1998	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	191,172			
1999	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	224,969		
2000	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	216,675	
2001	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	17,773	214,933
Exiting at									**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR									**24.0%**	**27.3%**	**21.4%**	**21.6%**	**20.5%**	**19.9%**

IRR analysis using Cashflow Accounts and Price:Book for Exit Price

Opening Value of fixed assets	34,000													
SHF from balance sheet									43012	49214	32788	38527	32994	43272
Core debt									11800	6500	27296	19340	12608	20878
Exit price									151,358	232,398	159,073	180,306	183,976	200,891
using Price:NBV multiple of									3.2x	4.6x	4.0x	4.2x	5.2x	4.2x
Net Surplus after Tax		4,965	7,249	2,667	-1,223	-8,712	12,514	6,198	7,969	13,148	7,640	16,178	16,106	13,843
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	47,401													
Post-tax real cashflow to owners		6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	17,773	14,042
Real exit price (Price:Book basis)									175,385	269,019	181,752	206,425	198,902	200,891
Real cash stream for exit at end of financial year:														
1996	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	184,626					
1997	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	284,227				
1998	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	190,521			
1999	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	224,969		
2000	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	216,675	
2001	-47,401	6,639	9,183	3,325	-1,509	-10,485	14,762	7,237	9,241	15,208	8,769	18,545	17,773	214,933
Exiting at:									**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:									**24.1%**	**27.3%**	**21.4%**	**21.6%**	**20.5%**	**19.9%**

Appendix E. Westgate Port Taranaki

Data and calculations for Westgate follow.

Westgate Port Taranaki

Period ending	September	September	June	June	June	June	June	June	June	June	June	June
June years from 1993; September years to 1991	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Months in period	12	12	9	12	12	12	12	12	12	12	12	12
P&L data as shown in annual reports, $000												
Operations revenue		**21,041**	**16,561**	**19,747**	**21,659**	**21,298**	**23,112**	**25,325**	**20,861**	**23,839**	**26,391**	**23,450**
Interest/investment income		866	329	445	55	1,060	606	167	38	55	372	15
Profit on disposl of fixed assets			10	66	36	18	4	18	10	597	68	94
Foreign currency gains										316		
Operations Expenditure		**13,079**	**10,356**	**10,920**	**12,045**	**11,892**	**14,636**	**14,202**	**14,313**	**16,266**	**17,957**	**17,483**
Depreciation (incl dredging a amortisation)		1,785	1,378	1,902	2,042	2,051	2,107	2,307	2,529	3,570	4,069	4,116
Interest		2,724	1,536	1,462	1,023	575	605	728	462	797	977	731
Loss on disposal of fixed assets			29	38	939	30	64	89	86	106	32	175
Abnormal expenditure item: rebate of wharfage fees to NKTT users											4,249	
Trading Profit		7,962	6,205	8,827	9,615	9,407	8,476	11,123	6,548	7,573	4,185	5,967
Other revenue		1,423	855	978	672	1,487	1,007	561	443	1,071	939	589
Other expenditure		358	525	320	157	100	117	150	178	178	132	240
Abnormal expenditure items: wharf & tug maintenance/refurbishment			0	1,624	597	65	1,803					
Abnormal expenditure items: write-downs and business plans				1,545	932	530	49					
Net Profit Before Taxation		9,026	6,536	6,316	8,600	10,200	9,366	11,534	6,813	8,466	4,991	6,315
Profit before interest and tax											5,970	7,050
Tax expense as per P&L		2,725	2,190	1,929	2,351	2,795	2,899	2,386	1,661	1,824	1,605	1,974
Net profit after tax		6,301	4,346	4,386	6,249	7,405	6,467	9,148	5,153	6,642	3,387	4,341
Extraordinary items		1,081										
Derived P&L Data for Analysis												
Revenue excluding interest, investment income, profit on asset sales and forex gains		*20,175*	*16,222*	*19,236*	*21,568*	*20,221*	*22,502*	*25,140*	*20,813*	*22,870*	*25,950*	*23,341*
Expenses excluding interest, depreciation and losses on asset sales		*8,571*	*7,413*	*7,519*	*8,040*	*9,236*	*11,861*	*11,078*	*11,235*	*11,793*	*12,880*	*12,461*
Expenses as per previous row plus expensed maintenance/refurbishment		*8,571*	*7,413*	*9,142*	*8,638*	*9,300*	*13,664*	*11,078*	*11,235*	*11,793*	*12,880*	*12,461*
Gross operating surplus before tax		*11,604*	*8,809*	*10,094*	*12,931*	*10,921*	*8,839*	*14,062*	*9,577*	*11,077*	*13,071*	*10,880*
EBITDA		*11,604*	*8,791*	*11,745*	*12,625*	*10,974*	*10,582*	*13,991*	*9,502*	*11,885*	*13,107*	*10,799*

Cashflows Statement from annual reports											
Operating activities: cash provided from											
Receipts from customers	21,045	16,727	21,103	22,260	21,369	23,360	25,082	20,074	21,664	24,130	31,744
Interest received	834	353	445	165	107	93	168	37	56	14	733
Cash was applied to:											
Payments to suppliers and employees	6,836	7,798	8,228	9,475	8,766	10,589	10,786	12,044	11,408	13,469	16,575
Payments for abnormal items			1,450	769	590	1,854					
Interest paid	3,056	1,960	937	1,283	842	681	752	380	816	1,045	1,018
Income tax pad	1,819	5,856	1,636	824	2,141	3,037	3,801	2,130	2,701	3,032	1,049
Net cash inflow (outflow) from GST in operating activities			-326	265	-9	84	-169	614	141	364	-892
Net cash inflow from operating activities	*10,168*	1,467	9,624	9,808	9,146	7,208	10,079	4,944	6,654	6,235	14,728
Investing Activities											
Cash was provided from:											
Sale of fixed assets	1,016	42	640	129	124	301	103	53	610	112	245
Net cash inflow (outflow) from GST in fixed asset transactions			-616	603	-35	-302	324	43	-25	28	-5
Other investing activities	142										
Proceeds from advances repaid	226	61	156	35							
Cash was applied to:											
Fixed asset acquisitions	790	1,004	5,903	3,480	4,383	6,705	6,997	3,138	12,499	4,959	1,711
Advances	3,527	2,265	1,251	4,633	4,100	4,500					
Net cash outflow from investing activities	*-2,933*	-3,167	-6,975	-7,346	-8,395	-11,206	-6,570	-3,041	-11,914	-4,819	-1,470
Financing Activities											
Cash provided from raising of debt				0	2,000	4,000	300	5,900	8,300	0	4,500
Cash applied to:											
Settlement of debt	4,892	4,495	876	3,212	3,252	1,315	4,957	4,500	0	0	0
Interim dividend						0	1,600	1,000	900	1,100	16,100
Final dividend							0	2,100	1,100	1,800	1,100
Net cash inflow from financing activities	*-4,892*	-4,495	-876	-3,212		2,685	-3,557	-1,700	6,300	-3,400	-12,700
Net increase (decrease) in cash held	2,342	-6,195	1,773	-749	-501	-1,314	-48	203	1,041	-1,984	557
Cash at start of period	5,451	7,793	1,598	3,371	2,622	2,121	807	759	962	2,003	18
Balance at end of period	7,793	1,598	3,371	2,622	2,121	807	759	962	2,003	18	576

Derived Cashflow data for analysis												
Operating revenue excluding interest		*21,045*	*16,727*	*21,103*	*22,260*	*21,369*	*23,360*	*25,082*	*20,074*	*21,664*	*24,130*	*31,744*
Operating expenses excluding interest but including abnormals 1993-1996		*6,836*	*7,798*	*9,678*	*10,244*	*9,356*	*12,443*	*10,786*	*12,044*	*11,408*	*13,469*	*16,575*
Gross operating surplus		*14,209*	*8,929*	*11,425*	*12,016*	*12,013*	*10,917*	*14,296*	*8,031*	*10,256*	*10,662*	*15,169*
Income tax paid		*1,819*	*5,856*	*1,636*	*824*	*2,141*	*3,037*	*3,801*	*2,130*	*2,701*	*3,032*	*1,049*
Tax outflows including GST effects		*1,819*	*5,856*	*1,926*	*486*	*2,167*	*3,424*	*3,309*	*2,700*	*2,867*	*3,368*	*161*
Comparison item: tax provision from P&L		*2,725*	*2,190*	*1,929*	*2,351*	*2,795*	*2,899*	*2,386*	*1,661*	*1,824*	*1,605*	*1,974*
Fixed Assets as per annual reports	prices											
Freehold land at cost	6,258	6,258	6,258	8,092	-	-	-	-	-		8,446	8,446
Freehold land at valuation		0		9,825	9,868	9,848	11,955	11,965	12,164	13,158	13,176	13,176
Freehold land book value		6,258	6,258	9,825	9,868	9,848	11,955	11,965	12,164	13,158	13,176	13,176
Buildings at cost	6,286	6,897	6,937	9,407	9,586	7,265	7,379	7,366	7,360	14,312	14,391	14,363
Buildings accumulated depreciation		440	803	1,265	1,869	1,619	2,029	2,456	2,896	3,533	4,246	4,939
Buildings book value		6,457	6,134	8,141	7,718	5,646	5,351	4,909	4,465	10,780	10,144	9,424
Maintenance dredging at cost										991	2,307	1,096
Maintenance dredging accumulated depreciation										610	1,211	658
Maintenance dredging book value										382	1,096	439
Harbour/port installations at cost	15,391	91,891	15,743	17,179	17,460	21,510	21,692	23,268	24,043	25,231	26,817	26,906
Port installations accumulated depreciation		517	912	1,465	2,050	2,646	3,352	4,069	4,680	5,497	6,349	7,224
Port installations book value		14,951	14,831	15,713	15,410	18,864	18,340	19,198	19,363	19,735	20,468	19,682
Plant, equipment and fittings at cost	10,644	8,185	8,767	9,601	7,488	9,882	10,425	20,873	20,966	27,679	28,097	27,901
Plant, equipment and fittings revaluation				-1,545								
Plant, equipment and fittings accumulated depreciation		825	1,406	2,255	2,272	3,670	4,560	5,632	6,915	7,642	9,449	10,870
Plant, equipment and fittings book value		7,357	7,361	5,801	5,216	6,211	5,865	15,242	14,051	20,037	18,648	17,031
Capital works in progress at cost					216	473	8,865	538	3,528	781	120	1,665
Capital works in progress accumulated depreciation					0	0	0	0	0	0	0	0
Capital works in progress book value					216	473	8,865	538	3,528	781	120	1,665
Total fixed assets at cost	38,580	36,809	37,706	44,278	44,618	39,130	48,362	52,045	55,897	68,995	71,731	71,931
Revaluations of land and plant				188								
Total fixed assets at valuation						9,848	11,955	11,965	12,164	13,158	13,176	13,176
Total fixed assets accumulated depreciation		1,785	3,122	4,986	6,190	7,935	9,941	12,157	14,491	17,281	21,254	23,691
Total fixed assets book value	38,580	35,024	34,584	39,481	38,428	41,042	50,376	51,852	53,570	64,872	63,652	61,417
Revaluation reserve at year end			0	1,717	1,717	1,717	3,824	3,824	3,824	4,713	4,713	4,713
Increase in revaluation reserve			0	1,717	0	0	2,107	0	0	889	0	0
Book value of assets net of revaluations	*38,580*	*36,809*	*37,706*	*42,562*	*42,901*	*37,413*	*44,538*	*48,221*	*52,073*	*64,282*	*67,018*	*67,218*

CAPEX and Fixed Asset Stocks analysis

Increase in fixed assets at cost/valuation		*-1,771*	*897*	*6,572*	*339*	*4,360*	*11,339*	*3,692*	*4,052*	*14,093*	*2,754*	*200*
Fixed assets at cost/valuation	*38,580*	*36,809*	*37,706*	*44,278*	*44,618*	*48,978*	*60,317*	*64,009*	*68,061*	*82,153*	*84,907*	*85,107*
Fixed assets at cost/valuation minus revaluation reserve		*36,809*	*37,706*	*42,562*	*42,901*	*47,261*	*56,493*	*60,185*	*64,237*	*77,440*	*80,194*	*80,394*
Cumulative gross fixed assets at cost, using gross capex		*39,369*	*40,373*	*46,276*	*49,756*	*54,140*	*60,845*	*67,842*	*70,979*	*83,478*	*88,437*	*90,148*
Cumulative gross fixed assets at cost, using net capex		*38,353*	*39,316*	*44,578*	*47,929*	*52,189*	*58,592*	*65,486*	*68,571*	*80,459*	*85,307*	*86,772*

Port Statistics

Number of permanent employees at year end		104	95	94	99	101	103	99	99	99	100	92
Vessel arrivals > 100 GRT	535	618	642	748	746	667	611	729	605	659	807	635
Total GRT 000	4,116	4,645	4,045	4,708	5,190	5,480	5,480	5,960	4,780	5,210	5,870	5,050
Import tonnage 000		390	360	440	480	460	500	480	420	510	570	580
Export tonnage 000		4,610	3,450	4,470	4,680	4,290	4,820	5,470	4,230	4,960	5,050	4,810
Total trade tonnage 000		5,000	3,810	4,910	5,160	4,750	5,320	5,950	4,650	5,470	5,620	5,390
Coastal cargo tonnage 000	2,250	2,320	1,750	2,410	2,130	1,610	1,480	1,260	1,130	860	890	800
Overseas cargo tonnage 000	2,380	2,680	2,060	2,500	3,030	3,140	3,840	4,690	3,520	4,610	4,730	4,590
Total trade (000 freight tonnes)	4,630	5,004	3,807	4,915	5,157	4,750	5,320	5,950	4,650	5,470	5,620	5,390
Average P&L operating revenue $ per tonne		*4.03*	*4.26*	*3.91*	*4.18*	*4.26*	*4.23*	*4.23*	*4.48*	*4.18*	*4.62*	*4.33*
Average gross operating costs $ per tonne		*1.71*	*1.95*	*1.86*	*1.67*	*1.96*	*2.57*	*1.86*	*2.42*	*2.16*	*2.29*	*2.31*
Surplus $ per tonne		*2.32*	*2.31*	*2.05*	*2.51*	*2.30*	*1.66*	*2.36*	*2.06*	*2.03*	*2.33*	*2.02*

Comparative Review Data

Revenue	22,460	17,420	20,720	22,330	22,790	24,120	25,890	21,300	24,910	27,330	24,040
Total interest expense	2,720	1,540	1,460	1,020	580	610	730	460	800	980	730
EBIT	11,750	8,070	7,780	9,620	10,780	9,970	12,260	7,280	9,260	5,970	7,050
Taxation	2,750	2,190	1,930	2,350	2,790	2,900	2,390	1,660	1,820	1,600	1,970
NPAT	5,220	4,350	4,390	6,250	7,410	6,470	9,150	5,150	6,640	3,390	4,340
Dividends: ordinary	1,820	1,300	1,300	1,820	2,210	1,950	3,700	2,100	2,700	2,200	1,100
Dividends: extraordinary					8,293	3,080					15,000
Capital expenditure and acquisitions	860	1,040	7,540	2,020	4,770	9,490	3,960	4,380	13,110	2,930	2,300
Equity	29,400	32,460	0	41,690	38,600	42,140	47,580	50,640	55,470	56,660	44,900
Interest bearing debt	13,610	9,110	8,240	5,020	3,770	6,460	4,500	5,900	14,200	13,700	18,200
Total tangible assets	50,040	44,760	51,110	52,470	57,740	61,080	57,700	61,470	75,660	78,120	65,620
Operating cashflow	10,170	1,470	9,620	9,810	9,150	7,210	10,080	4,940	6,650	6,230	14,730
50 cent shares on issue and fully paid 000									52,000	52,000	52,000
Total tangible assets										78,120	65,620
Equity							48,580	50,640	55,470	56,660	44,900
Revaluation reserve at year end		0	1,717	1,717	1,717	3,824	3,824	3,824	4,713	4,713	4,713
Increase in revaluation reserve			1,717			2,107			889	0	0

Westgate Port Taranaki

Period ending September June years from 1993; September years to 1991	September 1990	September 1991	June 1992	June 1993	June 1994	June 1995	June 1996	June 1997	June 1998	June 1999	June 2000	June 2001
Price Deflators (December quarter 1997=1000):												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PPI (Inputs) average for year ending June	900	919	929	952	972	982	988	991	999	1000	1039	1130
PPI (Inputs) average for year ending September	907	922	934	959	975	983	989	992	1001	1003	1060	1147
PPI (Inputs) average for nine months ending June	905	922	931	955	973	982	989	991	1000	999	1046	1139
PPI (Inputs) for September quarter	912	921	943	968	980	986	990	995	1003	1016	1101	1169
PPI (Inputs) for June quarter	913	919	936	960	975	983	989	990	1003	1001	1060	1146
IRR analysis using Cashflow Accounts												
Book value of fixed assets $000	38,580	35,024	34,584	39,481	38,428	41,042	50,376	51,852	53,570	64,872	63,652	61,417
Revenue excl interest, asset sales and forex gains		21,045	16,727	21,103	22,260	21,369	23,360	25,082	20,074	21,664	24,130	31,744
Operating expenditure excl interest and depreciation incl expensed maintenance		6,836	7,798	9,678	10,244	9,356	12,443	10,786	12,044	11,408	13,469	16,575
Gross operating surplus		14,209	8,929	11,425	12,016	12,013	10,917	14,296	8,031	10,256	10,662	15,169
Cash purchases of fixed assets, gross		790	1,004	5,903	3,480	4,383	6,705	6,997	3,138	12,499	4,959	1,711
Cash purchases of fixed assets, net of disposals		-226	962	5,263	3,350	4,260	6,404	6,894	3,084	11,889	4,847	1,466
Net surplus pre-tax and pre-rebates, using net capex		14,435	7,967	6,163	8,666	7,754	4,513	7,402	4,946	-1,633	5,815	13,704
Cash income tax		1,819	5,856	1,636	824	2,141	3,037	3,801	2,130	2,701	3,032	1,049
Rebates of wharfage fees to users												
Net surplus after tax and rebates		12,616	2,111	4,527	7,842	5,613	1,476	3,600	2,817	-4,334	2,783	12,655

Data deflated to June 2000 dollars												
Assets at valuation on 1 October 1990		48,478										
Real net cash surplus, pre-tax			17,952	9,803	7,416	10,222	9,053	5,234	8,562	5,677	-1,871	6,416	13,901
Real cash income tax paid			2,264	7,210	1,970	972	2,501	3,524	4,400	2,446	3,098	3,348	1,064
Post-tax real cashflow to owners			15,688	2,593	5,447	9,250	6,552	1,709	4,162	3,231	-4,969	3,069	12,836
Real exit price (book value including revaluations)			43,609	42,372	47,161	45,197	47,879	58,411	60,062	61,248	74,318	68,862	61,457
Real cash stream for exit at end of financial year:													
	1991	-48,478	59,297										
	1992	-48,478	15,688	44,964									
	1993	-48,478	15,688	2,593	52,608								
	1994	-48,478	15,688	2,593	5,447	54,446							
	1995	-48,478	15,688	2,593	5,447	9,250	54,431						
	1996	-48,478	15,688	2,593	5,447	9,250	6,552	60,120					
	1997	-48,478	15,688	2,593	5,447	9,250	6,552	1,709	64,224				
	1998	-48,478	15,688	2,593	5,447	9,250	6,552	1,709	4,162	64,479			
	1999	-48,478	15,688	2,593	5,447	9,250	6,552	1,709	4,162	3,231	69,348		
	2000	-48,478	15,688	2,593	5,447	9,250	6,552	1,709	4,162	3,231	-4,969	71,930	
	2001	-48,478	15,688	2,593	5,447	9,250	6,552	1,709	4,162	3,231	-4,969	3,069	74,293
Exiting at----------			**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR			**22.3%**	**13.8%**	**16.7%**	**16.4%**	**17.0%**	**17.9%**	**17.1%**	**16.3%**	**16.0%**	**14.5%**	**14.1%**

IRR Analysis using P&L Accounts for operating surplus

Book value of fixed assets $000	38,580	35,024	34,584	39,481	38,428	41,042	50,376	51,852	53,570	64,872	63,652	61,417
Revenue excl interest, asset sales and forex gains		20,175	16,222	19,236	21,568	20,221	22,502	25,140	20,813	22,870	25,950	23,341
Operating expenditure excl interest and depreciation incl expensed maintenance		8,571	7,413	9,142	8,638	9,300	13,664	11,078	11,235	11,793	12,880	12,461
Gross operating surplus		11,604	8,809	10,094	12,931	10,921	8,839	14,062	9,577	11,077	13,071	10,880
Cash purchases of fixed assets, gross		790	1,004	5,903	3,480	4,383	6,705	6,997	3,138	12,499	4,959	1,711
Cash purchases of fixed assets, net of disposals		-226	962	5,263	3,350	4,260	6,404	6,894	3,084	11,889	4,847	1,466
Net surplus pre-tax and pre-rebates, using net capex		11,830	7,847	4,831	9,580	6,661	2,435	7,168	6,493	-811	8,224	9,414
Provision for rebates of wharfage fees to users		0	0	0	0	0	0	0	0	0	4,249	0
Net pre-tax surplus after wharfage rebate		11,830	7,847	4,831	9,580	6,661	2,435	7,168	6,493	-811	3,975	9,414
Income tax provision		2,725	2,190	1,929	2,351	2,795	2,899	2,386	1,661	1,824	1,605	1,974
Net surplus after tax and rebates		9,105	5,657	2,902	7,229	3,866	-464	4,782	4,833	-2,635	2,370	7,440

Data deflated to June 2000 dollars												
Assets at valuation on 1 October 1990		48,478										
Real net surplus after rebate, pre-tax			14,712	9,656	5,814	11,301	7,778	2,824	8,291	7,452	-930	4,386	9,550
Real income tax provision			3,388	2,694	2,322	2,773	3,263	3,361	2,760	1,906	2,091	1,771	2,002
Post-tax real cashflow to owners			11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	2,615	7,547
Real exit price (book value including revaluations)			43,580	42,344	47,130	45,167	47,848	58,373	60,023	61,208	74,269	68,817	61,417
Real cash stream for exit at end of financial year:													
	1991	-48,478	54,904										
	1992	-48,478	11,324	49,305									
	1993	-48,478	11,324	6,961	50,622								
	1994	-48,478	11,324	6,961	3,492	53,695							
	1995	-48,478	11,324	6,961	3,492	8,528	52,362						
	1996	-48,478	11,324	6,961	3,492	8,528	4,515	57,835					
	1997	-48,478	11,324	6,961	3,492	8,528	4,515	-538	65,554				
	1998	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	66,754			
	1999	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	71,248		
	2000	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	71,432	
	2001	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	2,615	68,964
Exiting at----------			**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR			**13.3%**	**13.2%**	**14.9%**	**14.7%**	**14.9%**	**15.6%**	**15.2%**	**14.9%**	**15.0%**	**13.5%**	**12.6%**

IRR analysis using Cashflow Accounts using EV / EBITDA for Exit Price

Book value of fixed assets acquired	38,580										
Exit price				96,812	115,359	108,449	79,166	161,531	82,919	126,128	111,694	101,820
using EV/EBITDA multiple of				8.2x	9.1x	9.9x	7.5x	11.5x	8.7x	10.6x	8.5x	9.4x
Net surplus after tax and rebates		9,105	5,657	2,902	7,229	3,866	-464	4,782	4,833	-2,635	2,370	7,440

Data deflated to June 2000 dollars

Assets at valuation on 1 October 1990	48,478										
Post-tax real cashflow to owners		11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	2,615	7,547
Real exit price (EV / EBITDA basis)				115,570	135,591	126,432	91,733	186,984	94,741	144,399	120,756	101,820

Real cash stream for exit at end of financial year:

1993	-48,478	11,324	6,961	119,062							
1994	-48,478	11,324	6,961	3,492	144,119						
1995	-48,478	11,324	6,961	3,492	8,528	130,946					
1996	-48,478	11,324	6,961	3,492	8,528	4,515	91,195				
1997	-48,478	11,324	6,961	3,492	8,528	4,515	-538	192,515			
1998	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	100,288		
1999	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	141,378	
2000	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	123,372
2001	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	2,615	109,367

Exiting at	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Real post-tax IRR	**46.9%**	**41.7%**	**32.8%**	**22.3%**	**30.4%**	**19.3%**	**21.5%**	**18.2%**	**16.1%**

IRR analysis using Cashflow Accounts and Price:Book for Exit Price

Opening Value of fixed assets	38,580											
SHF from balance sheet		29,400	32,461	37,264	41,693	38,596	42,136	47,584	42,136	55,468	56,655	44,896
Core debt		13,608	9,270	8,237	5,025	3,773	6,457	4,500	5,900	14,200	13,700	18,200
Exit price				42,953	70,451	76,031	105,683	177,478	136,712	171,677	157,419	130,739
using Price:NBV multiple of				0.9x	1.6x	1.9x	2.4x	3.6x	3.1x	2.8x	2.5x	2.5x
Net Surplus after Tax		9,105	5,657	2,902	7,229	3,866	-464	4,782	4,833	-2,635	2,370	7,440
Data deflated to June 2000 dollars												
Assets at valuation on 1 October 1990	48,478											
Post-tax real cashflow to owners		11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	2,615	7,547
Real exit price (Price:Book basis)				51,275	82,807	88,638	122,460	205,444	156,204	196,545	170,190	130,739
Real cash stream for exit at end of financial year:												
1993	-48,478	11,324	6,961	54,767								
1994	-48,478	11,324	6,961	3,492	91,335							
1995	-48,478	11,324	6,961	3,492	8,528	93,153						
1996	-48,478	11,324	6,961	3,492	8,528	4,515	121,923					
1997	-48,478	11,324	6,961	3,492	8,528	4,515	-538	210,976				
1998	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	161,750			
1999	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	193,524		
2000	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	172,806	
2001	-48,478	11,324	6,961	3,492	8,528	4,515	-538	5,531	5,546	-3,021	2,615	138,287
Exiting at----------				**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR				**17.5%**	**28.2%**	**25.6%**	**27.1%**	**31.8%**	**25.0%**	**24.9%**	**21.4%**	**17.9%**

Appendix F. Port Nelson Limited

F.1 Establishment and Asset Acquisition

The Port Establishment Unit sub-committee recommended to the Chairman of the Nelson Harbour Board that the fixed assets be transferred to Port Nelson Limited at a valuation of $32.439 million.

That valuation was markedly different from the one arrived at by commissioning "independent valuers", being Harcourt Valuations Ltd in respect of vessels, plant and equipment and a Registered Valuer in respect of land and buildings. The independent valuers reported a combined total of $67.196 million. There is no explanation as to why the $67 million valuation is shown in the establishment plan document, nor is there any attempt to explain the disparity between the two valuation methods.

The transaction envisaged in the Establishment Plan was as follows:[53]

Assets		
Fixed assets	32,439,000	
Current Assets	2,035,000	
		34,474,000
Liabilities		
Current Liabilities	1,000,000	
Public Debt	6,600,000	
		7,600,000
Issue of Shares		26,874,000

The current assets and liabilities were those of the Board which related to the commercial activities being taken over. The "public debt" item related to debt of the Harbour Board and a related Sinking Fund investment.

For the purposes of the IRR analysis the relevant price paid for the business is given by the sum of fixed and current assets less current liabilities, i.e. $33.474 million.

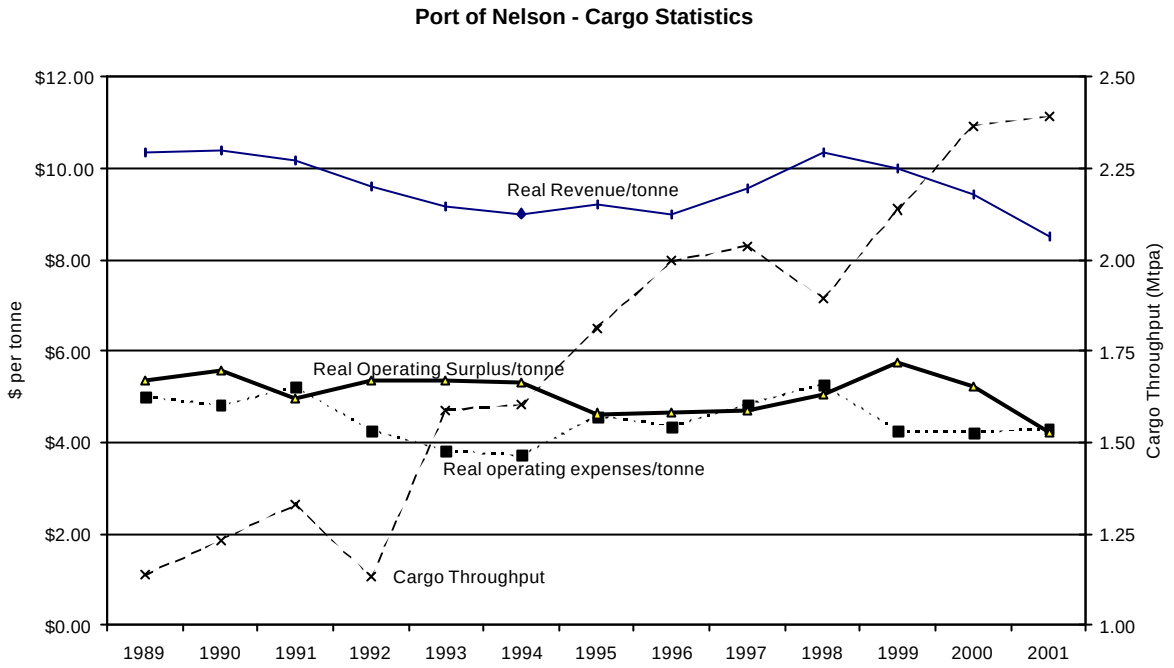
F.2 Notable Items from Annual Reports

F.2.1 Cargo Statistics

Throughput has increased by 111% over the period 1989 – 2001, an average annual growth rate of 6.4%. Expenses per tonne of cargo throughput, expressed in real terms, have reduced from $5.00 per tonne at the start of the period to $4.30 per tonne for the 2001 year. Average revenue per tonne, in real terms, has dropped from $10.34 to $8. 52 per tonne over the 1989 – 2001 period, a reduction of 17.6%.

53 "*Port Nelson Limited – Port Plan*" 24 June 1988, page 6

The following chart shows average revenue per tonne, expenses per tonne and operating surplus per tonne, all in real terms, for the period since corporatisation.



F.2.2 Land Revaluation

Land was revalued at 30 June 1994 creating an asset revaluation reserve of $24.77 million at that time. Three years later (June 1997) land was revalued again, pushing the revaluation reserve up to $31.55 million, an increase of 6.78 million over the previous year.

By 1999, with some land having been sold, the revaluation reserve had dropped to $29.79 million. Then in June 2000 land was revalued again to give a value in the fixed asset register of $51.94 million and an asset revaluation reserve of $33.9 million.

In the most recent accounts total land holdings in the fixed asset register totalled $53.1 million and that figure is compared with a year 2000 rateable value of $73.5 million.

F.2.3 Tasman Bay Stevedoring

In 1995 an employee share ownership plan was set up by selling 49% of the shares in Tasman Bay Stevedoring to a trust for a consideration of $274,000. The trust holds the shares on behalf of those staff that wish to participate in the ESOP. A loan of $233,000 was granted from the Company to the trust to fund the purchase of the shares. A further loan of $146,500 was made by the Company to the Trust in 1999. In 2001 the balance of the loans was paid by Tasman Bay Stevedoring and the ESOP is now funded solely by that company.

This means that a minority interest is deducted from the Port Nelson P&L from 1995 onwards. Distributions to the shares held by the Trust are shown in the following table.

	1995	1996	1997	1998	1999	2000	2001
Minority interest ($000)	120	114	117	126	149	187	183
Cumulative ($000)	120	234	351	477	626	813	996

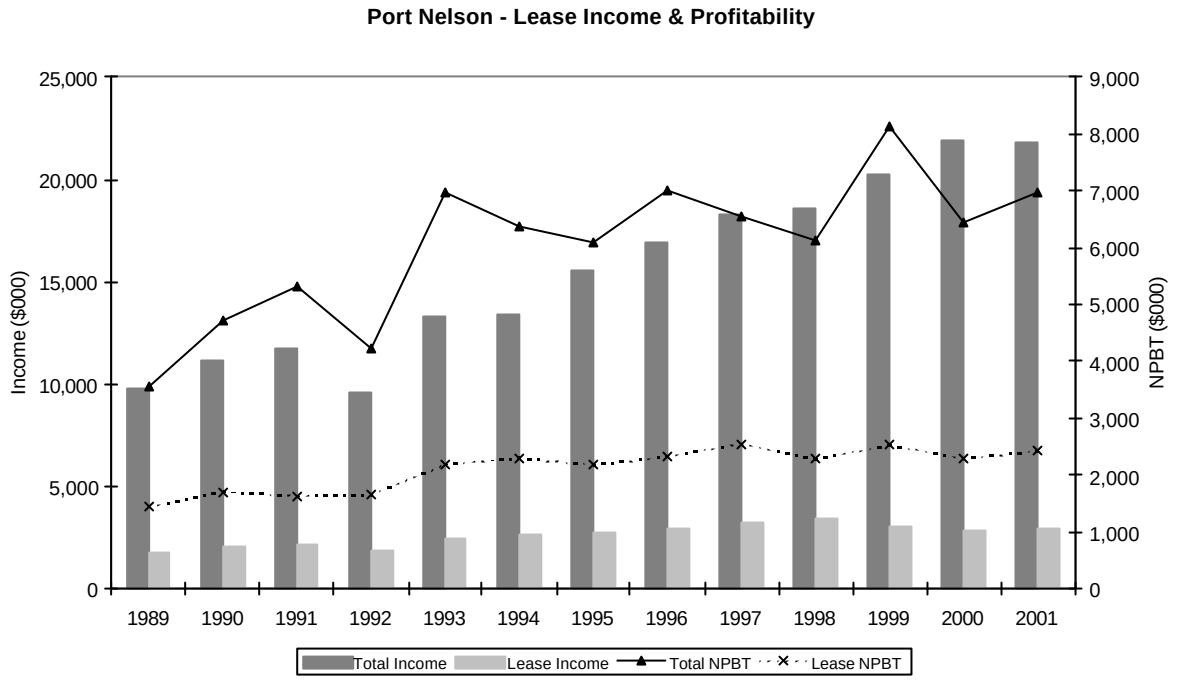
F.2.4 Rentals and Licences

A significant portion of revenue is identified as non-operating from "rentals" and "licences". In the first year of operation (1989) total revenue was $9.779 million of which $1.877 million, or 19.2%, related to items in the Profit and Loss identified as "Leases and Licences" or "Other".

The accounts also identify the assets associated with this income, as shown in the following figures taken from the 1990 Annual Report:

Asset	**Net Book Value**	
Wharves (licenced)	2,331,729	
Buildings (rented)	1,220,645	
Land (rented)	10,789,417	
		14,341,791
Total Fixed Assets		37,239,589

These non-operating assets accounted for 38.5% of total asset value at that time. The following chart compares the relative proportions of revenue and fixed assets accounted for by this non-operating part of the business. Although the expenses associated with these assets and revenues are not separately identified, for a number of years there are segment reports which show the contributions from the operating and lease segments of the business separately. In order to assess the significance of this non-operating segment on the overall IRR calculation we consider some approximations that could be expected to provide boundaries as to where the actual solution lies.



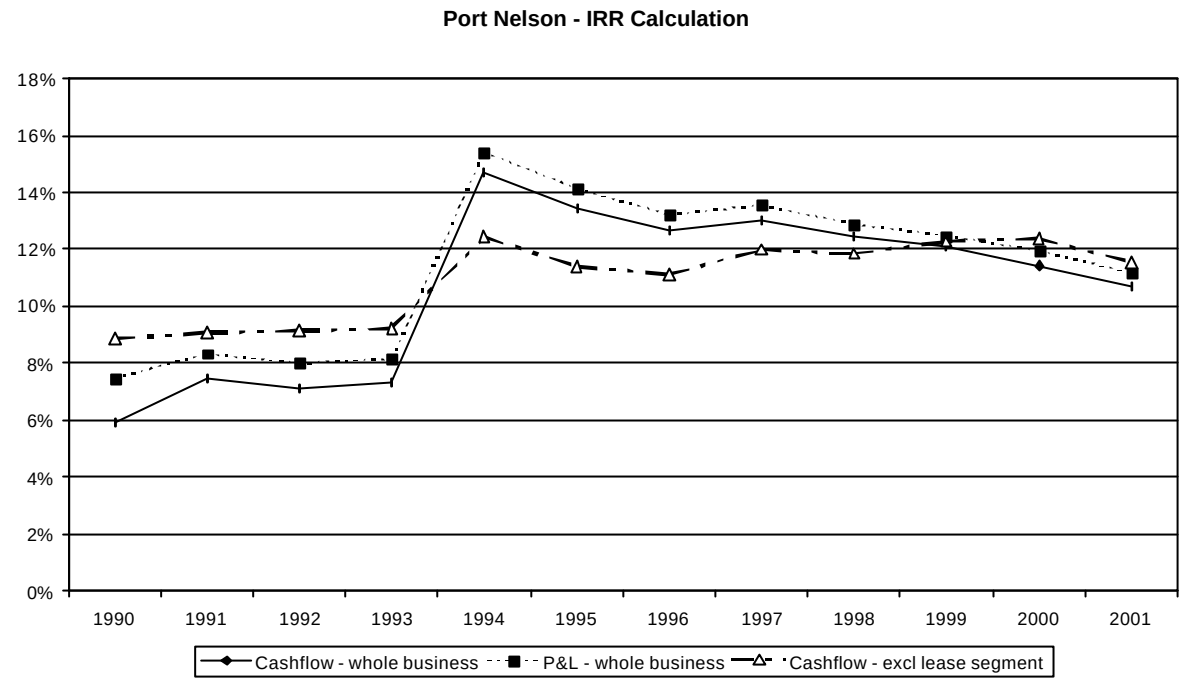
On average, the NPBT contribution from the lease segment accounts for 35% of the total while the assets involved in that segment of the business account for 44% of the fixed assets on average.

F.3 The IRR Calculation

The basis of the calculation is as follows:

- cash outflow at 1 October 1988 equal to the acquisition price of the business;
- each year that the investment is held, receipt of all cash income net of direct expenses and capital expenditure (financing income and expenditure is excluded from the calculations); and
- when the holding is divested, a cash inflow equivalent to the net book value of the assets at the end of that financial year.

The following chart shows the IRRs for the series of cashflow streams generated assuming possible exit dates of 1990 through 2001.



In deriving the above figures it was noted that it would be desirable to exclude certain items of income and expenditure that were unrelated to the fixed assets acquired (primarily, some tidying-up of current liabilities and assets taken over by the Company from the Harbour Board and then realised). For the cashflow-based IRR this was able to be done as the items in question were explicitly identified in the cashflow statements. However, the equivalent items were not separately identified in the P&L and, to avoid having to make assumptions regarding the accounting conventions, the P&L-based IRR does not have these items removed. This, in part, may explain why the IRR derived from the P&L data is consistently higher than the cashflow-based IRR.

Turning to the IRR calculation excluding the leasing segment of the business, given that the leasing segment accounts for 35% of the NPBT on average and 44% of the fixed assets, it might be expected that removing these cashflows and assets from the IRR analysis would result in the port operations showing a higher IRR than for the blended figures. However, it must be remembered that the IRR calculation deducts any capital expenditure in the year that it occurs and that this can have quite a marked effect on the annual cashflows. Although it is difficult to be precise, as the figures are not explicitly identified in the annual accounts, the leasing segment does not appear to require the level of capital expenditure that the rest of the business needs. Over the thirteen year period there is total capital expenditure of $45 million, of which it is estimated that only $3.3 million relates directly to the leasing segment. In addition, the leasing segment IRR would benefit from having a disproportionately higher share of the "windfall" benefit from revaluations of land. In the last year considered, the leasing segment has land assets of $31.8 million, while the rest of the business has land assets of $21.4 million. With the revaluations shared pro rata across the land assets, the lease segment benefits to the tune of $19.5 million whereas the port operations segment only has a benefit of $13.1 million.

The following tables outline the data used in the calculations.

Port Nelson Ltd

As at / Period ended	Sep-89	Sep-90	Sep-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Months in period	12	12	12	9	12	12	12	12	12	12	12	12	12
P&L Data from Annual Reports													
Total Income	9,779	11,138	11,786	9,598	13,315	13,369	15,603	16,934	18,343	18,569	20,272	21,959	21,813
Interest Earned	288	206	3	71	235	126	136	190	165	123	96	103	80
Leases and licences	1,771	2,103	2,146	1,842	2,412	2,605	2,766	2,978	3,211	3,441	2,998		
Total Expenses	6,234	6,412	7,029	4,851	6,342	6,463	8,883	9,388	11,964	12,579	11,845	13,652	14,824
Interest Paid	890	583	184	6	18	9	2	1	1,352	1,473	1,015	958	1,511
Depreciation	755	766	812	615	874	999	1,187	1,282	1,409	1,685	1,840	2,005	2,350
Less recoverable amount adjustment											428	901	
EBDIT	4,902	5,870	5,751	5,297	7,630	7,788	7,773	8,639	8,975	9,025	10,758	10,266	10,770
Abnormal Items													
- restructuring costs			129	534									
- write-offs						516	640	526					
- (gain)/loss on asset sales			-700						-164	-153	-148	943	4
NPBT	3,545	4,727	5,329	4,213	6,973	6,390	6,080	7,020	6,543	6,143	8,147	6,463	6,985
Taxation	1,039	1,601	1,524	1,407	2,301	2,147	2,163	2,551	2,114	2,038	2,787	2,550	2,390
NPAT	2,506	3,125	3,804	2,806	4,672	4,243	3,917	4,469	4,429	4,105	5,360	3,913	4,595
Deduct Minority Interest			14				120	114	117	126	149	187	183
Surplus Attributable to Shareholders	2,506	3,125	3,790	2,806	4,672	4,243	3,797	4,355	4,312	3,979	5,211	3,726	4,412
Dividends													
Declared	621	781	1,078	953	1,635	2,090	1,960	2,170	2,145	1,977	4,000	2,900	1,000
Special paid									16,000				
Derived P&L Data for Analysis													
Revenue excluding interest	9,491	10,932	11,783	9,527	13,080	13,243	15,467	16,744	18,178	18,446	20,176	21,856	21,733
Expenses excluding interest, depreciation and losses on asset sales	4,589	5,062	6,032	4,230	5,450	5,455	7,694	8,105	9,203	9,421	8,562	9,788	10,963
Gross operating surplus before tax	4,902	5,870	5,751	5,297	7,630	7,788	7,773	8,639	8,975	9,025	11,614	12,068	10,770
Revenue excluding interest, rentals, lic's	7,720	8,829	9,637	7,685	10,668	10,638	12,701	13,766	14,967	15,005	17,178	21,856	21,733
Gross op surplus before tax, excl. rentals, etc	3,131	3,767	3,605	3,455	5,218	5,183	5,007	5,661	5,764	5,584	8,616	12,068	10,770
Proportionate share of Expenses	856	974	1,099	818	1,005	1,073	1,376	1,442	1,626	1,757	1,272	0	0
Gross op surp excl rentals & prop exp's	3,987	4,741	4,703	4,273	6,223	6,256	6,383	7,103	7,390	7,341	9,888	12,068	10,770

Cashflow Data from Annual Reports

Operating Activities													
Cash provided from:													
Cash from Customers		5,617	8,087	10,225	7,800	10,389	10,838	12,971	13,435	15,113	15,951	17,122	18,336	19,438
Cash disbursed to:														
Cash Paid to Suppliers & Employees		2,246	6,307	6,656	4,458	5,355	5,713	8,160	7,772	9,059	10,069	8,630	10,965	10,669
Interest Paid						17	9	2	1					
Taxation Paid		652	1,417	1,356	1,395	2,270	2,514	1,967	2,624	2,359	1,427	2,691	2,609	2,624
Net GST Paid					206	111	5	29	-154	219	-102	-25	9	25
Investing Activities														
Cash provided from:														
Rental receipts		1,802	2,037	2,176	1,842	2,412	2,605	2,766	2,978	3,211	3,442	2,951	2,776	2,935
Interest Received		222	227	3	60	188	180	142	165	175	128	101	103	76
Fixed Asset Sales			79	1,321					279	1,718	1,204	2,350	886	26
Decrease in stock		29	9	61	8									
Proceeds from Share Sales								274						
Repayments from Employee Trust Loan									51	19	5	44		
Cash disbursed to:														
Fixed Asset Purchases		292	2,828	1,029	635	2,604	4,654	4,739	3,239	3,912	7,529	2,803	11,943	6,808
Loan to Trustees of Employee Trust								233					100	
Financing Activities														
Cash provided from:														
Borrowings									14,000		400	1,850	9,000	2,000
Realisation of current assets		1,831												
Receipts from Sinking Fund		253	395											
Share Issues	26,874													
Cash disbursed to:														
Loan Repayments		1,752	2,440	2,376		124		59				5,100	500	
Payment of current liabilities		685												
Payment to Sinking Fund		40	1											
Preliminary Expenses Paid		22												
Interest Payments (financing)		890	540	227	6					1,056	1,602	1,112	828	1,481
Dividend Payments			763	1,247	683	1,553	1,635	2,163	2,061	18,265	2,245	2,386	4,212	3,066
Derived Cashflow data for analysis														
Operating revenue excluding interest		7,419	10,124	12,401	9,642	12,801	13,443	15,737	16,413	18,324	19,393	20,073	21,112	22,373
Operating expenses excluding interest		2,268	6,307	6,656	4,664	5,466	5,718	8,189	7,618	9,278	9,967	8,605	10,974	10,694
Gross operating surplus		5,151	3,818	5,745	4,978	7,335	7,725	7,548	8,795	9,046	9,426	11,468	10,138	11,679
Income tax paid		652	1,417	1,356	1,395	2,270	2,514	1,967	2,624	2,359	1,427	2,691	2,609	2,624
Comparison item: tax provision from P&L		1,039	1,601	1,524	1,407	2,301	2,147	2,163	2,551	2,114	2,038	2,787	2,550	2,390

Fixed Assets

Port Nelson Ltd

As at / Period ended	Sep-89	Sep-90	Sep-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Operational													
Mobile Plant													
Cost/Valuation	1,215	1,200	1,324	1,324	1,600	2,481	3,193	3,542	4,162	9,768	10,086	16,152	16,388
Accumulated depreciation	96	190	281	357	476	603	799	1,021	1,282	1,832	2,430	3,169	4,104
Net Book Value	1,119	1,010	1,043	967	1,124	1,878	2,394	2,521	2,880	7,936	7,656	12,983	12,284
Floating Plant													
Cost/Valuation	4,042	4,042	4,042	4,042	4,042	4,242	4,242	4,167	4,170	4,171	4,171	4,171	4,171
Accumulated depreciation	202	404	606	758	960	1,172	1,384	1,567	1,775	1,984	2,193	2,401	2,610
Net Book Value	3,840	3,638	3,436	3,284	3,082	3,070	2,858	2,600	2,395	2,187	1,978	1,770	1,561
Wharves and Slipways													
Cost/Valuation	9,179	8,679	8,679	8,679	8,679	9,264	9,288	10,136	13,570	13,500	13,594	10,693	15,117
Accumulated depreciation	233	465	698	872	1,105	1,350	1,597	1,847	3,207	3,390	3,806	2,899	3,196
Net Book Value	8,947	8,214	7,981	7,807	7,574	7,914	7,691	8,289	10,363	10,110	9,788	7,794	11,921
Furniture and Fittings													
Cost/Valuation	358	399	593	650	703	987	1,930	2,345	2,679	3,518	5,001	4,847	6,968
Accumulated depreciation	72	151	266	358	490	597	735	906	1,127	1,406	1,829	2,130	2,695
Net Book Value	287	249	327	292	213	390	1,195	1,439	1,552	2,112	3,172	2,717	4,273
Hardstanding and Roadways													
Cost/Valuation						547	1,113	1,493	1,761	2,495	2,705	2,703	2,846
Accumulated depreciation						11	34	60	92	142	194	248	304
Net Book Value	0	0	0	0	0	536	1,079	1,433	1,669	2,353	2,511	2,455	2,542
Buildings													
Cost/Valuation	2,402	2,888	2,988	2,988	2,753	4,185	4,773	3,965	7,835	7,981	7,653	5,045	4,054
Accumulated depreciation	31	67	103	132	143	255	292	290	630	772	854	1,929	554
Net Book Value	2,371	2,822	2,885	2,856	2,610	3,930	4,481	3,675	7,205	7,209	6,799	3,116	3,500
Land													
Cost/Valuation	3,865	6,345	6,044	6,508	7,102	14,089	14,119	14,490	50,293	50,489	17,278	20,158	21,384
Accumulated depreciation													
Net Book Value	3,865	6,345	6,044	6,508	7,102	14,089	14,119	14,490	50,293	50,489	17,278	20,158	21,384
Dredgings													
Cost/Valuation												778	953
Accumulated depreciation													
Net Book Value		0	0	0	0	0	0	0	0	0	0	778	953

Fixed Assets (continued)													
Non-operational													
Lease Purchased													
Cost/Valuation						624	1,287	1,287					
Accumulated depreciation						16	48	146					
Net Book Value						608	1,239	1,141	0	0	0	0	0
Wharves													
Cost/Valuation	2,550	2,550	2,550	2,550	2,550	2,550	2,550	3,241				2,863	2,863
Accumulated depreciation	109	218	327	409	536	664	791	930				1,289	1,432
Net Book Value	2,441	2,332	2,223	2,141	2,014	1,886	1,759	2,311	0	0	0	1,574	1,431
Buildings													
Cost/Valuation	1,246	1,246	1,246	1,246	1,860	2,310	2,660	3,841				2,936	2,837
Accumulated depreciation	12	25	37	47	92	52	105	202				294	331
Net Book Value	1,233	1,221	1,208	1,199	1,768	2,258	2,555	3,639	0	0	0	2,642	2,506
Land													
Cost/Valuation	11,139	10,789	11,720	11,307	11,275	29,073	29,341	29,281			31,013	31,782	31,790
Accumulated depreciation													
Net Book Value	11,139	10,789	11,720	11,307	11,275	29,073	29,341	29,281	0	0	31,013	31,782	31,790
Work in Progress													
Cost/Valuation												6,331	3,264
Accumulated depreciation													
Net Book Value	75	621	21	658	1,881	1,084	1,020	156	2,241	588	1,486	6,331	3,264
Totals													
Cost/Valuation	35,997	38,138	39,185	39,294	40,564	70,352	74,496	77,788	84,470	91,922	91,501	108,459	112,635
Accumulated depreciation	755	1,519	2,318	2,933	3,802	4,720	5,785	6,969	8,113	9,526	11,306	14,359	15,226
Net Book Value	35,317	37,240	36,887	37,019	38,643	66,716	69,731	70,975	78,598	82,984	81,681	94,100	97,409
Revaluation Reserve						24,771	24,771	24,771	31,549	31,071	29,794	33,899	32,656
CAPEX and Fixed Asset Stocks analysis													
Book value at cost	35,997	38,138	39,185	39,294	40,564	70,352	74,496	77,788	84,470	91,922	91,501	108,459	112,635
Year-by-year increase in book value		2,142	1,047	109	1,270	29,788	4,144	3,292	6,682	7,452	-421	16,958	4,176
Asset purchases less disposals (from c/f stmt)	-1,510	791	-1,147	-1,207	192	2,049	1,973	261	701	4,087	-148	9,167	3,873
Gross asset purchases (from c/f stmt)	292	2,828	1,029	635	2,604	4,654	4,739	3,239	3,912	7,529	2,803	11,943	6,808
Cumulative using net acquisitions	35,997	36,787	35,640	34,433	34,625	36,674	38,647	38,908	39,609	43,696	43,548	52,715	56,588
Cumulative using gross acquisitions	35,997	38,824	39,853	40,488	43,092	47,746	52,485	55,724	59,636	67,165	69,968	81,911	88,719
Difference (net)	0	1,351	3,545	4,861	5,939	33,678	35,849	38,880	44,861	48,226	47,953	55,744	56,047
Difference (gross)	0	-686	-669	-1,194	-2,528	22,606	22,011	22,064	24,834	24,757	21,533	26,548	23,916

Cargo Statistics

Total (tonnes)		1134977	1231474	1330633	1131000	1588000	1603000	1813000	1996000	2037430	1893811	2137935	2366705	2392779
Revenue excl. interest		9,491	10,932	11,783	9,527	13,080	13,243	15,467	16,744	18,178	18,446	20,176	21,856	21,733
Expenses excl. interest & depreciation		4,589	5,062	6,032	4,230	5,450	5,455	7,694	8,105	9,203	9,421	8,562	9,788	10,963
EBDIT		4,902	5,870	5,751	5,297	7,630	7,788	7,773	8,639	8,975	9,025	11,614	12,068	10,770
Average P&L Revenue $/tonne		$8.36	$8.88	$8.86	$8.42	$8.24	$8.26	$8.53	$8.39	$8.92	$9.74	$9.44	$9.23	$9.08
Average P&L Expenses $/tonne		$4.04	$4.11	$4.53	$3.74	$3.43	$3.40	$4.24	$4.06	$4.52	$4.97	$4.00	$4.14	$4.58
Average P&L Surplus $/tonne		$4.32	$4.77	$4.32	$4.68	$4.80	$4.86	$4.29	$4.33	$4.41	$4.77	$5.43	$5.10	$4.50

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PPI (Inputs) average for year ending June	795	841	900	919	929	952	972	982	988	991	999	1000	1039	1130
PPI (Inputs) average for year ending September	805	857	907	922	934	959	975	983	989	992	1001	1003	1060	1147
PPI (Inputs) average for nine months ending June	799	848	905	922	931	955	973	982	989	991	1000	999	1046	1139
PPI (Inputs) for September quarter	822	885	912	921	943	968	980	986	990	995	1003	1016	1101	1169
PPI (Inputs) for June quarter	810	863	913	919	936	960	975	983	989	990	1003	1001	1060	1146

IRR analysis using Cashflow Accounts

Book value of fixed assets													
Opening	**33,474**												97,409
Closing	35,317	37,240	36,887	37,019	38,643	66,716	69,731	70,975	78,598	82,984	81,681	94,100	97,409
	7,419	10,124	12,401	9,642	12,801	13,443	15,737	16,413	18,324	19,393	20,073	21,112	22,373
Revenue excl interest	7,419	10,124	12,401	9,642	12,801	13,443	15,737	16,413	18,324	19,393	20,073	21,112	22,373
Operating expenditure excl interest	2,268	6,307	6,656	4,664	5,466	5,718	8,189	7,618	9,278	9,967	8,605	10,974	10,694
Gross operating surplus	5,151	3,818	5,745	4,978	7,335	7,725	7,548	8,795	9,046	9,426	11,468	10,138	11,679
Cash purchases of fixed assets and acquisitions, gross	292	2,828	1,029	635	2,604	4,654	4,739	3,239	3,912	7,529	2,803	11,943	6,808
Cash purchases of fixed assets and acquisition, net of disposals	262	2,739	-353	627	2,604	4,654	4,698	2,909	2,175	6,320	409	11,157	6,782
Net surplus pre-tax and pre-rebates, using net capex	4,889	1,079	6,098	4,351	4,731	3,071	2,850	5,886	6,871	3,106	11,059	-1,019	4,897
Cash income tax	652	1,417	1,356	1,395	2,270	2,514	1,967	2,624	2,359	1,427	2,691	2,609	2,624
Net surplus after tax	4,237	-339	4,742	2,956	2,461	557	883	3,262	4,512	1,679	8,368	-3,628	2,273

Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	43,166													
Real net cash surplus, pre-tax		6,047	1,261	7,015	4,952	5,266	3,351	3,078	6,313	7,351	3,297	11,725	-1,040	4,595
Real cash income tax paid		806	1,657	1,560	1,588	2,527	2,743	2,124	2,815	2,524	1,515	2,853	2,663	2,462
Post-tax real cashflow to owners		5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	-3,703	2,133
Real exit price (book value including revaluations)		42,300	43,283	42,455	41,612	42,316	72,162	74,964	75,993	83,733	87,700	85,218	90,596	88,326
Real cash stream for exit at end of financial year:														
1990	**-43,166**	5,241	42,886											
1991	**-43,166**	5,241	-396	47,909										
1992	**-43,166**	5,241	-396	5,455	44,976									
1993	**-43,166**	5,241	-396	5,455	3,364	45,055								
1994	**-43,166**	5,241	-396	5,455	3,364	2,739	72,770							
1995	**-43,166**	5,241	-396	5,455	3,364	2,739	608	75,918						
1996	**-43,166**	5,241	-396	5,455	3,364	2,739	608	954	79,492					
1997	**-43,166**	5,241	-396	5,455	3,364	2,739	608	954	3,499	88,560				
1998	**-43,166**	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	89,482			
1999	**-43,166**	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	94,091		
2000	**-43,166**	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	86,893	
2001	**-43,166**	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	-3,703	90,459
Exiting at:			**Sep-90**	**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:			**6%**	**7%**	**7%**	**7%**	**15%**	**13%**	**13%**	**13%**	**12%**	**12%**	**11%**	**11%**

IRR Analysis using P&L Accounts for operating surplus

Book value of fixed assets													
Opening	72,500												
Closing	35,317	37,240	36,887	37,019	38,643	66,716	69,731	70,975	78,598	82,984	81,681	94,100	97,409
Revenue excl interest	9,491	10,932	11,783	9,527	13,080	13,243	15,467	16,744	18,178	18,446	20,176	21,856	21,733
Operating expenditure excl interest, depreciation, asset sales	4,589	5,062	6,032	4,230	5,450	5,455	7,694	8,105	9,203	9,421	8,562	9,788	10,963
Gross operating surplus	4,902	5,870	5,751	5,297	7,630	7,788	7,773	8,639	8,975	9,025	11,614	12,068	10,770
Cash purchases of fixed assets and acquisitions net of disposals	262	2,739	-353	627	2,604	4,654	4,698	2,909	2,175	6,320	409	11,157	6,782
Net surplus pre-tax using net capex	4,640	3,131	6,104	4,670	5,026	3,134	3,075	5,730	6,800	2,705	11,205	911	3,988
Income tax provision	1,039	1,601	1,524	1,407	2,301	2,147	2,163	2,551	2,114	2,038	2,787	2,550	2,390
Net surplus after tax	3,601	1,530	4,579	3,263	2,725	987	912	3,179	4,686	667	8,418	-1,639	1,598

Data deflated to June 2000 dollars														
Assets at acquisition on 1 October 1988	43,166													
Real net surplus pre-tax		5,739	3,661	7,021	5,315	5,595	3,419	3,321	6,146	7,275	2,872	11,880	930	3,742
Real income tax provision		1,285	1,872	1,754	1,601	2,561	2,343	2,336	2,736	2,262	2,164	2,955	2,603	2,242
Post-tax real cash surplus to owners		4,454	1,789	5,267	3,714	3,033	1,077	985	3,410	5,014	708	8,925	-1,673	1,499
Real exit price (net book value)		42,300	43,283	42,455	41,612	42,316	72,162	74,964	75,993	83,733	87,700	85,218	90,596	88,326
Real cash stream for exit at end of financial year:														
1990	-43,166	4,454	45,072											
1991	-43,166	4,454	1,789	47,722										
1992	-43,166	4,454	1,789	5,267	45,326									
1993	-43,166	4,454	1,789	5,267	3,714	45,349								
1994	-43,166	4,454	1,789	5,267	3,714	3,033	73,239							
1995	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	75,949						
1996	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	985	79,403					
1997	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	985	3,410	88,746				
1998	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	985	3,410	5,014	88,408			
1999	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	985	3,410	5,014	708	94,144		
2000	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	985	3,410	5,014	708	8,925	88,923	
2001	-43,166	4,454	1,789	5,267	3,714	3,033	1,077	985	3,410	5,014	708	8,925	-1,673	89,826
Exiting at:			**Sep-90**	**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:			**7%**	**8%**	**8%**	**8%**	**15%**	**14%**	**13%**	**14%**	**13%**	**12%**	**12%**	**11%**

IRR Analysis Excluding Lease Income / Assets (Cashflow based)

Segment Information - Lease Income														
Income		1,771	2,103	2,146	1,842	2,412	2,605	2,766	2,978	3,211	3,441	2,998	0	0
Contribution (NPBT)				1619	1647	2182	2296	2170	2324	2541	2273	2520		
Assets Reported				15151	14647	15057	33825	34894	36372	39310	40049	37847		
Assets Identified in Register			14,342	15,151	14,647	15,057	33,217	33,655	35,231	0	0	31,013	35,998	35,727
Derived Segment Data														
Segment EBIT					*1,768*	*2,274*	*2,468*	*2,258*	*2,504*	*2,777*	*1,141*	*2,520*		
Estimated Income		1,771	2,103	2,146	1,842	2,412	2,605	2,766	2,978	3,211	3,441	2,998	*2,820*	*2,982*
Estimated Contribution		*1,436*	*1,705*	1,619	*1,768*	*2,274*	*2,468*	*2,258*	*2,504*	*2,777*	*1,141*	*2,520*	*2,287*	*2,418*
Expense Margin	18.9%			24.6%	4.0%	5.7%	5.3%	18.4%	15.9%	13.5%	66.8%	15.9%		
Estimated Capex Attributable to Segment				0	1	614	450	350	1,872					
Estimated Assets		14,342	14,342	15151	14647	15057	33825	34894	36372	39310	40049	37847	35,998	35,727
Tax adjustment (1 = marg'l, 0 = avg)	0	421	578	463	591	750	829	803	910	897	379	862	902	827

Data deflated to June 2000 dollars

Port Nelson Ltd

As at / Period ended		Sep-89	Sep-90	Sep-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Port Data excluding Lease Income / Assets														
Assets at valuation on 1 October 1988	24,672													
Real net cash surplus, pre-tax		4,271	-733	5,153	2,940	3,419	1,149	1,017	5,635	4,380	2,086	9,054	-3,375	2,326
Real cash income tax paid		286	982	1,028	916	1,692	1,838	1,257	1,839	1,564	1,113	1,939	1,742	1,686
Post-tax real cashflow to owners		3,985	-1,715	4,125	2,025	1,727	-689	-239	3,797	2,816	973	7,114	-5,117	640
Real exit price (book value including revaluations)			26,614	25,017	25,336	26,043	35,758	37,566	37,087	42,066	45,375	46,418	58,102	57,053
Real cash stream for exit at end of financial year:														
1990	-24,672	3,985	24,899											
1991	-24,672	3,985	-1,715	29,142										
1992	-24,672	3,985	-1,715	4,125	27,360									
1993	-24,672	3,985	-1,715	4,125	2,025	27,770								
1994	-24,672	3,985	-1,715	4,125	2,025	1,727	35,069							
1995	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	37,326						
1996	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	-239	40,884					
1997	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	-239	3,797	44,882				
1998	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	-239	3,797	2,816	46,348			
1999	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	-239	3,797	2,816	973	53,532		
2000	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	-239	3,797	2,816	973	7,114	52,985	
2001	-24,672	3,985	-1,715	4,125	2,025	1,727	-689	-239	3,797	2,816	973	7,114	-5,117	57,693
Exiting at:			Sep-90	Sep-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Real post-tax IRR:			**9%**	**9%**	**9%**	**9%**	**12%**	**11%**	**11%**	**12%**	**12%**	**12%**	**12%**	**12%**

IRR analysis using Cashflow Accounts and EV / EBITDA for Exit Value														
EBITDA		4,902	5,870	5,751	5,297	7,630	7,788	7,773	8,639	8,975	9,025	10,758	10,266	10,770
EV / EBITDA multiple						8.2x	9.1x	9.9x	7.5x	11.5x	8.7x	10.6x	8.5x	9.4x
Implied Enterprise Value (exit price)						62,892	71,163	76,817	64,631	103,618	78,758	114,172	87,486	101,548
Assets at acquisition on 1 October 1988	33,474													101,548
Net cash flow after tax		4,237	-339	4,742	2,956	2,461	557	883	3,262	4,512	1,679	8,368	-3,628	2,273

Data deflated to June 2000 dollars														
Asset acquisition	43,166													
Post-tax real cashflow to owners		5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	-3,703	2,133
Real exit price (book value including revaluations)						69,443	77,367	82,835	69,271	110,945	83,233	120,901	87,486	93,928
Real cash stream for exit at end of financial year:														
1993	-43,166	5,241	-396	5,455	3,364	72,182								
1994	-43,166	5,241	-396	5,455	3,364	2,739	77,975							
1995	-43,166	5,241	-396	5,455	3,364	2,739	608	83,788						
1996	-43,166	5,241	-396	5,455	3,364	2,739	608	954	72,770					
1997	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	115,772				
1998	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	85,016			
1999	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	129,774		
2000	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	83,783	
2001	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	-3,703	96,060
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**16%**	**16%**	**15%**	**12%**	**16%**	**12%**	**15%**	**11%**	**11%**

IRR analysis using Cashflow Accounts and Price:Book for Exit Value

Opening Value of fixed assets	33,474													
SHF from balance sheet						43149	70073	71781	58213	67771	69799	71050	76727	78945
Core debt						59	59	0	14000	14000	14400	11150	19650	21650
Exit price						40,258	110,019	134,387	151,085	260,361	231,091	212,864	214,285	219,537
using Price:NBV multiple of						0.9x	1.6x	1.9x	2.4x	3.6x	3.1x	2.8x	2.5x	2.5x
Net Surplus after Tax		4,237	-339	4,742	2,956	2,461	557	883	3,262	4,512	1,679	8,368	-3,628	2,273
Data deflated to June 2000 dollars														
Asset acquisition	43,166													
Post-tax real cashflow to owners		5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	-3,703	2,133
Real exit price (book value including revaluations)						44,451	119,610	144,914	161,931	278,770	244,223	225,410	214,285	203,062
Real cash stream for exit at end of financial year:														
1993	-43,166	5,241	-396	5,455	3,364	47,190								
1994	-43,166	5,241	-396	5,455	3,364	2,739	120,218							
1995	-43,166	5,241	-396	5,455	3,364	2,739	608	145,868						
1996	-43,166	5,241	-396	5,455	3,364	2,739	608	954	165,430					
1997	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	283,598				
1998	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	246,006			
1999	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	234,283		
2000	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	210,582	
2001	-43,166	5,241	-396	5,455	3,364	2,739	608	954	3,499	4,827	1,782	8,872	-3,703	205,195
Exiting at:						Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Real post-tax IRR:						**8%**	**23%**	**23%**	**22%**	**27%**	**23%**	**20%**	**18%**	**17%**

Appendix G. Port of Napier

G.1 Establishment and Asset Acquisition

Prior to corporatisation the Hawkes Bay Harbour Board had undertaken a number of major restructuring initiatives including mechanisation of cargo handling (which had reduced the waterfront workforce from 560 to 331 by the late 1980s)[54] and financial reorganisation, which had turned around a situation of operating deficit in the early 1980s.

The history of port development had left a large amount of land in the hands of the Harbour Board and at corporatisation these landholdings were divided up among the port company (which retained land required for port operations together with land leased out for industrial purposes, particularly in Ahuriri), the Hawkes Bay Regional Council and the Napier City Council (the last two of which took control of Harbour Board land leased for residential purposes)..

The main port operation is located at the Breakwater Harbour adjacent to The Bluff, which was fully developed as a deepwater port in the three decades following the 1931 earthquake which eliminated Ahuriri (the "Inner Harbour)" from contention for this purpose.

The Harbour Board retained, however, various interests and facilities (including a slipway) at Ahuriri to service small craft, together with a large amount of land much of which had been created by the earthquake. The Port Establishment Plan[55] noted the inclusion among the port assets of three land areas: Ahuriri Industrial Warehousing Zone located along the foreshore between the Breakwater Harbour and the Inner Harbour), Pandora Manufacturing Industrial Zone (located immediately inland of the Ahuriri lagoon), and Onekawa Manufacturing Industrial Zone (located well inland on the western side of Napier city). These land areas were retained as part of the port operation on the grounds of potential need for "expansion of port related industries".

A detailed financial model prepared by Ernst and Whinney valued the port, on a Net Present Value as a going concern, at $21.5 million, and the Establishment Plan provided for the assets to be transferred to the new company for this Amount, with fixed assets at $18.5 million.[56] The rate of return used for the present-value calculation was "approximately 9% which is considered reasonable, given the underlying assumptions and other performance targets in the statement of corporate intent."[57]

The transaction envisaged in the Establishment Plan was as follows:

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54 Stevenson, J., *The Continued Story of rhe Port of Napier 1975-1989* (Hawkes Bay Harbour Board, 1989).

55 Hawkes Bay Harbour Board Establishment Unit, *Port Company Plan: Port of Napier LtdI*, 18 July 1988, p.7 and appended aerial photo.

56 *Establishment Plan* p.8.

57 *Establishment Plan* p.8 and p.9..

Assets		
Fixed assets	18,500,000	
Current Assets	5,500,000	
		24,000,000
Liabilities		
Current Liabilities	2,500,000	
Long-term debt	4,000,000	
		6,500,000
Issue of Shares		17,500,000

In the event, a slightly higher value was adopted in the final transaction. Issued share capital was $21 million, which together with a $4 million loan from the Regional Council (corresponding to the remaining Harbour Board debt mostly due to heavy investment in port development during the 1970s) made up a purchase price of $25 million. Fixed assets were entered on the new company's balance sheet at $21.8 million, slightly above the initial equity commitment of the new owners.

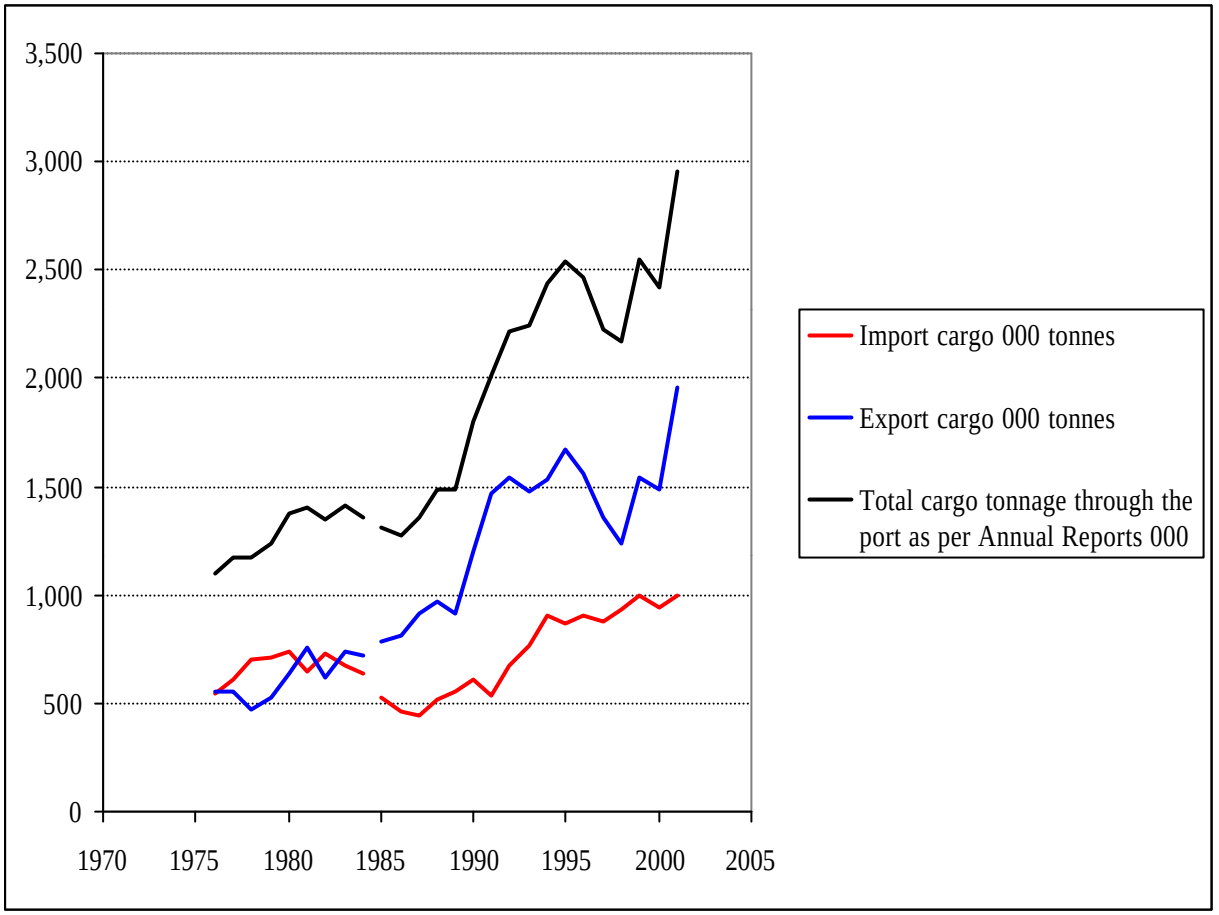
G.2 Notable Items from Annual Reports

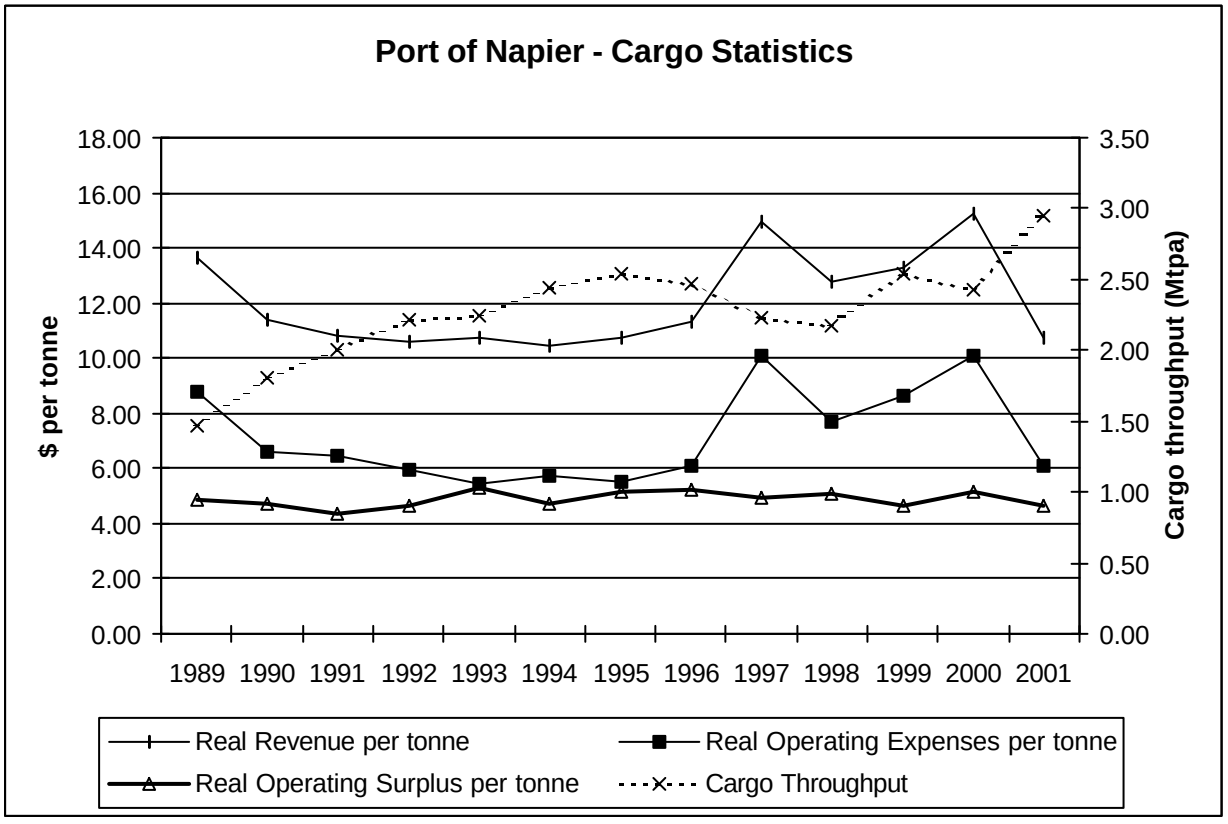
G.2.1 Cargo Statistics

Cargo throughput at Napier, after rising during the 1970s, was flat at around 1.4 million tonnes per year through the 1980s. Beginning in 1989 (the first year of the new port company) volume reached 2.5 million tonnes by 1995 and (after recovering from a sharp dip in 1997-1998) rose to 3 million tonnes by 2001.

Expenses per tonne of cargo throughput in real terms (June 2000 dollars using the PPI Inputs) were $8.80 in 1989, fell below $6 in 1992, and were $6.10 in 2001 following several high-cost years in the second half of the 1990s. Cost savings per tonne were thus concentrated in the early years of corporatisation and ended at 1992. Average revenue per tonne in real terms similarly fell from $13.68 in 1989 to $10.60 by 1992, before rising again to reach $15 by 1997, and then falling to $10.74 in 2001. This represented an initial 22.5% fall in average charges in the first three years, after which no further gains for port users are apparent from the aggregate data.

Operating surplus in real terms, per tonne of cargo, held steady at just below $5 per tonne throughout the period, so that all volume growth flowed through to additional profits.





Inter-port competition is mentioned from time to time in Annual Reports, with occasional specifics:

- In 1996 a large portion of the Winstone Pulp International trade was lost to Wellington, after 18 years of using Napier. "… the performance of our company and our associated service providers was not a factor that brought about the chang in preference" [58]

G.2.2 Land Leasing

The port company started out with large areas of land not directly dedicated to port use; most of this land was fully built-up with warehouses and industrial facilities paying rentals on the land. At the outset this land made up 56% of the total fixed asset register of the port, but by 2001 land sales had reduced this to only 3.7%. The evolution of the book value of fixed assets has been:

			$000			
Year	Port land	Other land ("investment properties")	Port installations	Plant, equipment & vehicles book value	Total	Non-port land as % of total
1988	1,500	9,800	3,982	2,210	17,492	56.0
1989	1,540	8,710	7,870	2,006	20,126	43.3
1990	1,572	8,710	8,116	6,474	24,872	35.0
1991	1,606	8,710	8,131	6,535	24,982	34.9
1992	1,616	11,190	9,092	6,444	28,342	39.5
1993	1,635	12,455	8,776	6,967	29,833	41.7
1994	1,713	14,340	11,552	9,724	37,329	38.4
1995	1,800	15,000	15,107	15,419	47,326	31.7
1996	1,806	14,900	21,966	15,060	53,732	27.7
1997	1,806	12,220	24,046	14,617	52,689	23.2
1998	1,806	12,344	27,655	14,475	56,280	21.9
1999	1,806	7,736	27,523	14,514	51,579	15.0
2000	1,917	1,765	26,989	14,324	44,995	3.9
2001	2,026	1,820	32,351	12,987	49,184	3.7

G.3 Port Charges

In 1991 the port company introduced a bundled Marine Service Charge covering pilotage, towage, moorings and essential shore-based requirements, in place of what were described as "a complex list of separate charges".[59]

The 1991 Annual report includes the statement:

> It has always been the company's aim to provide its customers with facilities and services at minimum cost. In only 2 years since September 1989 the company has reduced its revenues on all tonnage handled by more than 14%. By including inflationary movement that has occurred since 1988, the real reduction in charges levied by the company is 25.3%.

[58] Annual Report 1996 p.2.
[59] Port of Napier Ltd, *Annual Reoport 1991* p.5.

> The various critics who submit there have been no reductions in port company charges and that the benefits of reform are not being passed on, should be aware of their facts before making generalised statements and allegations.

Two years later, the 1993 Annual Report noted that volumes had risen 53% over the past five years[60] and commented on the rising profitability of the port due to this volume growth, but with no reference to any intention of passing volume gains through to lower average charges:[61]

> Our financial outcomes were strengthened by the increase in ship calls to carry the additional cargo volumes. Higher revenue and lower operating costs have produced a net profit after tax of $5.5 million…. Every financial target and projection contained in the Statement of Corporate Intent was exceeded.

The "very respectable net profit" was allocated to an increased dividend payout and "a good appropriation towards the capital expenditure and new development programme".[62]

The following year, performance targets were again exceeded and the Chairman's report noted that "retained earnings of $15.8 million have been steadily accumulated in anticipation of expenditure on new facilities and cargo handling equipment to meet future business and trade growth."[63]

In 1989 a 15% levy on all wharfage was imposed to fund waterfront redundancies; this levy ceased on 30 September 1991.[64]

G.4 General Efficiency Measures

One measure of turnaround efficiency is average ship time in port. The 1992 Annual report claimed that this had fallen from 5-6 days in 1989 to 2 days by 1992.[65] (It was not stated how much of this was due to the rising share of container trade following purchase of a mobile container crane in 1990.) The 1994 Annual Report stated that turnaround time had fallen further to 1.6 days.[66] For 1995 the figure was 1.77 days.

G.5 The IRR Calculation

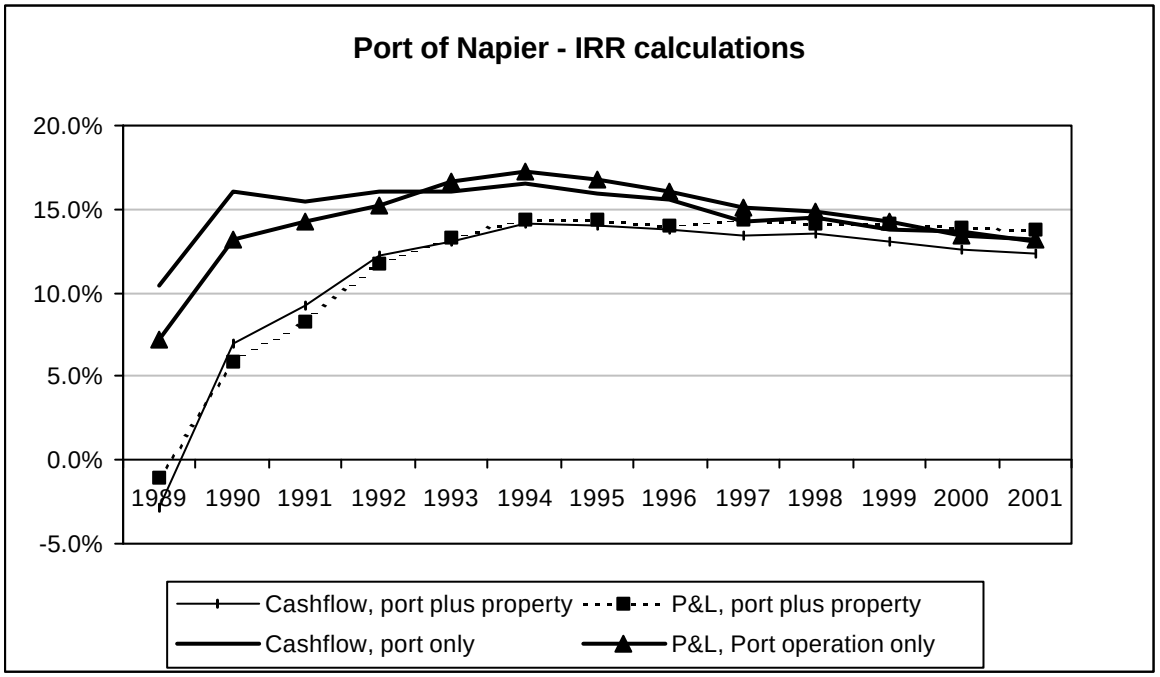
The basis of the calculation is as follows:

- cash outflow at 1 October 1988 equal to the acquisition price of the fixed assets, namely $21.8 million (recall that this was slightly greater than the initial share issue to the equity holders of $21 million; this gives a conservative bias to the IRR estimates);

60 *Annual Report* 1992 p.4.
61 *Annual Report* 1993 p.2.
62 *Annual Report 1993* p.4.
63 *Annual Report 1994* p.2.
64 *Annual Report 1991* p.7.
65 *Annual Report 1992* p.5.
66 *Annual Report 1994* p.5.

- each year for which the investment is held, receipt of all cash income net of direct expenses, and net of any capital expenditure not offset by cash receipts from sales of fixed assets; and
- when the holding is divested, a cash inflow equivalent to the net book value of the assets at the end of that financial year (this again gives a conservative bias, since the value of the business at each date will have been greater than book value of fixed assets).

The following chart shows the IRRs for the resulting series of cashflow streams generated assuming possible exit dates of September 1989 through September 2001.



The cashflow data (which are to be preferred for analysis of this sort) show that the Internal Rate of Return for the port operation, taken in isolation from property investments of the business, has been above 10% real after tax throughout the history of the company. For exit at 1994 the IRR would have been 16.5%; extending the project life to exit at 2001 the IRR is 13%.

The following tables outline the data used in the calculations. Some methodological notes on the calculations follow the tables.

Port of Napier

September years throughout	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
P&L data as shown in annual reports, $000														
Gross Revenue		14,987	16,233	17,466	19,123	20,082	21,676	23,279	24,059	28,910	24,156	29,640	34,182	31,747
revenue from port operations		13,503	14,510	15,889	17,539	18,303	20,017	21,309	22,570	22,500	23,132	23,621	27,150	31,657
interest income		612	767	588	546	658	484	282	43	89	54	10	13	13
property operations (industrial land)		872	956	989	1,038	1,121	1,175	1,668	1,446	1,124	970	929	402	77
revenue from sale of investment properties									0	5,197		5,080	6,617	0
Total operating expenditure as shown in P&L accounts		11,243	11,097	12,205	12,302	11,908								
Total operating expenditure calculated as residual		*11,243*	*11,097*	*12,205*	*12,302*	*11,908*	*13,885*	*15,965*	*16,787*	*18,001*	*18,708*	*18,579*	*19,716*	*21,706*
Port-only operating expenses excl interest and depreciation, as in Annual Reports		9,638	9,453	10,406	10,702	10,222								
Depreciation		791	954	1,111	1,202	1,389	1,823	2,276	2,689	3,013	2,539	3,133	3,265	3,433
"Property expenses"		179	61	74	101	35								
Interest		569	532	514	195	144	96	114	234	696	1,462	1,029	432	108
Donations							30	61	62	26	19	61	8	10
Provision for doubtful debts									7	19	28	74	6	0
Operating leases									0	17	66	79	83	104
Redundancies							0	929	107	0				
Retiring allowances							0	412	200	2				
Subvention payment							0	115						
Estimated port-only expenses excl depreciation and interest		*9,704*	*9,550*	*10,506*	*10,804*	*10,340*	*11,966*	*13,460*	*13,864*	*14,292*	*14,707*	*14,417*	*16,019*	*18,165*
NPAT adjusted for asset sales and revaluation reserve changes		*3,744*	*5,136*	*5,261*	*6,821*	*8,174*	*7,791*	*7,314*	*7,272*	*10,909*	*5,448*	*11,061*	*14,466*	*10,041*
Port operating surplus as shown in annual reports												5,982	7,784	10,044
Cost of property sales charged as expense										*5,197*		*5,080*	*6,617*	
"Net gain on sale of assets" credited as a negative expense								211	464	2,950	-116	2,639	3,292	3
Adjustment to revaluation reserve												1,101	65	
Net profit before taxation		3,744	5,136	5,261	6,821	8,174	7,791	7,525	7,736	8,662	5,332	7,519	11,076	10,044
Taxation expense		757	1,757	1,754	2,233	2,660	2,569	2,287	2,393	1,928	2,071	2,019	2,575	3,161
Net profit after taxation before extraordinaries		2,987	3,379	3,507	4,588	5,514	5,222	5,238	5,343	6,734	3,261	5,500	8,501	6,883
Deduct extraordinary item				88										
NPAT after extraordinary item		2,987	3,379	3,419	4,588	5,514	5,222	5,238	5,343	6,734	3,261	5,500	8,501	6,883

Derived P&L Data for Analysis													
Revenue of trading operation excluding interest	*14,375*	*15,466*	*16,878*	*18,577*	*19,424*	*21,192*	*22,997*	*24,016*	*28,821*	*24,102*	*29,630*	*34,169*	*31,734*
Operating expenses excluding interest, depreciation, losses on asset sales	*9,883*	*9,611*	*10,580*	*10,905*	*10,375*	*11,966*	*13,575*	*13,864*	*14,292*	*14,707*	*14,417*	*16,019*	*18,165*
Gross pre-tax operating surplus	*4,492*	*5,855*	*6,298*	*7,672*	*9,049*	*9,226*	*9,422*	*10,152*	*14,529*	*9,395*	*15,213*	*18,150*	*13,569*
Port-only revenue	*13,503*	*14,510*	*15,889*	*17,539*	*18,303*	*20,017*	*21,309*	*22,570*	*22,500*	*23,132*	*23,621*	*27,150*	*31,657*
Port only opex	*9,638*	*9,453*	*10,406*	*10,702*	*10,222*	*11,966*	*13,460*	*13,864*	*14,292*	*14,707*	*14,417*	*16,019*	*18,165*
Port-only operating surplus	*3,865*	*5,057*	*5,483*	*6,837*	*8,081*	*8,051*	*7,849*	*8,706*	*8,208*	*8,425*	*9,204*	*11,131*	*13,492*
EBITDA	*4,492*	*5,855*	*6,298*	*7,672*	*9,049*	*9,226*	*9,422*	*10,152*	*14,529*	*9,395*	*15,213*	*18,150*	*13,569*
Cashflows Statement from annual reports													
Operating activities: cash provided from													
Receipts from customers as per 1989-1992 accounts	15,497	19,707	17,706	20,892									
Receipts from customers as per 1993-1996 accounts				19,333	20,012	21,083	25,874	25,795					
Receipts from customers as per 1997-2000 accounts									23,577	24,696	25,151	30,075	
Receipts from customers as per 2001 accounts												30,075	30,985
GST received as per 1997-2000 accounts								0	304	254	1,653	1,986	
Interest received	612	729	538	477	570	599	337	50	89	84	9	12	13
Operating activities: cash applied to													
Payments to suppliers and employees as per 1989-1992 accounts	11,151	12,549	10,942	13,194									30,998
Payments to suppliers and employees as per 1993-1996 accounts				11,635	12,707	11,809	16,186	15,071					
Payments to suppliers and employees as per 1997-2000 accounts									15,032	14,519	17,546	19,637	
Payments to suppliers and employees as per 2001 accounts												16,836	18,273
Interest paid	569	517	340	195	144	96	114	227	518	1,884	1,115	480	143
Taxes paid	1,000	2,107	2,066	2,431	2,089	2,826	2,461	2,343	2,702	1,423	2,140	2,575	3,271
GST paid as per 2001 accounts												815	82
Net cash flows from operating activities	3,389	5,263	4,896	5,549	5,642	6,951	7,450	8,204	5,718	7,208	6,012	9,381	9,229
Investing activities: cash provided from													
Proceeds from sale of fixed assets	65	29	105	160	614	495	391	647	5,362	145	5,212	6,665	34
Proceeds from Loan					8	10	11	64					
Amalgamation of subsidiary											1		
Dividend received		19											
Proceeds from sale of investments													

Investing activities: cash applied to													
Purchase of fixed assets	809	5,266	1,123	2,153	1,663	7,449	12,256	9,553	4,755	4,657	3,158	2,818	8,291
Purchase of shares (nt)	88												
Net cash flows from investing activities	-832	-5,218	-1,018	-1,993	-1,041	-6,944	-11,854	-8,842	607	-4,512	2,055	3,847	-8,247
Financing activities: cash provided from													
Proceeds from Loan			2,500				0	2,500	24,200	13,000	22,065	24,900	18,800
Issue of shares	3,948												
Financing activities: cash applied to													
Loan repayment	450	1,391	2,832	332	332	332	332	332	10,633	14,932	27,510	34,255	15,900
Dividend paid	400	1,000	1,052	1,255	1,910	2,415	2,100	2,100	17,940	2,934	2,867	2,982	3,803
Net cash from financing activities	3,098	-2,391	-1,384	-1,587	-2,243	-2,747	-2,432	68	-4,373	-4,866	-8,312	-12,337	-903
Net increase in cash held	5,655	-2,346	2,494	1,969	2,358	-2,740	-6,836	-570	1,952	-2,170	-245	891	69
Net movement in Redundancy Account		37	-37										
Opening cash brought forward		5,655	3,346	5,802	7,771	10,129	7,389	553	-17	1,935	-235	-480	411
Closing cash carried forward	5,655	3,346	5,803	7,771	10,129	7,389	553	-17	1,935	-235	-480	411	480
Derived Cashflow data for analysis													
Operating revenue excluding interest (note changing treatment in accounts as above)	*15,497*	*19,707*	*17,706*	*20,892*	*20,012*	*21,083*	*25,874*	*25,795*	*23,577*	*24,696*	*25,151*	*30,075*	*30,985*
Operating expenses excluding interest and tax	*11,151*	*12,549*	*10,942*	*13,194*	*12,707*	*11,809*	*16,186*	*15,071*	*15,032*	*14,519*	*17,546*	*19,637*	*18,273*
Gross surplus before inclusion of net GST cashflows	*4,346*	*7,158*	*6,764*	*7,698*	*7,305*	*9,274*	*9,688*	*10,724*	*8,545*	*10,177*	*7,605*	*10,438*	*12,712*
GST cashflow effect (note accounting treatment changes over time)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*304*	*254*	*1,653*	*1,986*	*-82*
Gross operating surplus excl income tax and interest	*4,346*	*7,158*	*6,764*	*7,698*	*7,305*	*9,274*	*9,688*	*10,724*	*8,849*	*10,431*	*9,258*	*12,424*	*12,630*
Operating revenue as above minus property income as per P&L	*14,625*	*18,751*	*16,717*	*19,854*	*18,891*	*19,908*	*24,206*	*24,349*	*22,453*	*23,726*	*24,222*	*29,673*	*30,908*
Operating expenses as above minus property costs as per P&L	*10,972*	*12,488*	*10,868*	*13,093*	*12,672*	*11,809*	*16,186*	*15,071*	*15,032*	*14,519*	*17,546*	*19,637*	*18,273*
Gross port-only surplus before inclusion of net GST cashflows	*3,653*	*6,263*	*5,849*	*6,761*	*6,219*	*8,099*	*8,020*	*9,278*	*7,421*	*9,207*	*6,676*	*10,036*	*12,635*
GST cashflow effect (note accounting treatment changes over time)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*304*	*254*	*1,653*	*1,986*	*-82*
Gross operating surplus excl income tax, interest and property operations	*3,653*	*6,263*	*5,849*	*6,761*	*6,219*	*8,099*	*8,020*	*9,278*	*7,725*	*9,461*	*8,329*	*12,022*	*12,553*
Cash (income) tax paid	*1,000*	*2,107*	*2,066*	*2,431*	*2,089*	*2,826*	*2,461*	*2,343*	*2,702*	*1,423*	*2,140*	*2,575*	*3,271*
Comparison item: tax provision from P&L	*757*	*1,757*	*1,754*	*2,233*	*2,660*	*2,569*	*2,287*	*2,393*	*1,928*	*2,071*	*2,019*	*2,575*	*3,161*

Fixed Assets as per Annual Reports $000:														
Port land at cost	1,500	1,540	1,572	1,606	1,616	1,635	1,713	1,800	1,806	1,806	1,806	1,806	1,917	2,026
Port land accumulated depreciation		0	0	0	0	0	0	0	0	0	0	0		0
Port land book value	1,500	1,540	1,572	1,606	1,616	1,635	1,713	1,800	1,806	1,806	1,806	1,806	1,917	2,026
Site improvements at cost	275	275	261	621	1,289	1,562	2,974	3,976	6,668	7,178	9,165	10,475	10,662	12,787
Site improvements accumulated depreciation		14	14	14	60	90	231	391	612	963	1,388	1,907	2,490	3,133
Site improvements book value	275	261	247	607	1,229	1,472	2,743	3,585	6,056	6,215	7,777	8,568	8,172	9,654
Dredging (valuation)											1,917	1,917	2,306	2,306
Dredging accumulated depreciation											395	800	1,221	1,663
Dredging book value											1,522	1,117	1,085	643
Buildings at cost	4,308	4,343	4,791	4,635	5,278	5,280	5,830	7,824	7,916	7,916	7,712	7,706	7,769	8,415
Buildings accumulated depreciation		255	257	260	1,037	1,304	1,552	1,883	2,249	2,638	2,707	2,806	2,942	2,938
Buildings book value		4,088	4,534	4,375	4,241	3,976	4,278	5,941	5,667	5,278	5,005	4,900	4,827	5,477
Wharves and jetties at cost	3,707	3,707	3,521	3,335	3,707	3,809	3,918	4,162	3,856	14,108	14,743	14,743	14,836	14,836
Wharves and jetties accumulated depreciation		186	186	186	743	930	1,122	1,320	1,495	1,791	2,019	2,253	2,465	2,678
Wharves and jetties book value	3,707	3,521	3,335	3,149	2,964	2,879	2,796	2,842	2,361	12,317	12,724	12,490	12,371	12,158
Plant, equipment & vehicles at cost	2,210	2,342	6,971	7,186	8,662	10,090	13,614	20,790	22,195	23,282	24,651	26,093	27,473	26,421
Plant, equipment & vehicles accumulated depreciation		336	497	651	2,218	3,123	3,890	5,371	7,135	8,665	10,176	11,579	13,149	13,434
Plant, equipment & vehicles book value	2,210	2,006	6,474	6,535	6,444	6,967	9,724	15,419	15,060	14,617	14,475	14,514	14,324	12,987
Work in progress					658	449	1,735	2,739	7,882	236	627	448	534	4,419
Total fixed assets not intended for sale at cost														71,210
Total fixed assets not intended for sale accumulated depreciation														23,846
Total fixed assets not intended for sale book value														47,364
Fixed assets intended for sale at cost														2,274
Fixed assets intended for sale accumulated depreciation														1,581
Fixed assets intended for sale book value														693
Total port fixed assets at cost	*12,000*	*12,207*	*17,116*	*17,383*	*21,210*	*22,825*	*29,784*	41,591	50,323	54,526	60,621	63,188	65,497	73,484
Total port fixed assets accumulated depreciation	*0*	*791*	*954*	*1,111*	*4,058*	*5,447*	*6,795*	8,965	11,491	14,057	16,685	19,345	22,267	25,427
Total port fixed assets book value	*12,000*	*11,416*	*16,162*	*16,272*	*17,152*	*17,378*	*22,989*	32,326	38,832	40,469	43,936	43,843	43,230	48,057
Term debt		3,600	2,327	1,995	1,662	1,330	998	666	2,833	16,400	14,800	9,355	0	2,001
Book value minus term debt														
Revaluation reserve at end of period				0	1,396	2,795	4,857	5,044	5,008	4,561	6,619	5,570	2,793	2,848
Change in revaluation reserve				*0*	*1,396*	*1,399*	*2,062*	*187*	-36	*-447*	*2,058*	*-1,049*	*-2,777*	55
Investment Properties														
Land	9,800	8,710	8,710	8,710	11,190	12,455	14,340	14,900	14,800	12,120	12,244	2,146	1,690	1,745
Buildings						0	0	100	10	100	100	140	75	75
Investment properties intended for sale												5,450		
Total	9,800	8,710	8,710	8,710	11,190	12,455	14,340	15,000	14,900	12,220	12,344	7,736	1,765	1,820

Port of Napier

September years throughout	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Capex and Fixed Asset stocks analysis														
Book value of total fixed assets incl investment properties	*21,800*	*20,126*	*24,872*	*24,982*	*28,342*	*29,833*	*37,329*	*47,326*	*53,732*	*52,689*	*56,280*	*51,579*	*44,995*	*49,877*
Cash from disposal of fixed assets		65	29	105	160	614	495	391	647	5,362	145	5,212	6,665	34
Cash from sale of investments		0	0	0	0	0	0	0	0	0	0	0	0	0
Purchase of fixed assets		809	5,266	1,123	2,153	1,663	7,449	12,256	9,553	4,755	4,657	3,158	2,818	8,291
Cash spent on fixed assets gross		*809*	*5,266*	*1,123*	*2,153*	*1,663*	*7,449*	*12,256*	*9,553*	*4,755*	*4,657*	*3,158*	*2,818*	*8,291*
Cash spent on fixed assets net of sales of fixed assets		*744*	*5,237*	*1,018*	*1,993*	*1,049*	*6,954*	*11,865*	*8,906*	*-607*	*4,512*	*-2,054*	*-3,847*	*8,257*
Cash spent on fixed assets net of sales of fixed assets other than land		*744*	*5,237*	*1,018*	*1,993*	*1,049*	*6,954*	*11,865*	*8,906*	*4,590*	*4,512*	*3,026*	*2,770*	*8,257*
Increase in "fixed assets at cost"		*-883*	*4,909*	*267*	*6,307*	*2,880*	*8,844*	*12,367*	*8,632*	*1,523*	*6,219*	*-7,531*	*1,853*	*8,042*
Cumulative fixed assets at cost using net cash acquisitions		*22,544*	*27,781*	*28,799*	*30,792*	*31,841*	*38,795*	*50,660*	*59,566*	*58,959*	*63,471*	*61,417*	*57,570*	*65,827*
Cumulative fixed assets at cost using gross cash acquisitions		*22,609*	*27,875*	*28,998*	*31,151*	*32,814*	*40,263*	*52,519*	*62,072*	*66,827*	*71,484*	*74,642*	*77,460*	*85,751*
Book fixed assets at cost	21,800	20,917	25,826	26,093	32,400	35,280	44,124	56,491	65,123	66,646	72,865	65,334	67,187	75,229
Fixed assets DRC valuation														
Port land													23,160	23,160
Site improvement													28,087	28,214
Deredging													7,636	7,107
Buildings													10,104	11,108
Wharves and jetties													28,065	27,983
Vehicles, plant and equipment													14,324	13,680
Work in progress													534	4,419
Total													111,910	115,671

Port Statistics

Stats NZ export volume 000 tonnes June years													
Stats NZ import volume 000 tonnes June years													
Total overseas cargo volume from Stats NZ data													
Total coastal cargo volume from Stats NZ data													
Container TEUs		12,683	15,675	24,994	30,063	33,842	42,130	48,354	47,012	50,176	58,972	66,455	74,681	84,911
Import cargo 000 tonnes		551	605	540	674	762	909	867	901	874	932	999	*940*	994
Overseas						438	579							
Coastal						325	312							
Export cargo 000 tonnes		914	1,200	1,469	1,539	1,478	1,529	1,668	1,562	1,356	1,237	1,546	*1,484*	1,960
Overseas														
Coastal														
Total cargo tonnage through the port as per Annual Reports		1,465	1,805	2,009	2,213	2,240	2,438	2,535	2,463	2,230	2,169	2,545	2,424	2,954
Total cargo tonnage through the port as per Annual Reports million tonnes		1.47	1.81	2.01	2.21	2.24	2.44	2.54	2.46	2.23	2.17	2.55	2.42	2.95
Implied coastal volume														
Revenue June 2000 $ per tonne of total cargo		13.68	11.37	10.81	10.60	10.72	10.46	10.71	11.32	14.98	12.76	13.31	15.25	10.74
Expenses excl deprec & interest, June 2000 $ per tonne of total cargo		8.80	6.62	6.44	5.93	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating surplus June 2000 $ per tonne		4.88	4.75	4.37	4.67	5.26	10.46	10.71	11.32	14.98	12.76	13.31	15.25	10.74
Stats NZ export value $million June years														
Stats NZ import value $million June years														
Port revenue $ per $000 of overseas trade value														
Port expenses $ per $000 of overseas trade value														
Number of ship visiting		294	319	386	492	518	581	584	596	588	576	601	643	707
Permanent employees		120	121	116	111	111	126	116	120	124	128			
Ship turnaround (average days in port)	6.0				2.0	1.6	1.8							

Price Deflators (December quarter 1997=1000):

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PPI (Inputs) average for year ending June	795	841	900	919	929	952	972	982	988	991	999	1000	1039	1130
PPI (Inputs) average for year ending September	805	857	907	922	934	959	975	983	989	992	1001	1003	1060	1147
PPI (Inputs) average for nine months ending June	799	848	905	922	931	955	973	982	989	991	1000	999	1046	1139
PPI (Inputs) for September quarter	822	885	912	921	943	968	980	986	990	995	1003	1016	1101	1169
PPI (Inputs) for June quarter	810	863	913	919	936	960	975	983	989	990	1003	1001	1060	1146

IRR analysis using Cashflow Accounts: Port plus Landholdings

Book value of fixed assets incl investment props	21,800	20,126	24,872	24,982	28,342	29,833	37,329	47,326	53,732	52,689	56,280	51,579	44,995	49,877
Gross pre-tax operating surplus excluding interest		4,346	7,158	6,764	7,698	7,305	9,274	9,688	10,724	8,849	10,431	9,258	12,424	12,630
Cash purchases of fixed assets, gross		809	5,266	1,123	2,153	1,663	7,449	12,256	9,553	4,755	4,657	3,158	2,818	8,291
Cash purchases of fixed assets, net of disposals (incl land sales)		744	5,237	1,018	1,993	1,049	6,954	11,865	8,906	-607	4,512	-2,054	-3,847	8,257
Net surplus pre-tax, using net capex		3,602	1,921	5,746	5,705	6,256	2,320	-2,177	1,818	9,456	5,919	11,312	16,271	4,373
Cash income tax		1,000	2,107	2,066	2,431	2,089	2,826	2,461	2,343	2,702	1,423	2,140	2,575	3,271
Net surplus after tax		2,602	-186	3,680	3,274	4,167	-506	-4,638	-525	6,754	4,496	9,172	13,696	1,102

Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	30,393													
Real net cash surplus, pre-tax		4,817	2,429	7,146	6,998	7,480	2,728	-2,538	2,106	10,924	6,780	12,925	17,595	4,370
Real cash income tax paid		1,337	2,664	2,569	2,982	2,498	3,323	2,869	2,714	3,121	1,630	2,445	2,785	3,269
Post-tax real cashflow to owners		3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	14,811	1,101
Real exit price (book value including revaluations)		26,061	31,254	31,085	34,443	35,319	43,652	55,006	62,199	60,685	64,304	58,179	46,834	48,896
Real cash stream for exit at end of financial year:														
1989	-30,393	29,541												
1990	-30,393	3,479	31,018											
1991	-30,393	3,479	-235	35,662										
1992	-30,393	3,479	-235	4,577	38,459									
1993	-30,393	3,479	-235	4,577	4,016	40,301								
1994	-30,393	3,479	-235	4,577	4,016	4,982	43,057							
1995	-30,393	3,479	-235	4,577	4,016	4,982	-595	49,599						
1996	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	61,591					
1997	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	68,488				
1998	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	69,454			
1999	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	68,658		
2000	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	61,645	
2001	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	14,811	49,997
Exiting at----------		**Sep-89**	**Sep-90**	**Sep-91**	**Sep-92**	**Sep-93**	**Sep-94**	**Sep-95**	**Sep-96**	**Sep-97**	**Sep-98**	**Sep-99**	**Sep-00**	**Sep-01**
Real post-tax IRR		**-2.8%**	**6.9%**	**9.2%**	**12.2%**	**13.0%**	**14.1%**	**14.1%**	**13.8%**	**13.4%**	**13.5%**	**13.0%**	**12.6%**	**12.4%**

IRR Analysis using P&L Accounts: Port Plus Landholdings

Book value of fixed assets $000	21,800	20,126	24,872	24,982	28,342	29,833	37,329	47,326	53,732	52,689	56,280	51,579	44,995	49,877
Revenue excl interest incl property sales		14,375	15,466	16,878	18,577	19,424	21,192	22,997	24,016	28,821	24,102	29,630	34,169	31,734
Operating expenditure excl interest and dep'n		9,883	9,611	10,580	10,905	10,375	11,966	13,575	13,864	14,292	14,707	14,417	16,019	18,165
Cost of property sales (subtract)										5,197		5,080	6,617	0
Capital gains realised on sale of assets (add)								211	464	2,950	-116	2,639	3,292	3
Gross operating surplus including capital gains		4,492	5,855	6,298	7,672	9,049	9,226	9,633	10,616	12,282	9,279	12,772	14,825	13,572
Cash purchases of fixed assets, gross		809	5,266	1,123	2,153	1,663	7,449	12,256	9,553	4,755	4,657	3,158	2,818	8,291
Cash purchases of fixed assets, net of disposals		744	5,237	1,018	1,993	1,049	6,954	11,865	8,906	-607	4,512	-2,054	-3,847	8,257
Net surplus pre-tax using net capex		3,748	618	5,280	5,679	8,000	2,272	-2,232	1,710	12,889	4,767	14,826	18,672	5,315
Income tax provision		757	1,757	1,754	2,233	2,660	2,569	2,287	2,393	1,928	2,071	2,019	2,575	3,161
Net surplus after tax		2,991	-1,139	3,526	3,446	5,340	-297	-4,519	-683	10,961	2,696	12,807	16,097	2,154
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	30,393													
Real net surplus pre-tax		5,012	781	6,566	6,966	9,565	2,672	-2,602	1,981	14,890	5,460	16,940	20,192	5,312
Real income tax provision		1,012	2,221	2,181	2,739	3,180	3,021	2,666	2,772	2,227	2,372	2,307	2,785	3,159
Post-tax real cashflow to owners		4,000	-1,440	4,385	4,227	6,385	-349	-5,268	-791	12,663	3,088	14,633	17,407	2,153
Real exit price (book value including revaluations)		26,061	31,254	31,085	34,443	35,319	43,652	55,006	62,199	60,685	64,304	58,179	46,834	48,896
Real cash stream for exit at end of financial year:														
1989	-30,393	30,061												
1990	-30,393	4,000	29,814											
1991	-30,393	4,000	-1,440	35,470										
1992	-30,393	4,000	-1,440	4,385	38,670									
1993	-30,393	4,000	-1,440	4,385	4,227	41,703								
1994	-30,393	4,000	-1,440	4,385	4,227	6,385	43,303							
1995	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	49,737						
1996	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	-5,268	61,408					
1997	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	-5,268	-791	73,348				
1998	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	-5,268	-791	12,663	67,392			
1999	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	-5,268	-791	12,663	3,088	72,812		
2000	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	-5,268	-791	12,663	3,088	14,633	64,241	
2001	-30,393	4,000	-1,440	4,385	4,227	6,385	-349	-5,268	-791	12,663	3,088	14,633	17,407	51,048
Exiting at----------		**Sep-89**	**Sep-90**	**Sep-91**	**Sep-92**	**Sep-93**	**Sep-94**	**Sep-95**	**Sep-96**	**Sep-97**	**Sep-98**	**Sep-99**	**Sep-00**	**Sep-01**
Real post-tax IRR		**-1.1%**	**5.8%**	**8.3%**	**11.7%**	**13.2%**	**14.4%**	**14.3%**	**14.0%**	**14.4%**	**14.2%**	**14.1%**	**13.9%**	**13.7%**

Port only excluding investment property: cashflow basis														
Book value of fixed assets	12,000	11,416	16,162	16,272	17,152	17,378	22,989	32,326	38,832	40,469	43,936	43,843	43,230	48,057
Operating Surplus		3,653	6,263	5,849	6,761	6,219	8,099	8,020	9,278	7,725	9,461	8,329	12,022	12,553
Capital expenditure net of non-land asset sales		744	5,237	1,018	1,993	1,049	6,954	11,865	8,906	4,590	4,512	3,026	2,770	8,257
Pre-tax net surplus		2,909	1,026	4,831	4,768	5,170	1,145	-3,845	372	3,135	4,949	5,303	9,252	4,296
Cash tax paid		1,000	2,107	2,066	2,431	2,089	2,826	2,461	2,343	2,702	1,423	2,140	2,575	3,271
Post tax surplus		1,909	-1,081	2,765	2,337	3,081	-1,681	-6,306	-1,971	433	3,526	3,163	6,677	1,025
Exit value	12,000	11,416	16,162	16,272	17,152	17,378	22,989	32,326	38,832	40,469	43,936	43,843	43,230	48,057
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	16,730													
Real net surplus pre-tax		3,890	1,297	6,008	5,849	6,181	1,347	-4,483	431	3,622	5,669	6,059	10,005	4,293
Real income tax paid		1,337	2,664	2,569	2,982	2,498	3,323	2,869	2,714	3,121	1,630	2,445	2,785	3,269
Post-tax real cashflow to owners		2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	-2,283	500	4,039	3,614	7,220	1,024
Real exit price (book value including revaluations)		15,916	20,928	20,447	21,342	21,119	27,216	37,802	45,133	46,846	50,604	50,094	48,761	50,021
Real cash stream for exit at end of financial year:														
1989	-16,730	18,468												
1990	-16,730	2,553	19,562											
1991	-16,730	2,553	-1,367	23,886										
1992	-16,730	2,553	-1,367	3,439	24,209									
1993	-16,730	2,553	-1,367	3,439	2,867	24,803								
1994	-16,730	2,553	-1,367	3,439	2,867	3,684	25,239							
1995	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	30,450						
1996	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	42,850					
1997	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	-2,283	47,346				
1998	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	-2,283	500	54,642			
1999	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	-2,283	500	4,039	53,708		
2000	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	-2,283	500	4,039	3,614	55,982	
2001	-16,730	2,553	-1,367	3,439	2,867	3,684	-1,977	-7,352	-2,283	500	4,039	3,614	7,220	51,046
Exiting at		**Sep-89**	**Sep-90**	**Sep-91**	**Sep-92**	**Sep-93**	**Sep-94**	**Sep-95**	**Sep-96**	**Sep-97**	**Sep-98**	**Sep-99**	**Sep-00**	**Sep-01**
Real post-tax IRR		**10.4%**	**16.0%**	**15.4%**	**16.1%**	**16.1%**	**16.5%**	**15.9%**	**15.6%**	**14.3%**	**14.5%**	**13.8%**	**13.6%**	**13.0%**

Port only excluding investment property: P&L basis

Book value of fixed assets	12,000	11,416	16,162	16,272	17,152	17,378	22,989	32,326	38,832	40,469	43,936	43,843	43,230	48,057
Revenue excluding property income and land sales		13,503	14,510	15,889	17,539	18,303	20,017	21,309	22,570	22,500	23,132	23,621	27,150	31,657
Expenses excluding depreciation, interest, property costs and subventions		9,638	9,453	10,406	10,702	10,222	11,966	13,460	13,864	14,292	14,707	14,417	16,019	18,165
Gross pre-tax operating Surplus		3,865	5,057	5,483	6,837	8,081	8,051	7,849	8,706	8,208	8,425	9,204	11,131	13,492
Capital expenditure net of non-land asset sales		744	5,237	1,018	1,993	1,049	6,954	11,865	8,906	4,590	4,512	3,026	2,770	8,257
Pre-tax net surplus		3,121	-180	4,465	4,844	7,032	1,097	-4,016	-200	3,618	3,913	6,178	8,361	5,235
Tax expense		757	1,757	1,754	2,233	2,660	2,569	2,287	2,393	1,928	2,071	2,019	2,575	3,161
Post tax surplus		2,364	-1,937	2,711	2,611	4,372	-1,472	-6,303	-2,593	1,690	1,842	4,159	5,786	2,074
Exit value	12,000	11,416	16,162	16,272	17,152	17,378	22,989	32,326	38,832	40,469	43,936	43,843	43,230	48,057

Data deflated to June 2000 dollars

Assets at valuation on 1 October 1988	16,730													
Real net surplus pre-tax		4,173	-228	5,553	5,942	8,408	1,290	-4,682	-232	4,180	4,482	7,059	9,041	5,232
Real income tax provision		1,012	2,221	2,181	2,739	3,180	3,021	2,666	2,772	2,227	2,372	2,307	2,785	3,159
Post-tax real cashflow to owners		3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	-3,004	1,952	2,110	4,752	6,257	2,073
Real exit price (book value including revaluations)		14,783	20,309	20,247	20,844	20,574	26,883	37,572	44,951	46,611	50,200	49,453	44,997	47,111

Real cash stream for exit at end of financial year:

1989	-16,730	17,944											
1990	-16,730	3,161	17,860										
1991	-16,730	3,161	-2,449	23,619									
1992	-16,730	3,161	-2,449	3,371	24,047								
1993	-16,730	3,161	-2,449	3,371	3,203	25,801							
1994	-16,730	3,161	-2,449	3,371	3,203	5,227	25,152						
1995	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	30,223					
1996	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	41,947				
1997	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	-3,004	48,563			
1998	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	-3,004	1,952	52,310		
1999	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	-3,004	1,952	2,110	54,205	
2000	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	-3,004	1,952	2,110	4,752	51,254
2001	-16,730	3,161	-2,449	3,371	3,203	5,227	-1,731	-7,348	-3,004	1,952	2,110	4,752	6,257	49,184

Exiting at----------	**Sep-89**	**Sep-90**	**Sep-91**	**Sep-92**	**Sep-93**	**Sep-94**	**Sep-95**	**Sep-96**	**Sep-97**	**Sep-98**	**Sep-99**	**Sep-00**	**Sep-01**
Real post-tax IRR	**7.3%**	**13.2%**	**14.2%**	**15.3%**	**16.6%**	**17.3%**	**16.7%**	**16.1%**	**15.1%**	**14.8%**	**14.2%**	**13.4%**	**13.1%**

IRR analysis using Cashflow Accounts (Port plus Landholdings) Using EV / EBITDA for Exit Values

Assets at acquisition value	21,800													
Exit price						74,588	84,303	93,114	75,950	167,740	81,987	161,452	154,673	127,939
using EV/EBITDA multiple of						8.2x	9.1x	9.9x	7.5x	11.5x	8.7x	10.6x	8.5x	9.4x
Net Surplus after Tax		2,602	-186	3,680	3,274	4,167	-506	-4,638	-525	6,754	4,496	9,172	13,696	1,102
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	30,393													
Post-tax real cashflow to owners		3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	14,811	1,101
Real exit price (book value including revaluations)						88,304	98,583	108,224	87,918	193,196	93,676	182,110	160,995	125,422
Real cash stream for exit at end of financial year:														
1993	-30,393	3,479	-235	4,577	4,016	93,286								
1994	-30,393	3,479	-235	4,577	4,016	4,982	97,988							
1995	-30,393	3,479	-235	4,577	4,016	4,982	-595	102,817						
1996	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	87,310					
1997	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	200,999				
1998	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	98,825			
1999	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	192,589		
2000	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	175,806	
2001	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	14,811	126,523
Exiting at----------						**Sep-93**	**Sep-94**	**Sep-95**	**Sep-96**	**Sep-97**	**Sep-98**	**Sep-99**	**Sep-00**	**Sep-01**
Real post-tax IRR						**30.7%**	**27.7%**	**24.5%**	**18.4%**	**26.8%**	**17.0%**	**22.2%**	**20.2%**	**17.4%**

IRR analysis using Cashflow Accounts and Price:Book for Exit Price

Opening Value of fixed assets	21,800													
SHF from balance sheet						37044	42428	45753	48330	36683	39555	41024	42945	48413
Core debt						1662	1330	998	3184	16733	15035	9835	387	3006
Exit price						36,173	67,909	86,656	116,996	150,083	137,833	126,304	109,327	124,360
using Price:NBV multiple of						0.9x	1.6x	1.9x	2.4x	3.6x	3.1x	2.8x	2.5x	2.5x
Net Surplus after Tax		2,602	-186	3,680	3,274	4,167	-506	-4,638	-525	6,754	4,496	9,172	13,696	1,102
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	30,393													
Post-tax real cashflow to owners		3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	14,811	1,101
Real exit price (Price:Book basis)						42,825	79,412	100,718	135,431	172,859	157,485	142,465	113,795	121,913
Real cash stream for exit at end of financial year:														
1993	-30,393	3,479	-235	4,577	4,016	47,807								
1994	-30,393	3,479	-235	4,577	4,016	4,982	78,817							
1995	-30,393	3,479	-235	4,577	4,016	4,982	-595	95,311						
1996	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	134,823					
1997	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	180,662				
1998	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	162,634			
1999	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	152,944		
2000	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	128,606	
2001	-30,393	3,479	-235	4,577	4,016	4,982	-595	-5,407	-608	7,803	5,150	10,480	14,811	123,015
Exiting at:						**Sep-93**	**Sep-94**	**Sep-95**	**Sep-96**	**Sep-97**	**Sep-98**	**Sep-99**	**Sep-00**	**Sep-01**
Real post-tax IRR:						**16.3%**	**23.8%**	**23.3%**	**24.5%**	**25.4%**	**22.2%**	**20.0%**	**17.8%**	**17.2%**

G.6 Data Issues in Analysis

Three problems presented themselves with the data in the Annual Reports:

- the company's practice of presenting the P&L account with no explicit line item for expenses and only an incomplete list of matters that had been credited or charged in calculating profit before tax, which meant that operating expenditure for many years had to be derived as a residual, with consequent possibility of errors
- the handling of GST in the cashflow accounts which differed across the period;
- the separation of land investments from port operations.

G.6.1 GST and the cashflow accounts

From 1989 to 1992 the cashflow statements are set out as in the left hand column of the table below (showing the 1992 year only). In the 1993 accounts a change occurred, to the presentation shown in the retrospective figures for 1992 in the middle column:

	1992 year As per 1993 accounts	1992 year As per 1992 accounts	Difference
Operating activities: cash provided from			
Receipts from customers	19,333	20,892	-1,559
Interest received	477	477	0
Total	**19,810**	**21,369**	-1,559
Operating activities: cash applied to			
Payments to suppliers and employees incl GST	11,635	13,194	-1,559
Interest paid	195	195	0
Taxes paid	2,431	2,431	0
Total	**14,261**	**15,820**	-1,559
Net cash flows from operating activities	**5,549**	**5,549**	**0**

It can be seen that $1.559 million was taken off both receipts and outlays, leaving net cash unchanged. This may represent a change in the recording of GST payments, although there is no note explaining the change. In our data set the receipts for years 1992 to 1996 are shown on a separate row "as per 1993-1996 accounts"

Until 1996 cash receipts and payments were recorded with no explicit GST line item, with GST evidently subsumed in one or both of the figures. From 1997 to 1999 there is a separate line for "GST received" in the cash receipts panel, suggesting that payments from customers are recorded exclusive of GST for those years. Payments to employees and suppliers continued to be recorded with no separate GST line item. This treatment continued through the 2000 accounts.

In the 2001 accounts, the line item for "GST received" was eliminated from cash receipts and a line "GST paid" appears in the cash outflows panel. The result, as shown in the table below,

was to shift $1.986 million from receipts to outlays in that year, and to reduce "payments to suppliers and employees" by $2.801 million (comprising apparently the GST component of these outlays).

	2000 year as per 2000 Annual Report	2000 year as per 2001 Annual Report	
Operating activities: cash provided from			
Receipts from customers	30,075	30,075	0
GST received	1,986		1,986
Interest received	12	12	0
Total	**32,073**	**30,087**	1,986
Operating activities: cash applied to			
Payments to suppliers and employees incl GST	19,637	16,836	2,801
GST payable gross			0
Payments to suppliers and employees excl GST			0
Interest paid	480	480	0
Taxes paid	2,575	2,575	0
GST paid		815	-815
Total	**22,692**	**20,706**	1,986
Net operating cashflows	**9,381**	**9,381**	**0**

The net cashflows from operating activities used for our analysis are inclusive of any net cash gains or losses from GST, since these are taken to be part of the normal costs of running a business. Hence the discrepancies in accounting treatment for the income and outlay rows in our tables do not affect the IRR calculations; the net cash operating surplus is the same across all the various treatments.

G.6.2 Separation of Property Activities and Estimation of Operating Expenses

The P&L accounts provide a certain amount of disaggregation of the port's activities between its landlord function and its port operation. The table below shows the extent of disaggregation with respect to revenue:

	Revenue from port operations	Interest income	Property operations (industrial land)	Revenue from sale of investment properties	Gross Revenue
1989	13,503	612	872		14,987
1990	14,510	767	956		16,233
1991	15,889	588	989		17,466
1992	17,539	546	1,038		19,123
1993	18,303	658	1,121		20,082
1994	20,017	484	1,175		21,676
1995	21,309	282	1,668		23,259
1996	22,570	43	1,446	0	24,059
1997	22,500	89	1,124	5,197	28,910
1998	23,132	54	970		24,156
1999	23,621	10	929	5,080	29,640
2000	27,150	13	402	6,617	34,182
2001	31,657	13	77	0	31,747

It is obvious that land rentals and sale receipts played a major role in the income of the port company, especially in 1997, 1999 and 2000.

The disaggregation of expenses available from the P&L accounts and associated notes is less straightforward, since from the 1994 Annual Report on there was no total expense line shown – merely Net Profit After Tax, with a Note showing certain items which had been taken into account in calculating that NPAT.

For the period 1994-2001, we have therefore been obliged to work with residuals. Total expenditure is estimated by subtracting NPAT from total revenue, and then adjusting for three other items:

- recorded realised capital gains on disposal of fixed assets and property investments, which were credited to NPAT in the P&L accounts;
- cost of sales of investment property, which was not explicitly listed in the Notes; and
- "adjustments to the revaluation reserve" which were charged against income in calculating NPAT for 1999 and 2000.

The calculation of total expenditure gave the following results.

	1 Gross Revenue	2 Net profit before taxation	3 Gain on sale of property	4 Gain on sale of fixed assets	5 Total net gain on asset sales (subtract from NPAT)	6 NPAT minus gain on asset sales (2-5)	7 Residual (1-6)	8 Cost of property sales (= revenue from sale) (subtract from residual)	9 Adjust-ment to revaluat-ion reserve (subtract from residual)	10 Total operating expend-iture estimate (7-8-9)
1989	14,987	3,744				3,744	11,243			11,243
1990	16,233	5,136				5,136	11,097			11,097
1991	17,466	5,261				5,261	12,205			12,205
1992	19,123	6,821				6,821	12,302			12,302
1993	20,082	8,174				8,174	11,908			11,908
1994	21,676	7,791				7,791	13,885			13,885
1995	23,279	7,525			211	7,314	15,965			15,965
1996	24,059	7,736	183	281	464	7,272	16,787			16,787
1997	28,910	8,662	2,823	127	2,950	5,712	23,198	5,197		18,001
1998	24,156	5,332	-5	-111	-116	5,448	18,708			18,708
1999	29,640	7,519	2,638	1	2,639	4,880	24,760	5,080	1,101	18,579
2000	34,182	11,076	3,423	-131	3,292	7,784	26,398	6,617	65	19,716
2001	31,747	10,044		3	3	10,041	21,706			21,706

(To maintain consistency in calculating the P&L-based operating surplus for the total port and landowning operation, the full amount of receipts from land sales has been debited as an operating expense additional to those in the table above, offset against the negative expense item credited for capital gains realised.)

To derive operating expenses for the IRR analysis we have subtracted interest and depreciation from the estimate of total expenses. In addition we have subtracted a 1995 subvention payment, which is assumed to be a tax-reducing transfer rather than an operating expense in the usual sense. The resulting total is then disaggregated between the total operation and the port exclusive of property operations, as in the table below. For the years 1989-1993, the Annual Report provides a line item for port-only operating expenses, which has been used in the analysis in preference to the derived figure.

	1 Total operating expend-iture estimate	2 Deprec-iation	3 Interest	4 Subvent-ion payments	5 Operating expenses excluding depreciat-ion, interest and subvent-ions (1-2-3-4)	6 "Property expenses"	7 Port-only operating expenses (5-6)	8 Port-only operating expenses as shown in Annual Reports
1989	11,243	791	569		9,883	179	9,704	9,638
1990	11,097	954	532		9,611	61	9,550	9,453
1991	12,205	1111	514		10,580	74	10,506	10,406
1992	12,302	1202	195		10,905	101	10,804	10,702
1993	11,908	1389	144		10,375	35	10,340	10,222
1994	13,885	1823	96	0	11,966		11,966	
1995	15,965	2276	114	115	13,460		13,460	
1996	16,787	2689	234		13,864		13,864	
1997	18,001	3013	696		14,292		14,292	
1998	18,708	2539	1462		14,707		14,707	
1999	18,579	3133	1029		14,417		14,417	
2000	19,716	3265	432		16,019		16,019	
2001	21,706	3433	108		18,165		18,165	

Appendix H. Port Marlborough Limited

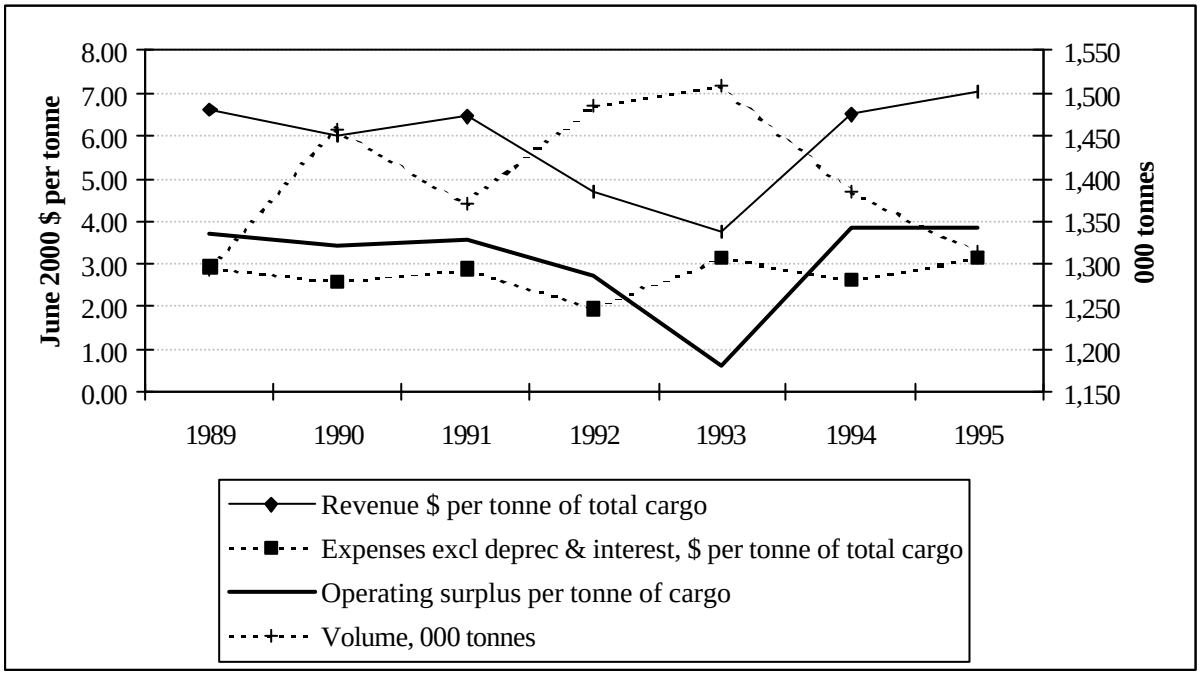
H.1 Establishment and Asset Acquisition

The new company was set up with the issue in November 1988 of $11.2 million in shares to the Marlborough Harbour Board from which the assets were acquired[67]. Term debt at the outset was $5.0 million, making up the total acquisition outlay of $16.2 million. Fixed assets at cost were shown as $15.975 million at September 1989, and an item of $240,000 for "purchase of fixed assets" in the first year's cashflow statement suggests that the initial book value at establishment was $15.735 million. This figure has been used as the entry cost paid by the hypothetical investor in the IRR analysis.

H.2 Notable Items from Annual Reports

H.2.1 Cargo Statistics

The great bulk of trade through Picton is coastal and data for volumes through the ferry terminal are not provided in the port'' annual reports, nor by Statistics New Zealand since 1995. For the period 1989 to 1995, trends in total volume, revenue per tonne and expenses per tonne were as shown below:



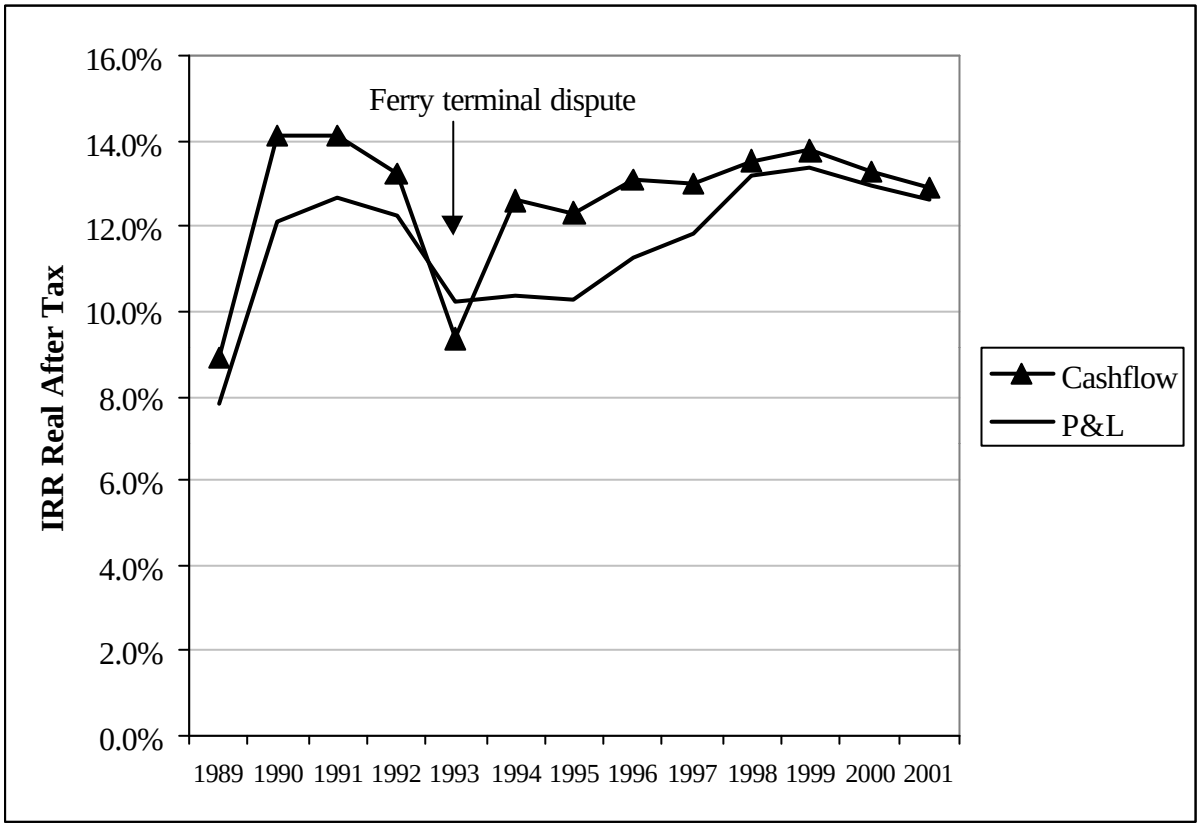
H.3 The IRR Calculation

The basis of the calculation is as follows:

67 *Port Company Plan: Marlborough Harbour Board* revised edition 21 July 1988, p.34.

- cash outflow at 1 October 1988 equal to the acquisition price of the fixed assets, namely $15.7 million;
- each year for which the investment is held, receipt of all cash income net of direct expenses, and net of any capital expenditure not offset by cash receipts from sales of fixed assets; and
- when the holding is divested, a cash inflow equivalent to the net book value of the assets at the end of that financial year (this again gives a conservative bias, since the value of the business at each date will have been greater than book value of fixed assets).

The following chart shows the IRRs for the resulting series of cashflow streams generated assuming possible exit dates of September 1989 through September 2001. The dip in 1993 is due to a dispute over charges at the ferry terminal which was settled the following year, with a $2.85 million payment from TranzRail to the port which brought the IRR back onto its longer-run path.



Port Marlborough Limited

Period ending	Sept	Sept	Sept	Sept	June	June	June	June	June	June	June	June	June	June
June years from 1993; September years to 1991	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Months in period	12	12	9	12	9	12	12	12	12	12	12	12	12	12
P&L data as shown in annual reports, $000														
Gross Revenue														
port installations and services		5,316	5,618	5,878	4,684	3,049	6,216	6,328	6,624	6,568	6,309	6,411	6,862	6,749
small craft facilities		1,179	1,340	1,608	1,334	1,862	2,020	2,189	2,420	2,648	2,760	2,853	3,144	3,483
total port operating revenues as per segmental reporting									9,961	10,280	12,224	9,714	10,334	10,616
airport								0	377	470	473	488	506	506
total airport operating revenues as per segmental reporting									383	474	479	494	508	509
interest									649	634	542	71	21	37
miscellaneous		546	659	664	452	767	675	675	232	383	2,563	336	254	295
of which interest		126	134	428	332	434	631	593						
of which revenue from non-port-related land		21	31	61	15	180	24	65						
total "eliminations" as per segmental reporting									-42	-51	-56	-49	-55	-55
Total		7,041	7,617	8,150	6,470	5,678	8,911	9,287	10,302	10,703	12,647	10,159	10,787	11,070
Operating expenditure														
personnel		1,888	2,006	1,988	1,509	2,086	2,229	2,266	2,301	2,340	2,278	1,582	1,585	1,735
operations and maintenance		1,149	1,069	1,415	787	1,396	1,137	1,559	1,846	2,665	1,811	2,089	2,318	2,554
interest		641	302	177	133	177	175	171	169	168	167	162	330	648
depreciation		557	560	500	378	540	561	606	687	709	707	638	835	1,049
abnormal items expensed		0	136		238	739								
Total		4,235	4,073	4,080	3,045	4,938	4,102	4,602	5,003	5,882	4,963	4,471	5,068	5,986
Operating surplus before subvention and tax		2,806	3,544	4,070	3,425	740	4,809	4,685	5,299	4,821	7,684	5,688	5,719	5,084
Subvention payment									0	126	222	105	242	403
Abnormal items							2,423							
Operating surplus before taxation		2,806	3,544	4,070	3,425	740	7,232	4,685	5,299	4,695	7,462	5,583	5,477	4,681
Taxation expense		862	462	1,456	1,257	437	2,454	2,332	1,757	720	1,619	1,786	1,687	1,340
Net profit after taxation		1,944	3,082	2,614	2,168	303	4,778	2,353	3,542	3,975	5,843	3,797	3,790	3,341
Extraordinary items			-294											
Net profit after taxation after extraordinaries			2,788											
Port operations NPAT as per segmental reporting									3,433	3,852	5,714	3,676	3,702	3,243
Airport operations NPAT as per segmental reporting									78	92	99	85	56	66
"Eliminations" NPAT as per segmental reporting									31	31	31	36	32	32

Derived P&L Data for Analysis													
Revenue excluding interest & property returns	*6,894*	*7,452*	*7,661*	*6,123*	*5,064*	*8,256*	*8,534*	*9,961*	*10,280*	*12,224*	*9,714*	*10,334*	*10,616*
Port operating expenses excluding interest, depreciation, asset sales	*3,037*	*3,211*	*3,403*	*2,534*	*4,221*	*3,366*	*3,825*	*4,147*	*5,005*	*4,089*	*3,671*	*3,903*	*4,289*
Abnormal/extraordinary credits						*2,423*							
Gross operating surplus excl property & asset sales	*3,857*	*4,241*	*4,258*	*3,589*	*843*	*7,313*	*4,709*	*5,814*	*5,275*	*8,135*	*6,043*	*6,431*	*6,327*
EBITDA	*3,878*	*4,272*	*4,319*	*3,604*	*1,023*	*4,914*	*4,869*	*6,155*	*5,698*	*8,558*	*6,488*	*6,884*	*6,781*
Cashflows Statement from annual reports													
Operating activities: cash provided from													
Receipts from customers	6,432	7,857	7,601	6,166	4,777	11,712	8,759	9,894	9,641	9,995	9,695	10,758	10,978
Interest received	126	100	392	285	545	673	563	683	634	583	71	21	36
GST received				-72	24	-23	-64	85	-75	79	0	105	2
Operating activities: cash applied to													
Payments to employees				1,219	1,891	2,202	2,250	2,281	2,342	2,471	1,438	1,581	1,706
Payments to suppliers				1,531	2,029	2,028	1,993	1,821	2,742	1,924	1,963	2,407	2,777
Payments to suppliers and employees	2,496	3,288	3,380	*2,750*	*3,920*	*4,230*	*4,243*	*4,102*	*5,084*	*4,395*	*3,401*	*3,988*	*4,483*
Income tax paid	758	279	1,427	1,274	2,080	1,147	2,197	1,707	1,164	1,690	1,798	1,823	1,697
Interest paid	537	349	177	169	177	175	172	170	169	168	164	289	645
Net cash flows from operating activities		4,041	3,009	2,186	-831	6,810	2,646	4,683	3,783	4,404	4,232	4,784	4,191
Investing activities: cash provided from													
Proceeds from sale of fixed assets		725	139	3	4	1	7		0	3,666	250	20	0
Cash acquired with subsidiary								321					
Matured investment - mortgage bonds						830							
Mortgage and staff loan repayments			400	18									
Investing activities: cash applied to													
Purchase of fixed assets	240	739	569	237	726	2,254	1,871	3,490	3,461	1,235	3,607	7,019	4,144
Purchase of investment securities			908										
Net cash flows from investing activities		-14	-938	-216	-722	-1,423	-1,864	-3,169	-3,461	2,431	-3,357	-6,999	-4,144
Financing activities: cash provided from													
Term loan										0	0	5,600	1,600
Issue of shares	318							13					
Financing activities: cash applied to													
Term loan repayment	2,404	1,406	13	7	15	17	18	20	22	24	27	14	0
Dividend paid		493	696	648	540	600	1,548	1,320	2,347	11,007	1,790	3,442	1,362
Net cash from financing activities		-1,899	-709	-655	-555	-617	-1,566	-1,327	-2,369	-11,031	-1,817	2,144	238
Net increase in cash held	441	2,128	1,362	1,315	-2,108	4,770	-784	187	-2,047	-4,196	-942	-71	285
Opening cash brought forward	0	441	2,569	3,931	5,246	3,138	7,908	7,124	7,311	5,264	1,068	126	55
Closing cash carried forward	441	2,569	3,931	5,246	3,138	7,908	7,124	7,311	5,264	1,068	126	55	340

Derived Cashflow data for analysis													
Operating revenue excluding interest		*6,432*	*7,857*	*7,601*	*6,166*	*4,777*	*11,712*	*8,759*	*9,894*	*9,641*	*9,995*	*9,695*	*10,758*	*10,978*
Operating expenses excluding interest		*2,496*	*3,288*	*3,380*	*2,750*	*3,920*	*4,230*	*4,243*	*4,102*	*5,084*	*4,395*	*3,401*	*3,988*	*4,483*
Gross operating surplus		*3,936*	*4,569*	*4,221*	*3,416*	*857*	*7,482*	*4,516*	*5,792*	*4,557*	*5,600*	*6,294*	*6,770*	*6,495*
Income tax paid		*758*	*279*	*1,427*	*1,274*	*2,080*	*1,147*	*2,197*	*1,707*	*1,164*	*1,690*	*1,798*	*1,823*	*1,697*
Comparison item: tax provision from P&L		*862*	*462*	*1,456*	*1,257*	*437*	*2,454*	*2,332*	*1,757*	*720*	*1,619*	*1,786*	*1,687*	*1,340*
Fixed Assets as per Annual Reports $000:														
Land, roads and bridges at cost		4,161	4,522	4,687										
Land, roads and bridges accumulated depreciation		74	153	244										
Land, roads and bridges book value		4,087	4,369	4,443										
Port land at cost					2,556	2,556	2,556	4,031	4,619	4,788	9,896	9,894	8,360	8,609
Port land accumulated depreciation										0	0		0	0
Port land book value					2,556	2,556	2,556	4,031	4,619	4,788	9,896	9,894	8,360	8,609
Roads, bridges and improvements at cost					2,131	2,131	2,131	2,264	2,746	2,723	2,723	2,880	4,452	3,607
Roads, bridges and improvements accumulated depreciation					312	403	493	585	697	807	915	1,027	1,196	1,370
Roads, bridges and improvements book value					1,819	1,728	1,638	1,679	2,049	1,916	1,808	1,853	3,256	2,237
Buildings at cost		2,662	2,753	2,743	2,761	2,761	2,761	3,452	3,667	3,987	3,992	4,478	4,700	5,438
Buildings accumulated depreciation		61	76	120	155	201	248	306	379	445	525	615	719	836
Buildings book value		2,601	2,677	2,623	2,606	2,560	2,513	3,146	3,288	3,542	3,467	3,863	3,981	4,602
Office equipment, furniture and fittings at cost		157	158	168	189	194	254	277	432	345	403	453	488	673
Office equipment, furniture and fittings accumulated depreciation		28	53	74	90	110	141	175	241	233	299	324	360	439
Office equipment, furniture and fittings book value		129	105	94	99	84	113	102	191	112	104	129	128	234
Motor vehicles and trucks at cost		184	141	108	134	158	145	172	162	162	185	186	228	274
Motor vehicles and trucks accumulated depreciation		32	46	47	55	77	79	91	94	109	120	134	148	168
Motor vehicles and trucks book value		152	95	61	79	81	66	81	68	53	65	52	80	106
Plant and equipment at cost		1,793	1,214	1,234	1,717	1,766	1,851	1,870	1,990	2,108	2,283	2,300	2,875	3,050
Plant and equipment accumulated depreciation		114	160	238	300	408	522	644	771	905	1,048	1,190	1,348	1,542
Plant and equipment book value		1,697	1,054	996	1,417	1,358	1,329	1,226	1,219	1,203	1,235	1,110	1,527	1,508
Wharves and jetty facilities at cost		6,905	6,947	6,952	6,970	7,305	7,306	8,787	8,914	9,177	8,016	8,001	16,337	18,307
Wharves and jetty facilities accumulated depreciation		248	497	748	936	1,188	1,451	1,738	2,027	2,320	2,613	2,770	3,110	3,570
Wharves and jetty facilities book value		6,657	6,450	6,204	6,034	6,117	5,855	7,049	6,887	6,857	5,403	5,231	13,227	14,737
Work in progress		113	119	340	6	588	2,693	707	3,039	5,622	948	4,170	1,449	3,133
Total fixed assets at cost		15,975	15,854	16,232	16,464	17,459	19,697	21,560	25,569	28,912	28,446	32,362	38,889	43,091
Total fixed assets accumulated depreciation		557	985	1,471	1,848	2,387	2,934	3,539	4,209	4,819	5,520	6,060	6,881	7,925
Total fixed assets book value	*15,735*	15,418	14,869	14,761	14,616	15,072	16,763	18,021	21,360	24,093	22,926	26,302	32,008	35,166
Net assets of port operation (segmental reporting)									25,154	26,902	21,910	23,932	24,265	26,936
Net assets of airport operation (segmental reporting)									1,268	1,359	1,458	1,543	1,599	1,665
Net assets of "eliminations" (segmental reporting)									-1,159	-1,127	-1,097	-1,061	-1,029	-997
Net assets Group total									25,263	27,134	22,271	24,414	24,835	27,604

Port Marlborough Limited

Period ending	Sept	Sept	Sept	Sept	June	June	June	June	June	June	June	June	June	June
June years from 1993; September years to 1991	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Term debt	5,000	2,177	1,166	1,151	1,143	1,126	1,108	1,088	1,066	1,041	1,014	1,000	6,600	8,200
Book value minus term debt	10,735	13,241	13,703	13,610	13,473	13,946	15,655	16,933	20,294	23,052	21,912	25,302	25,408	26,966
Revaluation reserve at end of period														
Change in revaluation reserve														
Capex and Fixed Asset stocks analysis														
Book value of fixed assets	*15,735*	*15,418*	*14,869*	*14,761*	*14,616*	*15,072*	*16,763*	*18,021*	*21,360*	*24,093*	*22,926*	*26,302*	*32,008*	*35,166*
Cash from disposal of fixed assets		0	725	139	3	4	1	7	0	0	3,666	250	20	0
Purchase of fixed assets		240	739	569	237	726	2,254	1,871	3,490	3,461	1,235	3,607	7,019	4,144
Cash spent on fixed assets gross		*240*	*739*	*569*	*237*	*726*	*2,254*	*1,871*	*3,490*	*3,461*	*1,235*	*3,607*	*7,019*	*4,144*
Cash spent on fixed assets net of sales of fixed assets		*240*	*14*	*430*	*234*	*722*	*2,253*	*1,864*	*3,490*	*3,461*	*-2,431*	*3,357*	*6,999*	*4,144*
Port Statistics														
Stats NZ export volume 000 tonnes June years	6	5	6	7	6	4	5	5	4	5	5	4	4	4
Stats NZ import volume 000 tonnes June years	5	5	0	0	0	4	4	4	4	4	4	4	4	4
Total overseas cargo volume from Stats NZ data	10	9	6	7	6	8	9	9	8	9	9	8	8	8
Total coastal cargo volume from Stats NZ data		1,284	1,452	1,362	1,478	1,500	1,375	1,305						
Total port tonnage as per Statistics NZ		1,293	1,458	1,369	1,484	1,508	1,384	1,314						
Container TEUs														
Import cargo 000 tonnes														
Export cargo 000 tonnes														
Ferry terminal cargo 000 tonnes	3,000	2,900												
Non-ferry-terminal cargo tonnes	11,269	35,050	37,500	113,211	93,335	244,719	327,320	261,297	389,335	389,827	462,303	536,756	504,023	716,937
Implied coastal volume														
Revenue $ per tonne of total cargo		5.33	5.11	5.60	4.12	3.36	5.97	6.50						
Expenses excl deprec & interest, $ per tonne of total cargo		2.35	2.20	2.49	1.71	2.80	2.43	2.91						
Number of ships visiting								2,386	3,241	4,007	3,670	4,437	4,865	4,597
Permanent employees														
Price Deflators (December quarter 1997=1000)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PPI (Inputs) average for year ending June	795	841	900	919	929	952	972	982	988	991	999	1000	1039	1130
PPI (Inputs) average for year ending September	805	857	907	922	934	959	975	983	989	992	1001	1003	1060	1147
PPI (Inputs) average for nine months ending June	799	848	905	922	931	955	973	982	989	991	1000	999	1046	1139
PPI (Inputs) for September quarter	822	885	912	921	943	968	980	986	990	995	1003	1016	1101	1169
PPI (Inputs) for June quarter	810	863	913	919	936	960	975	983	989	990	1003	1001	1060	1146

IRR analysis using Cashflow Accounts

Book value of fixed assets $000	15,735	15,418	14,869	14,761	14,616	15,072	16,763	18,021	21,360	24,093	22,926	26,302	32,008	35,166
Book value of fixed assets net of term debt $000	10,735	13,241	13,703	13,610	13,473	13,946	15,655	16,933	20,294	23,052	21,912	25,302	25,408	26,966
Revenue excl interest		6,432	7,857	7,601	6,166	4,777	11,712	8,759	9,894	9,641	9,995	9,695	10,758	10,978
Operating expenditure excl interest and depreciation		2,496	3,288	3,380	2,750	3,920	4,230	4,243	4,102	5,084	4,395	3,401	3,988	4,483
Gross operating surplus		3,936	4,569	4,221	3,416	857	7,482	4,516	5,792	4,557	5,600	6,294	6,770	6,495
Cash purchases of fixed assets, gross		240	739	569	237	726	2,254	1,871	3,490	3,461	1,235	3,607	7,019	4,144
Cash purchases of fixed assets, net of disposals		240	14	430	234	722	2,253	1,864	3,490	3,461	-2,431	3,357	6,999	4,144
Net surplus pre-tax using net capex		3,696	4,555	3,791	3,182	135	5,229	2,652	2,302	1,096	8,031	2,937	-229	2,351
Cash income tax		758	279	1,427	1,274	2,080	1,147	2,197	1,707	1,164	1,690	1,798	1,823	1,697
Net surplus after tax		2,938	4,276	2,364	1,908	-1,945	4,082	455	595	-68	6,341	1,139	-2,052	654
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	21,937													
Real net cash surplus, pre-tax		4,942	5,758	4,715	3,903	161	6,149	3,092	2,667	1,266	9,199	3,356	-248	2,349
Real cash income tax paid		1,014	353	1,775	1,563	2,487	1,349	2,561	1,977	1,345	1,936	2,054	1,971	1,696
Post-tax real cashflow to owners		3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	-2,219	654
Real exit price (book value including revaluations)		19,965	18,684	18,367	17,762	17,844	19,602	20,945	24,726	27,749	26,195	29,667	33,316	34,474
Real cash stream for exit at end of financial year:														
1989	-21,937	23,894												
1990	-21,937	3,929	24,090											
1991	-21,937	3,929	5,406	21,307										
1992	-21,937	3,929	5,406	2,940	20,103									
1993	-21,937	3,929	5,406	2,940	2,340	15,518								
1994	-21,937	3,929	5,406	2,940	2,340	-2,325	24,403							
1995	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	21,476						
1996	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	25,415					
1997	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	27,671				
1998	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	33,458			
1999	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	30,969		
2000	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	31,097	
2001	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	-2,219	35,128
Exiting at----------		**Sep-89**	**Jun-90**	**Jun-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR		**8.9%**	**14.1%**	**14.1%**	**13.2%**	**9.3%**	**12.6%**	**12.3%**	**13.1%**	**13.0%**	**13.5%**	**13.8%**	**13.3%**	**12.9%**

IRR Analysis using P&L Accounts for operating surplus

Book value of fixed assets $000	15,735	15,418	14,869	14,761	14,616	15,072	16,763	18,021	21,360	24,093	22,926	26,302	32,008	35,166
Book value of fixed assets net of term debt $000	10,735	13,241	13,703	13,610	13,473	13,946	15,655	16,933	20,294	23,052	21,912	25,302	25,408	26,966
Revenue excl interest, asset sales and forex gains		6,894	7,452	7,661	6,123	5,064	8,256	8,534	9,961	10,280	12,224	9,714	10,334	10,616
Operating expenditure excl interest and depreciation incl expensed maintenance		3,037	3,211	3,403	2,534	4,221	3,366	3,825	4,147	5,005	4,089	3,671	3,903	4,289
Gross operating surplus		3,857	4,241	4,258	3,589	843	4,890	4,709	5,814	5,275	8,135	6,043	6,431	6,327
Cash purchases of fixed assets, gross		240	739	569	237	726	2,254	1,871	3,490	3,461	1,235	3,607	7,019	4,144
Cash purchases of fixed assets, net of disposals		240	14	430	234	722	2,253	1,864	3,490	3,461	-2,431	3,357	6,999	4,144
Net surplus pre-tax using net capex		3,617	4,227	3,828	3,355	121	2,637	2,845	2,324	1,814	10,566	2,686	-568	2,183
Income tax provision		862	462	1,456	1,257	437	2,454	2,332	1,757	720	1,619	1,786	1,687	1,340
Net surplus after tax		2,755	3,765	2,372	2,098	-316	183	513	567	1,094	8,947	900	-2,255	843
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	21,937													
Real net surplus pre-tax		4,837	5,344	4,761	4,115	145	3,101	3,317	2,692	2,096	12,103	3,069	-614	2,182
Real income tax provision		1,153	584	1,811	1,542	522	2,886	2,719	2,035	832	1,854	2,041	1,824	1,339
Post-tax real cashflow to owners		3,684	4,760	2,950	2,574	-378	215	598	657	1,264	10,248	1,028	-2,439	842
Real exit price (book value including revaluations)		19,965	18,684	18,367	17,762	17,844	19,602	20,945	24,726	27,749	26,195	29,667	33,316	34,474
Real cash stream for exit at end of financial year:														
1989	-21,937	23,649												
1990	-21,937	3,684	23,444											
1991	-21,937	3,684	4,760	21,317										
1992	-21,937	3,684	4,760	2,950	20,336									
1993	-21,937	3,684	4,760	2,950	2,574	17,466								
1994	-21,937	3,684	4,760	2,950	2,574	-378	19,818							
1995	-21,937	3,684	4,760	2,950	2,574	-378	215	21,543						
1996	-21,937	3,684	4,760	2,950	2,574	-378	215	598	25,383					
1997	-21,937	3,684	4,760	2,950	2,574	-378	215	598	657	29,013				
1998	-21,937	3,684	4,760	2,950	2,574	-378	215	598	657	1,264	36,443			
1999	-21,937	3,684	4,760	2,950	2,574	-378	215	598	657	1,264	10,248	30,696		
2000	-21,937	3,684	4,760	2,950	2,574	-378	215	598	657	1,264	10,248	1,028	30,878	
2001	-21,937	3,684	4,760	2,950	2,574	-378	215	598	657	1,264	10,248	1,028	-2,439	35,317
Exiting at----------		**Sep-89**	**Jun-90**	**Jun-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR		**7.8%**	**12.1%**	**12.6%**	**12.3%**	**10.2%**	**10.3%**	**10.3%**	**11.3%**	**11.8%**	**13.2%**	**13.4%**	**12.9%**	**12.6%**

IRR analysis using Cashflow Accounts and EV/EBITDA for Exit Price

Opening Value of fixed assets	15,735												
Exit price						8,432	44,902	48,118	46,048	65,785	74,682	68,855	58,665	63,937
using EV/EBITDA multiple of						8.2x	9.1x	9.9x	7.5x	11.5x	8.7x	10.6x	8.5x	9.4x
Net Surplus after Tax		2,938	4,276	2,364	1,908	-1,945	4,082	455	595	-68	6,341	1,139	-2,052	654
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	21,937													
Post-tax real cashflow to owners		3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	-2,219	654
Real exit price (EV/EBITDA basis)						10,066	52,777	56,097	53,357	76,151	85,330	78,829	63,425	63,937
Real cash stream for exit at end of financial year:														
1993	-21,937	3,929	5,406	2,940	2,340	7,741								
1994	-21,937	3,929	5,406	2,940	2,340	-2,325	57,577							
1995	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	56,628						
1996	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	54,047					
1997	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	76,072				
1998	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	92,593			
1999	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	80,131		
2000	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	61,206	
2001	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	-2,219	64,590
Exiting at:						Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Real post-tax IRR:						**0.6%**	**26.8%**	**24.4%**	**21.3%**	**23.1%**	**22.9%**	**20.7%**	**17.5%**	**16.6%**

IRR analysis using Cashflow Accounts and Price:Book for Exit Price

Opening Value of fixed assets	15,735												
SHF from balance sheet						19,440	22,070	23,103	25,263	27,134	22,271	24,414	24,835	27,604
Core debt						1,143	1,126	1,108	1,088	1,065	1,041	1,014	6,600	8,200
Exit price						19,254	35,759	44,361	60,579	99,702	70,181	70,326	69,600	77,393
using Price:NBV multiple of						0.9x	1.6x	1.9x	2.4x	3.6x	3.1x	2.8x	2.5x	2.5x
Net Surplus after Tax		2,938	4,276	2,364	1,908	-1,945	4,082	455	595	-68	6,341	1,139	-2,052	654
Data deflated to June 2000 dollars														
Assets at valuation on 1 October 1988	21,937													
Post-tax real cashflow to owners		3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	-2,219	654
Real exit price (Price:Book basis)						19,254	35,759	44,361	60,579	99,702	70,181	70,326	69,600	77,393
Real cash stream for exit at end of financial year:														
1993	-21,937	3,929	5,406	2,940	2,340	16,928								
1994	-21,937	3,929	5,406	2,940	2,340	-2,325	40,559							
1995	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	44,892						
1996	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	61,269					
1997	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	99,624				
1998	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	77,444			
1999	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	71,628		
2000	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	67,381	
2001	-21,937	3,929	5,406	2,940	2,340	-2,325	4,800	530	689	-79	7,263	1,301	-2,219	78,047
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**10.6%**	**20.7%**	**21.2%**	**22.8%**	**26.1%**	**21.1%**	**19.8%**	**18.2%**	**17.8%**

Appendix I. IRRs Using Market Values for Exit Prices

The IRR analysis presented in section 3 is a very conservative approach in that it is based almost exclusively on data that can be clearly identified in the annual reports of each of the respective ports. One outcome of this is that the sale price used by our hypothetical investor when exiting the investment is the net book value of fixed assets at the time. This is considered likely to be a very conservative (i.e. low) price relative to a market price that would actually be achieved for the business were it sold as a going concern. (Although we add the caution here that if a port company had been grossly over-optimistic concerning its future prospects and had invested in fixed assets that were neither used nor likely to be useful in the foreseeable future, then net book value of fixed assets would not be a reliable indicator of exit price.)

To test the expectation that net book value of fixed assets gives a conservative exit price, we have examined market prices for port assets and then applied these to the earlier analyses. The results are set out in the following sections.

I.1 Market Prices for Port Companies

Valuations based on asset values suffer from the drawback that it is necessary to modify these values by identifying any previous over- or under-investments and then adjusting for these. Such an exercise requires a good deal of rigour in deriving future volume forecasts together with in-depth knowledge of the capacity constraints imposed by the existing set of assets.

A reasonably robust alternative is provided by reviewing the prices that are paid for port companies, or shares in port companies, in transactions between willing buyers and willing sellers. Under such a valuation method, the price paid can be related not only to the assets themselves but also to their earning capacity – specifically we consider the relationship between market value and various accounting measures such as NTA, EBIT, EBITDA and NPAT.

Within New Zealand there are five listed port companies whose share prices can be used to estimate benchmarks for market prices: Northland Port Corporation, Ports of Auckland, Port of Tauranga, Lyttelton Port Corporation and Southport. We have also looked for offshore transactions involving port companies but we have been unable to identify recent transactions that would assist with providing benchmark data for valuing port companies in New Zealand.

I.2 Listed Port Companies

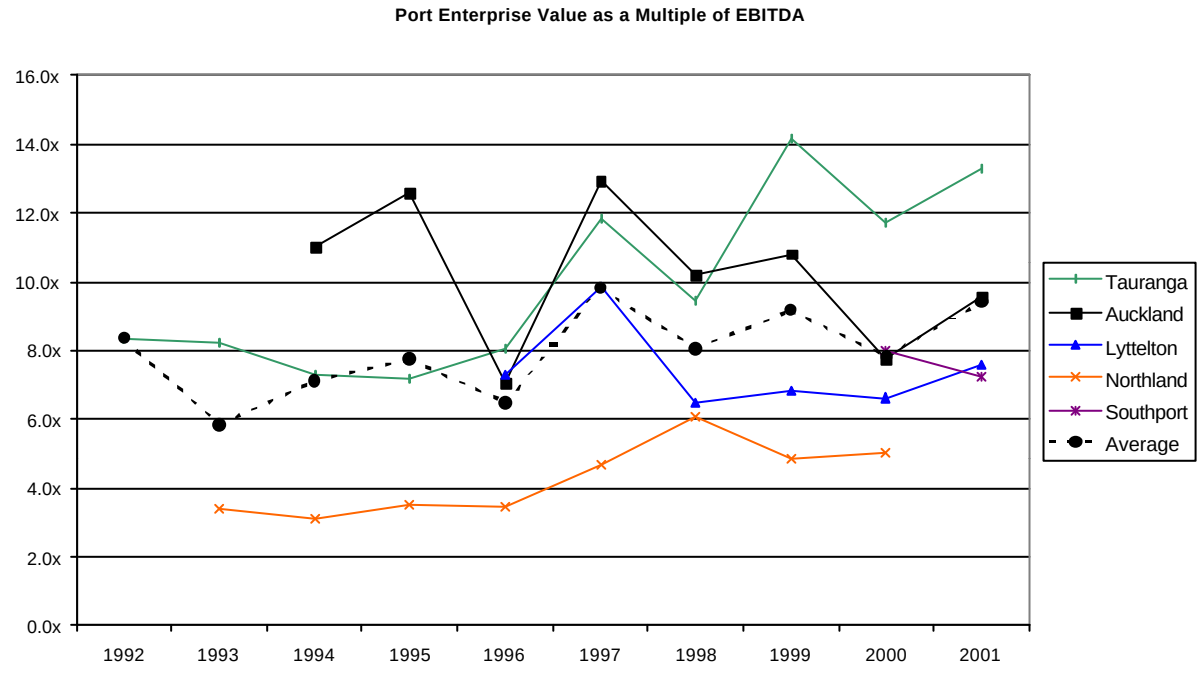
One of the advantages of using share price data is that there is a continual stream of transactions defining the market price at any one point in time. However, the parcels of shares traded are relatively small and, in particular with the port companies in New Zealand, there are no controlling stakes passing hands. Thus the share market prices observed will contain no premium for control, an element of overall value that might be observed in the case of the transfer of a controlling stake or the trade sale of an entire company. This suggests that benchmarks derived from listed port companies in New Zealand may provide a lower bound for value. There is also a wide range in the size of listed port companies and consideration will need to be given to whether benchmarks need to be derived that relate to certain sizes of entity.

I.3 Cashflow Ratios

Although price:book ratios are a useful indication of the relationships between balance sheet values and market values, it is useful to consider valuation methods related to the earning capabilities of the assets. Considering two companies with sets of assets of identical book value, it would be expected that the market would place a higher value on whichever company was able to consistently achieve higher returns on those assets.

Ratios such as price:earnings multiples have limited use for our purposes as different levels of gearing and tax structures may mask the underlying cash flow generating ability of the company and its assets. Such ratios could be used as proxies for market value but there would need to be a significant amount of adjustment to the figures to "normalise" them so that they could be applied to other companies. Similarly, we have rejected the use of multiples based on NPBT or EBIT as these may need significant correction for effects such as where companies may have over or under-invested in assets or other investments. Accordingly, we have calculated EV/EBITDA[68] ratios for the five listed port companies for those years for which data is available. In calculating enterprise value we have used the average (closing) share price for the three-month period after financial year-end to calculate market capitalisation.

The chart below plots EV/EBITDA for each of the five ports as well as an average each year (for the ports for which data is available in that year). The 2001 figure for Northland is not included in the graph as, at a value of over 90x, it is well off the scale.



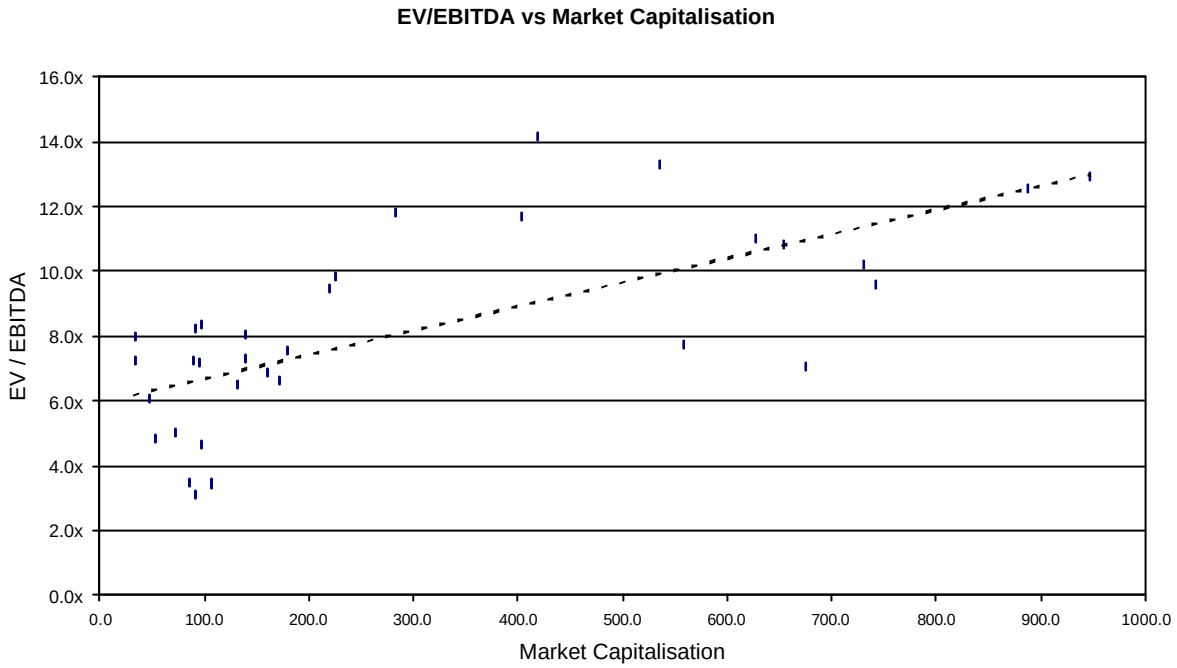
Sources: Company annual reports and NZSE share price data

I.3.1 The Effect of Scale

The scatter chart below compares the EV/EBITDA ratios for each of the ports (in each year data is available) with market capitalisation. The location of the points suggests that there could

[68] Enterprise Value / Earnings before Interest, Tax, Depreciation and Amortisation

be some relationship between the market value of these companies and the market capitalisation. A simple linear regression line is also plotted to estimate this relationship. Comparing the trend line with the points plotted we see that there are considerable deviations which suggest that, although the overall shape of the data indicates some scale effect, we would not be justified in overlaying a scale effect on the data.

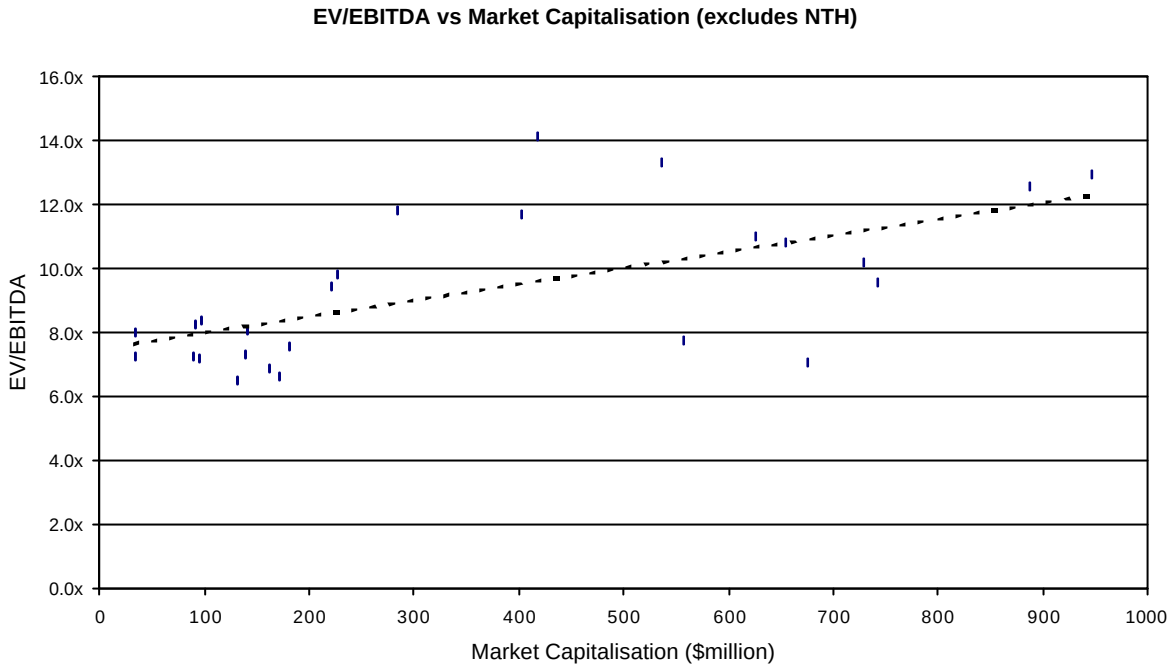


Sources: Company annual reports and NZSE share price data

One of the five listed companies, Northland Port Corporation, has had a succession of problems with subsidiaries and associated companies as well as having lost its major contract with the Refinery. It would be reasonable to expect that the market data for Northland Port will be affected by the perception of its handling of these problems as much as by the fundamental figures underlying the port's performance. The 2001 EV/EBITDA multiple of 90.3x is an example of how, during difficult periods, share prices may deviate from what would be considered market norms.[69] The shareholders are viewing the stock not on the basis of fundamentals but on expectations of future performance.

Insofar as we are able to, we prefer to work with a set of data based on reasonably stable "business as usual" circumstances. This is primarily because the EV/EBITDA multiples are being applied retrospectively, i.e. to derive an enterprise value for the year just ended, whereas they would more typically be applied as a "prospective" multiple to expectations about future earnings. One option would be to normalise the data for Northland so as to remove the effects of the difficult trading conditions but this would require access to data that goes beyond the scope of the information in the published accounts. We have concluded, therefore, that it is appropriate to remove the Northland figures from the analysis. The scatter chart is repeated below with the Northland Port Corporation figures removed from the chart.

[69] Note that the 2001 EV/EBITDA figure of 90.3 is not plotted on the scatter chart as the scale required would render the rest of the chart meaningless.



Sources: Company annual reports and NZSE share price data

Removal of the figures for Northland Port Corporation has the effect of flattening the trend line somewhat. However, there is still a considerable spread around the trend line and thus we still cannot assume a simple linear relationship between market capitalisation and EV/EBITDA multiple.

I.3.2 Selecting a Multiple for Valuations

There is a multitude of factors that will affect how the market values any particular stock on a given day. Although we have calculated and plotted ratios from a range of years, it is not appropriate to simply average the results to arrive at a benchmark valuation multiple for a particular company. The results for any one year incorporate company-specific factors for that time period as well as market sentiment regarding that sector of the economy, domestic shares versus other domestic investments, domestic investments versus overseas investments, and so on.

In choosing an EV/EBITDA multiple to use as a proxy for valuing non-listed port companies, our choice is therefore restricted to multiples from the same time period, e.g. if we require an exit valuation for June 2001 then we use multiples data from the 2001 year.

It may be asked why we take share price averages for a three-month period instead of simply taking the closing price for, say, June 30. Our use of three-month average figures is designed to dampen the "noise" from daily fluctuations. The ratio is to be applied to a transaction, albeit hypothetical, wherein the entire company changes hands. Such a transaction would come about in a carefully considered fashion and in using three-month average prices we hope to arrive at something of a market consensus on value during that time. Of course, as we have already noted, the use of share price data which involves relatively small parcels of shares does not provide any information regarding what might be paid as a control premium and, therefore, our estimate is likely to be at the low end of the spectrum.

Having concluded that we should use data from matching time periods, the question then is whether we should simply take an average of the various multiples for a given time period or whether it is more appropriate to select among the possible options.

It is wholly appropriate to use a particular multiple where that company corresponds to one of the ports whose IRR we are calculating, Lyttelton for example. For the remaining ports that we are dealing with, the scatter chart above does not suggest that it is appropriate to segregate the multiples according to the size of the entity concerned. Ideally it would be appropriate to attempt to match businesses that are in similar situations if at all possible. However, in order to make such matches there is a presumption that, among the listed entities, are a stock or stocks that closely correspond to each of the ports being studied. Given the multitude of different factors that affect the performance of any company it is unlikely that we would be able to determine "close" matches for our target ports. It is worth noting here that valuation reports used in merger and takeover situations will typically use sector averages of cashflow multiples, perhaps after removing atypical performers. Accordingly we are driven to the conclusion that using average multiples across the sector is appropriate for providing our benchmarks. In the following sections we will use multiples:

- for unlisted companies that are simple averages of the multiples available for a particular year; and
- for listed companies, the actual multiples that applied to those companies at the time.

I.4 Application of EV/EBITDA Multiples

I.4.1 Lyttelton Port Corporation

Lyttelton has been listed for some years and we have actual EV/EBITDA multiples for Lyttelton from 1996 through 2001. The table below compares the exit prices thus derived with fixed asset values and also compares the IRRs calculated using the different exit prices.

Year	Fixed Assets at Net Book Value	Exit Price using EV/EBITDA	IRR Based on Net Book Value	IRR Based on EV/EBITDA
1996	62,144	151,016	13.8%	24.0%
1997	61,526	233,874	14.3%	27.3%
1998	66,656	159,643	14.6%	21.4%
1999	66,756	180,306	15.1%	21.6%
2000	66,089	183,976	15.2%	20.5%
2001	65,234	200,891	15.1%	19.9%

I.4.2 Westgate

The table below shows exit prices using EV/EBITDA multiples and the IRRs thus derived for Westgate. Also shown are the IRRs calculated using net book value of fixed assets for exit values.

Year	Fixed Assets at Net Book Value	Exit Price using EV/EBITDA	IRR Based on Net Book Value	IRR Based on EV/EBITDA
1993	39,481	96,812	16.7%	46.9%
1994	38,428	115,359	16.4%	41.7%
1995	41,042	108,449	17.0%	32.8%
1996	50,376	79,166	17.9%	22.3%
1997	51,852	161,531	17.1%	30.4%
1998	53,570	82,919	16.3%	19.3%
1999	64,872	126,128	16.0%	21.5%
2000	63,652	111,694	14.5%	18.2%
2001	61,417	101,820	14.1%	16.1%

I.4.3 Centreport

The table below compares exit prices and IRRs derived using EV/EBITDA multiples for Centreport. These are compared with the IRRs calculated using net book value of fixed assets for exit values.

Year	Fixed Assets at Net Book Value	Exit Price using EV/EBITDA	IRR Based on Net Book Value	IRR Based on EV/EBITDA
1993	68,224	90,109	2.9%	7.6%
1994	69,462	119,090	4.3%	11.8%
1995	69,410	126,181	4.5%	11.5%
1996	68,997	101,230	4.7%	8.4%
1997	71,595	152,385	4.9%	11.7%
1998	69,743	99,702	5.0%	7.6%
1999	69,054	165,017	5.6%	11.3%
2000	75,009	126,747	5.5%	8.4%
2001	81,228	138,170	5.4%	8.2%

Centreport does not revalue its land holdings and the 2001 annual accounts note that a valuation conducted in 1999 of all freehold land owned by the group yielded a figure of $43 million, compared with the 2001 balance sheet figure of $35.5 million.[70]

I.4.4 Port Nelson Limited

Being unlisted, we use average EV/EBITDA multiples as a proxy for calculating exit prices for Port Nelson. The table below shows those exit prices and the IRRs calculated using them. It also shows the fixed assets at net book value and the IRRs calculated using net book value as the exit price.

[70] The 2001 Annual Report and Financial Statements for Centreport Limited, The Reporter Supplement, note 6, page F5.

Year	Fixed Assets at Net Book Value	Exit Price using EV/EBITDA	IRR Based on Net Book Value	IRR Based on EV/EBITDA
1993	38,643	62,892	7.3%	16.5%
1994	66,716	71,163	14.7%	15.9%
1995	69,731	76,817	13.5%	14.9%
1996	70,975	64,631	12.6%	11.6%
1997	78,598	103,618	13.0%	15.9%
1998	82,984	78,758	12.5%	12.0%
1999	81,681	114,172	12.1%	14.8%
2000	94,100	87,486	11.4%	11.2%
2001	97,409	101,548	10.7%	11.1%

The effect of using an alternative exit value is minimal by the end of the period and the reason for this is that Port Nelson revalues its land holdings every three years which has the effect of bringing the figure for net book value of fixed assets in 2001 quite close to the exit price calculated using the EV/EBITDA proxy. As an indication of the scale of these revaluations, at 30 June 2001 the statement of financial position records an amount of $33.899 million as "*Asset Revaluation Reserve (Land)*".[71] This figure gives the cumulative effect of all previous revaluations (net of any revaluations of land that may have been disposed of).and represents approximately 64% of the total land value included in fixed assets.[72]

I.4.5 Port of Napier

In the table below are shown the exit prices for Port of Napier calculated using EV/EBITDA multiples and the IRRs that result from using those exit prices. The exit price for the 1998 year is markedly different from the adjacent years for two reasons: first, the EV/EBITDA multiple for that year is considerably lower than for 1997 or 1999; and, secondly, the 1998 year was a year of relatively poor performance for the Port of Napier with low revenues leading to a comparatively low EBITDA.

Year	Fixed Assets at Net Book Value	Exit Price using EV/EBITDA	IRR Based on Net Book Value	IRR Based on EV/EBITDA
1993	29,833	74,588	13.0%	30.7%
1994	37,329	84,303	14.1%	27.7%
1995	47,326	93,114	14.1%	24.5%
1996	53,732	75,950	13.8%	18.4%
1997	52,689	167,740	13.4%	26.8%
1998	56,280	81,987	13.5%	17.0%
1999	51,579	161,452	13.0%	22.2%
2000	44,995	154,673	12.6%	20.2%
2001	49,877	127,939	12.4%	17.4%

I.5 Price to Book Ratios

The base IRR analysis presented in section 3 assumes that our hypothetical investor sells at the end of any period for an amount equal to the net book value of the fixed assets. We can look at market data for the listed port companies to see whether that assumption is reflective of the way in which the market values these companies. The following table shows quotations for

[71] Port Nelson Ltd Annual Report 2001, page 12.

[72] Ibid, note 10, page 20.

the listed port companies on 13 February 2002 and compares these with net tangible assets per share.

Port Company	Symbol	Quotation: Buy/Sell	NTA/share	P/NTA
Northland Port Corp	NTH	233 / 235	103.45	2.25
Ports of Auckland	POA	550 / 560	217.19	2.53
Port of Tauranga	POT	708 / 720	307.34	2.30
Lyttelton Port Company	LPC	168 / 169	42.51	3.95
Southport	SPN	156 / 157	85.54	1.82

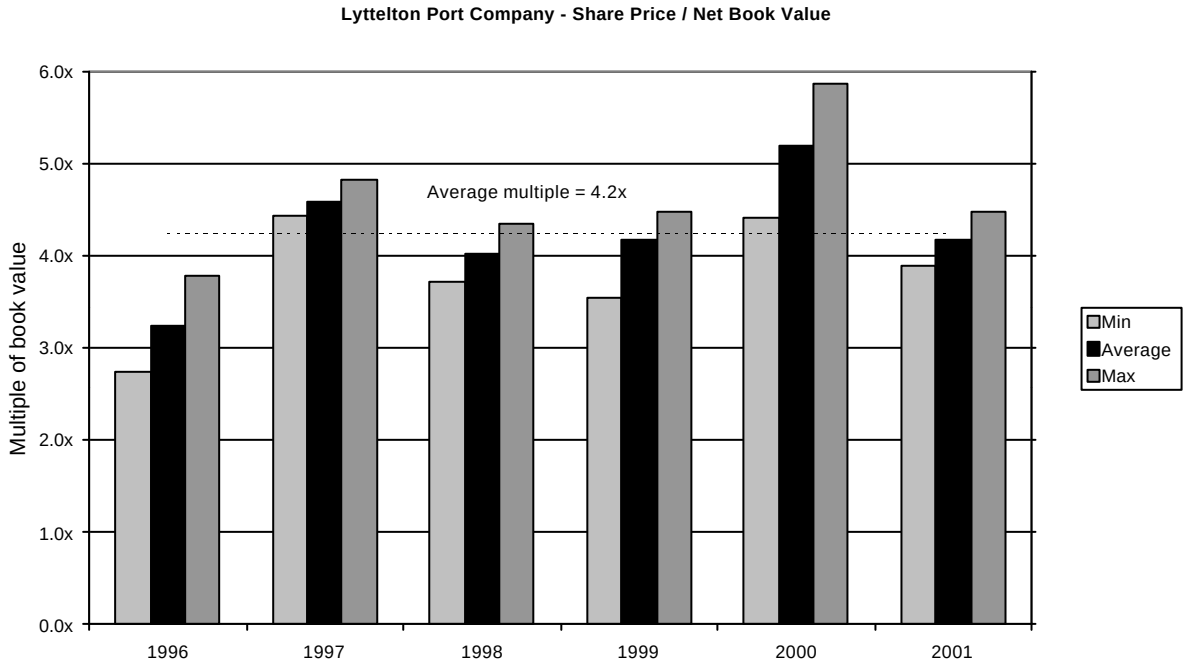
Source: Access Brokerage

A simple average of the above ratios gives a selling price that is 2.57x the net tangible assets of the business. To identify whether the share price data for mid-February gives an unusually high price:book ratio, it is necessary to examine the historical relationship between share prices and book values for each of the port companies.

I.5.1 Lyttelton Port Company

Share price data was gathered for Lyttelton since 1996. On the assumption that the market would have been relatively well-informed regarding the current year's outturn by the end of the financial year (30 June), we have used share prices over the months of July through September to conduct the following analysis.

Daily closing prices for the three months were used to provide a three-month average price and to provide maximum and minimum (closing) prices for that period. Ratios were then calculated of the share price (average, minimum, maximum) to the shareholders' funds reported at June 30 of that particular year. The results are shown in the following chart.

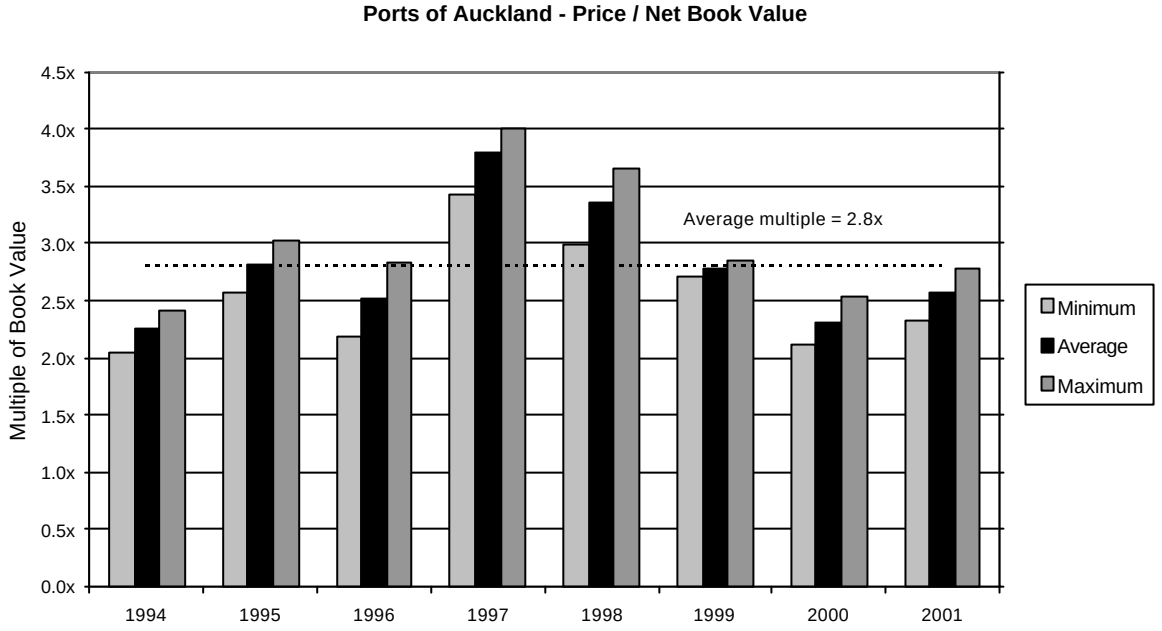


Sources: Company annual reports and NZSE price data

The P/NBV ratio on average share prices lies between 3.2x and 5.2x with an average multiple across the six years of 4.2x. Using the maximum and minimum share prices for each year's calculations gives lower and upper bounds to the P/NBV ratio of 2.7 and 5.9 respectively.

I.5.2 Ports of Auckland

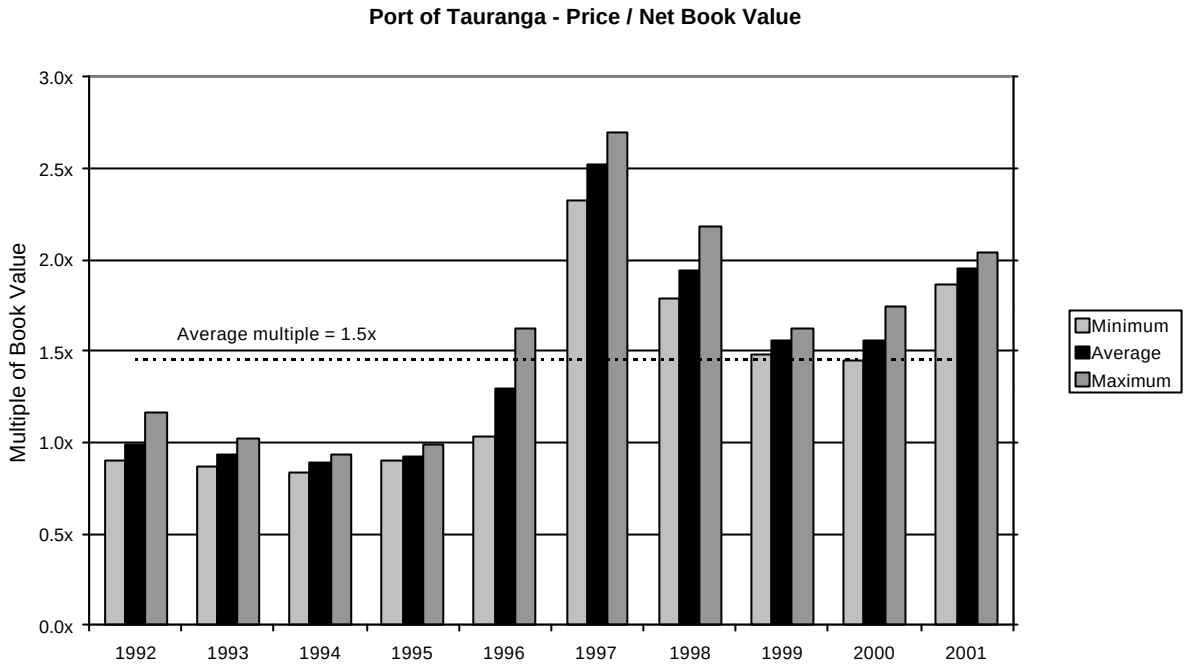
Applying the same analysis to Ports of Auckland gives the results shown in the following chart. Across the eight years of data, the average P/NBV multiple is 2.8x and ranges from a minimum of 2.0x to a maximum of 4.0x.



Sources: Company annual reports and NZSE price data

I.5.3 Port of Tauranga

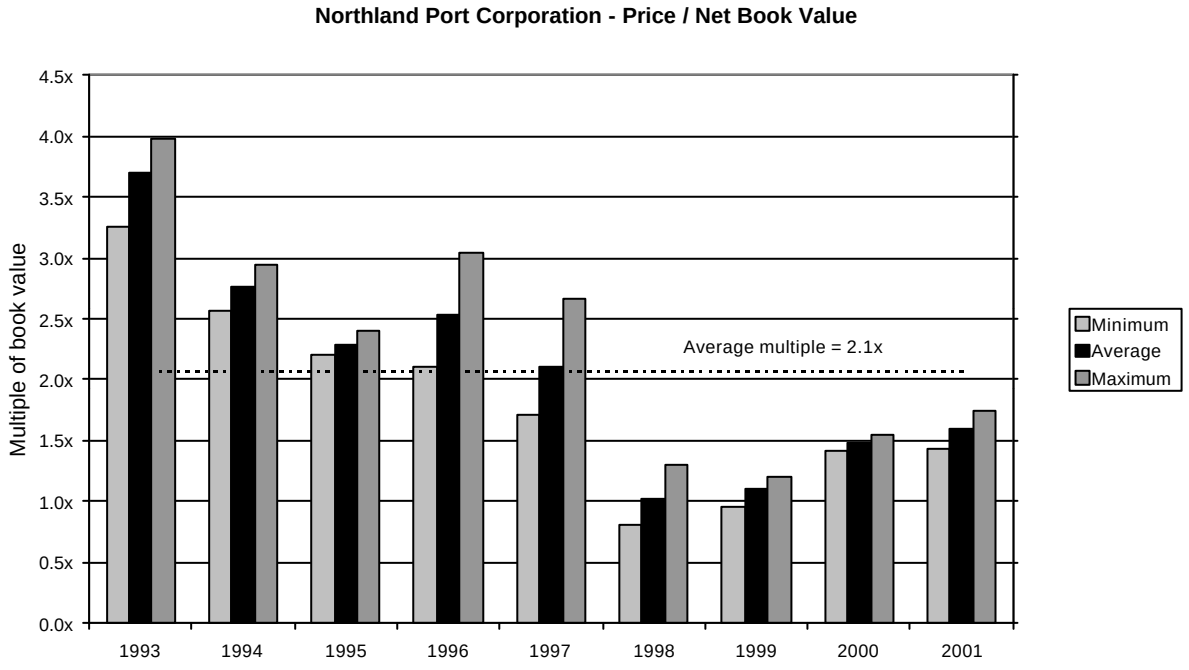
The exercise was repeated for Port of Tauranga, yielding the chart below. The P/NBV multiple, based on three-month average share prices, ranges from 0.9x to 2.5x. The average across the ten years is a shade under 1.5x.



Sources: Company annual reports and NZSE price data

I.5.4 Northland Port Corporation

P/NBV ratios for Northland Port Corporation, based on three-month average share prices after financial year-end, have ranged from 1.0x to 3.7x over a nine year period. The average of these multiples over that period is 2.1x, while the outcome for the last financial year was 1.6x.



Sources: Company annual reports and NZSE price data

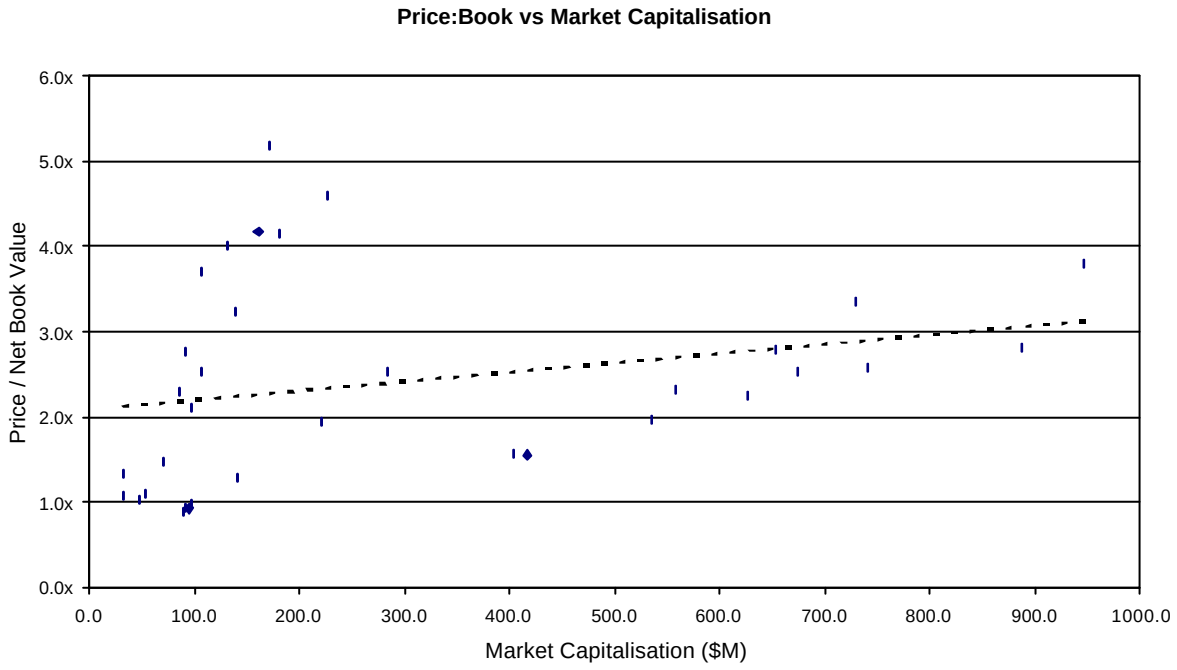
However, Northland Port Corporation has been going through difficult times and it is questionable as to whether measurements form this company can be applied to other port companies if those companies are not experiencing problems similar to those of Northland.[73]

I.5.5 Southport

At the time of writing we only had data for two years for Southport – 2000 and 2001. P/NBV for those two years are 1.1x and 1.3x respectively.

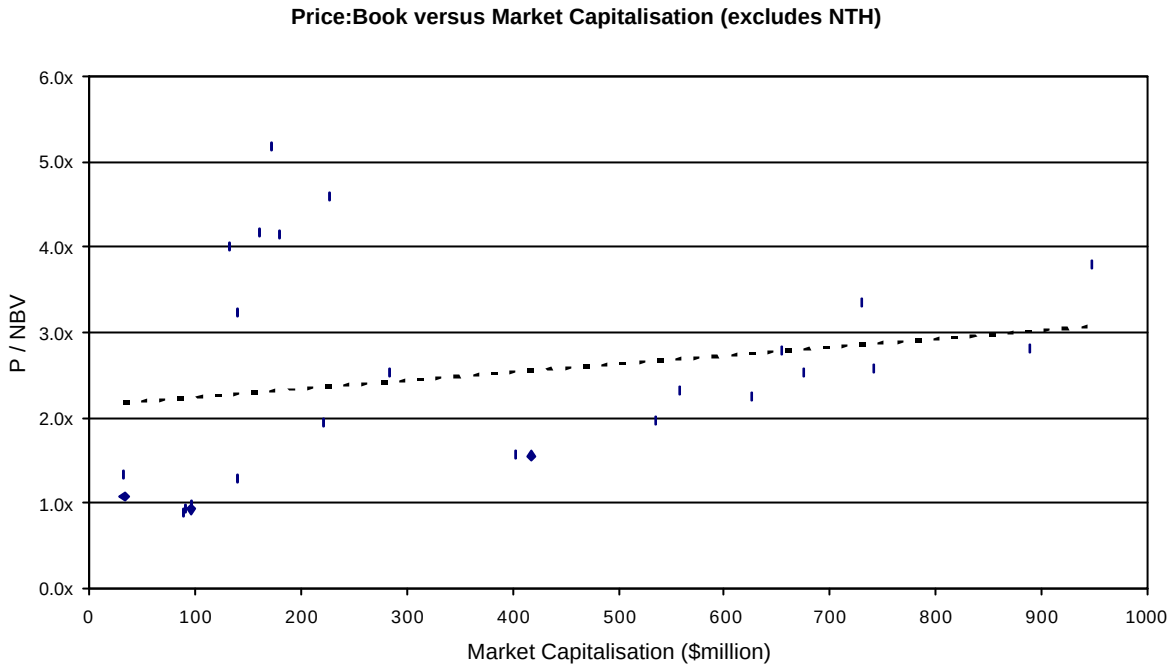
I.6 Benchmark P/NBV Ratios

It is notable from the preceding charts that there is a wide range of P/NBV values across the port companies. The following chart is a scatter plot of P/NBV versus market capitalisation for each company for every year that data is available. Although the trend line does indicate that there may be a relationship between market capitalisation and P/NBV, there are some significant outlying points. Thus it would be inappropriate to conclude that such a simple relationship exists.



Removing Northland Port Corporation from the scatter plot has little or no effect on the trend line and is considered appropriate because of the concerns over Northland's performance. However, should we require a market value estimate for a port company that has been experiencing poor trading conditions then it would be useful to consider Northland's performance in the market. A scatter chart excluding Northland is shown below.

[73] In the 2001 Annual Report the Company discussed its losses in respect of Northport Engineering which had experienced $6 million of cost overruns on a fixed-price luxury yacht conversion. That subsidiary had been identified as problematic in previous commentaries. Problems identified in earlier years include the loss of the oil refinery contract, poor performance of Sea Tow (another subsidiary), poor performance and subsequent sale of Central Cranes.



As was the case with the cashflow multiples, the spread of points around the trend line suggests that we would not be justified in attempting to overlay some scale function on the Price:Book ratios. The way in which these ratios will be used is to average the ratios for each particular year (for those companies for which data is available) and apply that average to derive exit prices for that year. The results are given in the following section. We would, however, add the cautionary note that the value generating capability of a company is not necessarily related to the assets owned but is more closely linked to the ability of the business to generate wealth from those assets. The results in section I.7 are provided for comparative purposes but we would place greater reliance on the methodology that derives exit prices using cashflow multiples.

I.7 IRR Calculations Based on Price:Book Ratios

I.7.1 Lyttelton Port Corporation

Instead of using market averages, for Lyttelton Port Corporation we use the price:book figures calculated using the stock market data solely for Lyttelton. For the 2001 year the net book value of fixed assets is $65 million, compared with the exit price calculated from market data of $201 million. Current market quotations (mid-February 2002) suggest a price/NTA ratio of approximately 4x and our chart for Lyttelton Port Corporation gives a ratio of market price to shareholders' funds of approximately 4x for the year ended June 2001. (Note that as shareholders' funds are less than net book value of fixed assets then the exit price is less than four times the net book value of assets).

Year	Fixed Assets at Net Book Value	Exit Price using Price:Book	IRR Based on Net Book Value	IRR Based on Price:Book
1996	62,144	151,358	14%	24.1%
1997	61,526	232,398	14%	27.3%
1998	66,656	159,073	15%	21.4%
1999	66,756	180,306	15%	21.6%
2000	66,089	183,976	15%	20.5%
2001	65,234	200,891	15%	19.9%

I.7.2 Westgate

Year	Fixed Assets at Net Book Value	Exit Price using Price:Book	IRR Based on Net Book Value	IRR Based on Price:Book
1993	39,481	42,953	16.7%	17.5%
1994	38,428	70,451	16.4%	28.2%
1995	41,042	76,031	17.0%	25.6%
1996	50,376	105,683	17.9%	27.1%
1997	51,852	177,478	17.1%	31.8%
1998	53,570	136,712	16.3%	25.0%
1999	64,872	171,677	16.0%	24.9%
2000	63,652	157,419	14.5%	21.4%
2001	61,417	130,739	14.1%	17.9%

Westgate also undertakes periodic revaluations of its land and for the year ended June 2001 the revaluation reserve account stands at $4.7 million. The effect on the IRR of removing the revaluation (when using an exit price of net book value of fixed assets) is to lower the 2001 IRR from 14.1% (the second to last column in the table above) to 13.7%.

I.7.3 Centreport

Given that Centreport is not listed, we use yearly averages of the price:book ratios calculated for the listed stocks.

Year	Fixed Assets at Net Book Value	Exit Price using Price:Book	IRR Based on Net Book Value	IRR Based on Price:Book
1993	68,224	63,927	2.9%	2.0%
1994	69,462	105,707	4.3%	10.1%
1995	69,410	112,644	4.5%	10.1%
1996	68,997	128,500	4.7%	10.9%
1997	71,595	197,705	4.9%	14.4%
1998	69,743	171,127	5.0%	12.0%
1999	69,054	163,825	5.6%	11.3%
2000	75,009	160,526	5.5%	10.2%
2001	81,228	168,842	5.4%	9.5%

I.7.4 Port Nelson Limited

As with the other unlisted companies, price:book ratios for Nelson use the average of the ratios calculated across the listed sector and then apply these to Nelson.

Year	Fixed Assets at Net Book Value	Exit Price using Price:Book	IRR Based on Net Book Value	IRR Based on Price:Book
1993	38,643	40,258	7.3%	8.2%
1994	66,716	110,019	14.7%	23.5%
1995	69,731	134,387	13.5%	23.3%
1996	70,975	151,085	12.6%	22.2%
1997	78,598	260,361	13.0%	26.7%
1998	82,984	231,091	12.5%	22.7%
1999	81,681	212,864	12.1%	20.3%
2000	94,100	214,285	11.4%	18.1%
2001	97,409	219,537	10.7%	16.5%

I.7.5 Port of Napier

Year	Fixed Assets at Net Book Value	Exit Price using Price:Book	IRR Based on Net Book Value	IRR Based on Price:Book
1993	29,833	42,825	13.0%	16.3%
1994	37,329	79,412	14.1%	23.8%
1995	47,326	100,718	14.1%	23.3%
1996	53,732	135,431	13.8%	24.5%
1997	52,689	172,859	13.4%	25.4%
1998	56,280	157,485	13.5%	22.2%
1999	51,579	142,465	13.0%	20.0%
2000	44,995	113,795	12.6%	17.8%
2001	49,877	121,913	12.4%	17.2%

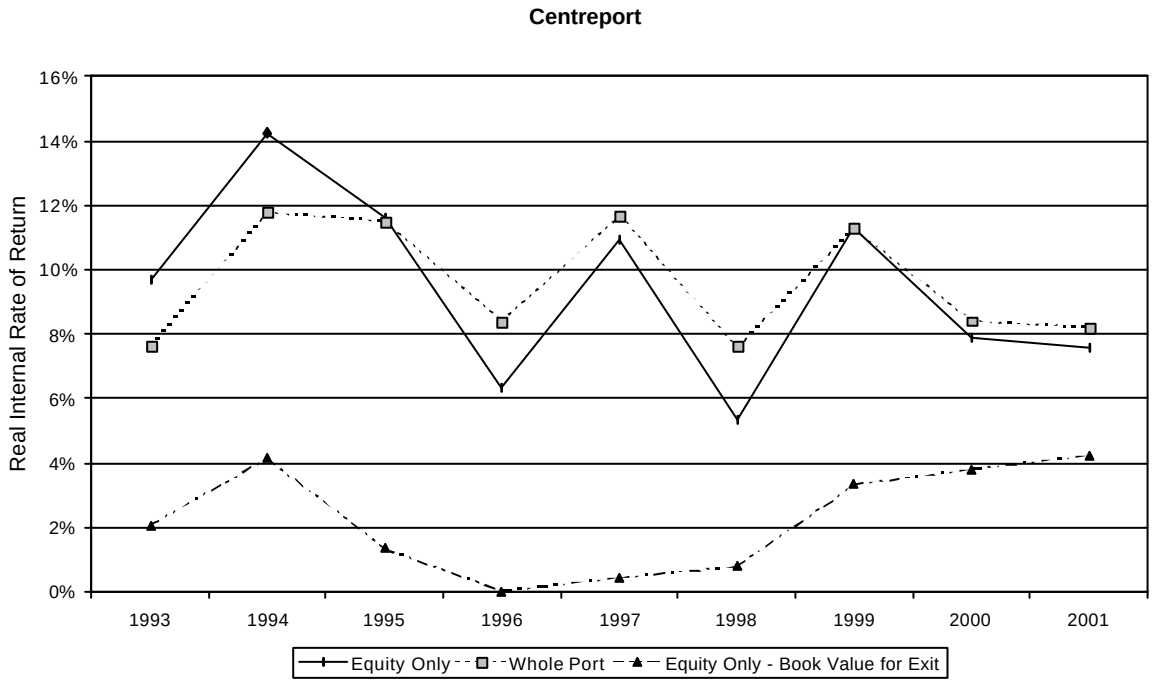
Appendix J. IRRs Achieved by Shareholders

The base methodology used in this document calculates the IRR achieved by the overall enterprise, i.e. the cash available to both debt and equity providers without regard to how these may be apportioned among them. In this appendix we consider the returns achieved solely by the equity providers, i.e. the shareholders of these enterprises. While we would not necessarily expect a close match between the overall and equity-only IRRs, there should be sufficient correlation to provide a cross-check on the methods.

The calculation is straightforward and assumes that a share is held from corporatisation (typically 1 October 1988) until a given exit date.[74] Along the way cash is received in the form of dividends and any capital reductions that might have taken place. Cash is expended to acquire, pro rata, shares in any new issues. Exit prices are calculated using the EV/EBITDA multiples from Appendix I with net debt at the time being deducted to give a residual equity value. For three of the ports charts are provided that compare the equity-only IRR with the overall IRR as well as with an equity-only IRR using book value for the exit price.

J.1 Centreport – Equity-only IRR

The chart below compares the equity-only IRRs with the IRRs calculated previously for the whole port (i.e. returns to both debt and equity). Also plotted for comparison is the equity-only return using book value of fixed assets as the basis for the exit price.



The following table shows the data for the equity-only calculations.

[74] For ease, the calculations are performed using the entire equity in the company rather than a single share, this does not affect the results.

Port of Wellington / CentrePort

Equity-only calculation

As at / Period ended	Oct-88	Sep-89	Sep-90	Sep-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Shares Purchased	*-51000*											*-10000*		
Capital Reductions		*0*	*0*	*0*	*5000*	*0*	*0*	*26000*	*0*	*0*	*0*	*0*	*0*	*0*
Dividend Payments		*0*	*1500*	*1750*	*1250*	*4375*	*4316*	*2399*	*3050*	*2720*	*1265*	*9000*	*5797*	*4100*
Enterprise Value (EV / EBITDA basis)						90,109	119,090	126,181	101,230	152,385	99,702	165,017	126,747	138,170
Core debt						5657	1139	15000	23759	27000	24250	13478	18850	21822
Equity Value						*84,452*	*117,951*	*111,181*	*77,471*	*125,385*	*75,452*	*151,539*	*107,897*	*116,348*

Deflated to June 2000 Values

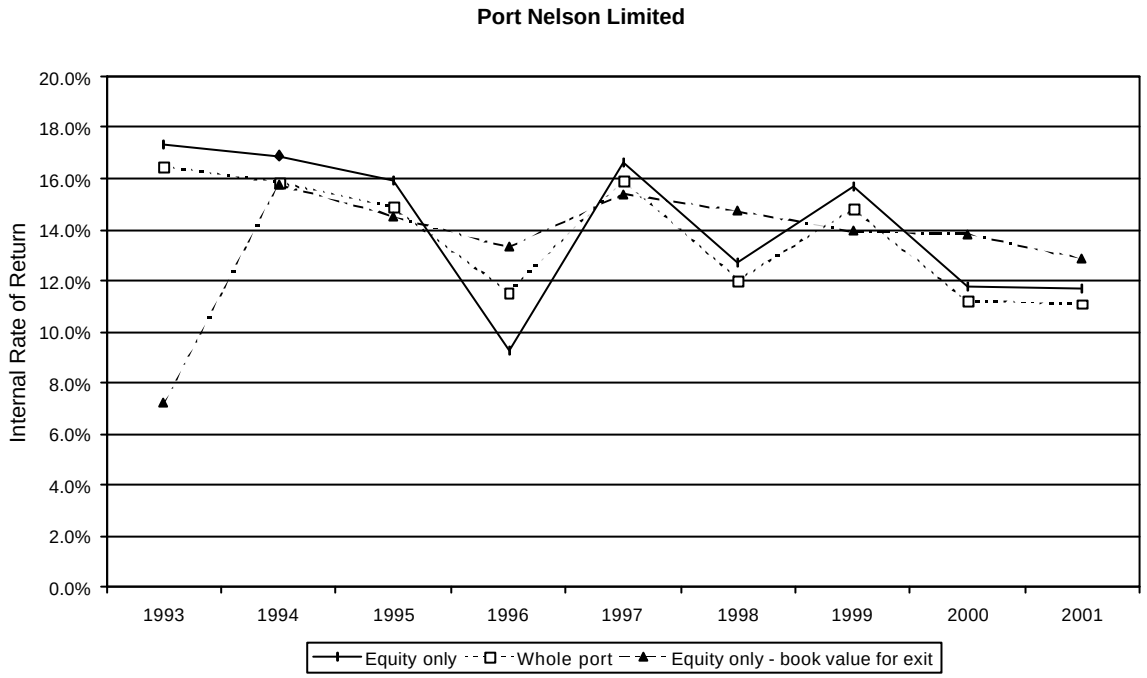
Share Purchases	-65,766											-10,589		
Capital Reductions					5,662	0	0	28,037	0	0	0	0	0	0
Dividends			1,754	2,013	1,418	4,838	4,695	2,587	3,268	2,906	1,340	9,511	5,798	3,790
Share Sale Price						93,249	128,234	119,890	83,032	134,251	79,739	160,471	107,897	107,617

Real cash stream for exit at end of financial year:

1993	-65,766	0	1,754	2,013	1,418	98,088								
1994	-65,766	0	1,754	2,013	1,418	4,838	132,928							
1995	-65,766	0	1,754	2,013	1,418	4,838	4,695	122,477						
1996	-65,766	0	1,754	2,013	1,418	4,838	4,695	2,587	86,301					
1997	-65,766	0	1,754	2,013	1,418	4,838	4,695	2,587	3,268	137,157				
1998	-65,766	0	1,754	2,013	1,418	4,838	4,695	2,587	3,268	2,906	81,080			
1999	-65,766	0	1,754	2,013	1,418	4,838	4,695	2,587	3,268	2,906	1,340	169,983		
2000	-65,766	0	1,754	2,013	1,418	4,838	4,695	2,587	3,268	2,906	1,340	9,511	113,695	
2001	-65,766	0	1,754	2,013	1,418	4,838	4,695	2,587	3,268	2,906	1,340	9,511	5,798	111,406
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**9.7%**	**14.3%**	**11.6%**	**6.3%**	**10.9%**	**5.3%**	**11.3%**	**7.9%**	**7.6%**

J.2 Port Nelson Limited – Equity-only IRR

The chart below compares the equity-only IRRs with the IRRs calculated previously for the whole port (i.e. returns to both debt and equity). Also plotted for comparison is the equity-only return using book value of fixed assets as the basis for the exit price.



The data for the equity-only calculations is provided in the following table.

Port Nelson Limited

Equity-only calculation

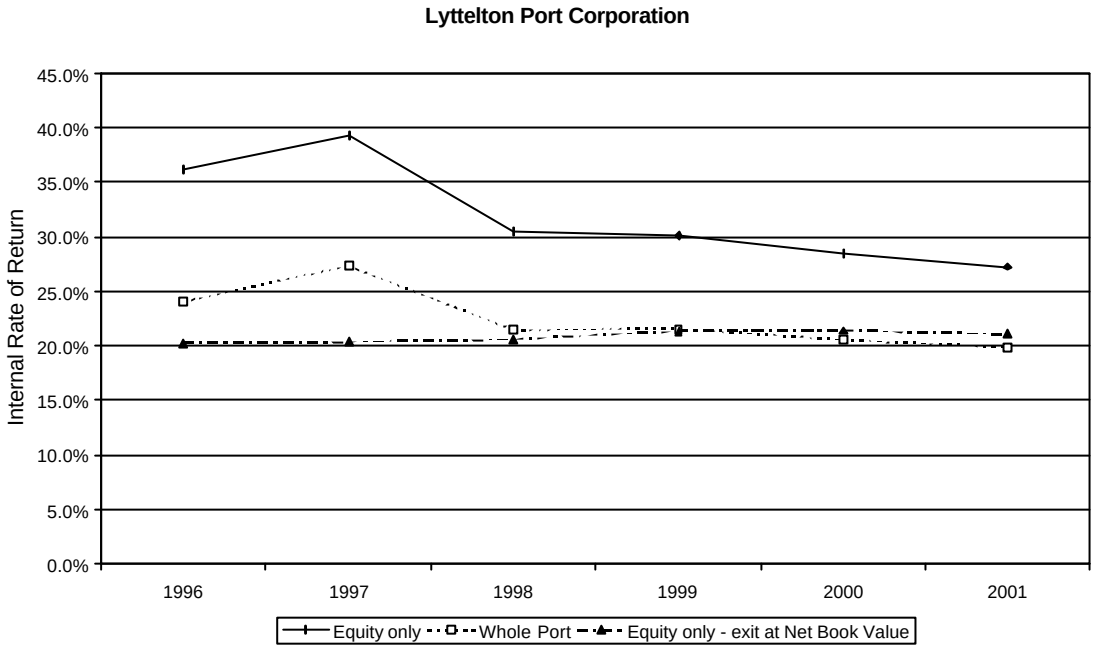
As at / Period ended	**Oct-88**	**Sep-89**	**Sep-90**	**Sep-91**	**Jun-92**	**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Shares Purchased	26874													
Capital Reductions														
Dividend Payments		621	781	1,078	953	1,635	2,090	1,960	2,170	18,145	1,977	4,000	2,900	1,000
Enterprise Value (EV / EBITDA basis)						62,892	71,163	76,817	64,631	103,618	78,758	114,172	87,486	101,548
Core debt						59	59	0	14,000	14,000	14,400	11,150	19,650	21,650
Equity Value						62,833	71,104	76,817	50,631	89,618	64,358	103,022	67,836	79,898

Deflated to June 2000 Values

Share Purchases	34,655													
Capital Reductions														
Dividends		744	908	1,241	1,079	1,805	2,272	2,114	2,326	19,428	2,089	4,236	2,900	925
Share Sale Price						69,378	77,303	82,835	54,266	95,955	68,015	109,094	67,836	73,902
Real cash stream for exit at end of financial year:														
1993	-34,655	744	908	1,241	1,079	71,183								
1994	-34,655	744	908	1,241	1,079	1,805	79,575							
1995	-34,655	744	908	1,241	1,079	1,805	2,272	84,948						
1996	-34,655	744	908	1,241	1,079	1,805	2,272	2,114	56,592					
1997	-34,655	744	908	1,241	1,079	1,805	2,272	2,114	2,326	115,383				
1998	-34,655	744	908	1,241	1,079	1,805	2,272	2,114	2,326	19,428	70,104			
1999	-34,655	744	908	1,241	1,079	1,805	2,272	2,114	2,326	19,428	2,089	113,330		
2000	-34,655	744	908	1,241	1,079	1,805	2,272	2,114	2,326	19,428	2,089	4,236	70,736	
2001	-34,655	744	908	1,241	1,079	1,805	2,272	2,114	2,326	19,428	2,089	4,236	2,900	74,827
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**17.3%**	**16.9%**	**15.9%**	**9.3%**	**16.7%**	**12.7%**	**15.7%**	**11.8%**	**11.7%**

J.3 Lyttelton Port Corporation – Equity-only IRR

The IRR achieved by the shareholders in Lyttelton Port Corporation is calculated using Lyttelton's share prices for the exit value. The chart below compares the equity-only IRR with the IRR for the whole port operation (i.e. the returns to both debt and equity holders) and the equity-only IRR calculated using an exit price equal to net book value of fixed assets.



The calculations are shown in the following table

Lyttelton Port Corporation

Equity-only calculation

As at / Period ended		Sep-89	Jun-90	Jun-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Shares Purchased	10,304							10,000					191	184
Dividend Payments		0	515	258	515	618	1,133	3,675	5,419	5,791	29,222	6,396	8,172	20,590
Enterprise Value (EV / EBITDA basis)									151,016	233,874	159,643	180,306	183,976	200,891
Core debt									11,935	6,500	27,296	19,340	12,608	20,878
Equity Value									139,081	227,374	132,347	160,966	171,368	180,013
Deflated to June 2000 Values														
Share Purchases	14,366		0	0	0	0	0	11,658	0	0	0	0	207	184
Dividends			646	322	631	738	1,332	4,284	6,279	6,704	33,388	7,322	8,835	20,590
Share Sale Price									161,159	263,203	151,216	184,283	185,271	180,013
Real cash stream for exit at end of financial year:														
1996	-14,366	0	646	322	631	738	1,332	-7,374	167,438					
1997	-14,366	0	646	322	631	738	1,332	-7,374	6,279	269,907				
1998	-14,366	0	646	322	631	738	1,332	-7,374	6,279	6,704	184,604			
1999	-14,366	0	646	322	631	738	1,332	-7,374	6,279	6,704	33,388	191,606		
2000	-14,366	0	646	322	631	738	1,332	-7,374	6,279	6,704	33,388	7,322	193,900	
2001	-14,366	0	646	322	631	738	1,332	-7,374	6,279	6,704	33,388	7,322	8,644	200,418
Exiting at:									**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:									**36.1%**	**39.3%**	**30.4%**	**30.2%**	**28.4%**	**27.3%**

J.4 Westgate Port Taranaki – Equity-only IRR

Equity-only calculation

As at / Period ended	Sep-90	Sep-91	Jun-92	Jun-93	Jun-94	Jun-95	Jun-96	Jun-97	Jun-98	Jun-99	Jun-00	Jun-01
Shares Purchased	26,000											
Dividend Payments		1,820	1,300	1,300	1,820	10,503	5,034	3,700	2,100	2,700	2,200	16,100
Enterprise Value (EV / EBITDA basis)				96,812	115,359	108,449	79,166	161,531	82,919	126,128	111,694	101,820
Core debt				8,237	5,025	3,773	6,457	4,500	5,900	14,200	13,700	18,200
Equity Value				88,576	110,334	104,676	72,709	157,031	77,019	111,928	97,994	83,620
Deflated to June 2000 Values												
Share Purchases	29,924											
Dividends		2,099	1,472	1,435	1,979	11,326	5,395	3,962	2,219	2,859	2,200	14,892
Share Sale Price				97,802	119,953	112,876	77,928	168,134	81,396	118,525	97,994	77,345
Real cash stream for exit at end of financial year:												
1993	-29,924	2,099	1,472	99,238								
1994	-29,924	2,099	1,472	1,435	121,932							
1995	-29,924	2,099	1,472	1,435	1,979	124,201						
1996	-29,924	2,099	1,472	1,435	1,979	11,326	83,324					
1997	-29,924	2,099	1,472	1,435	1,979	11,326	5,395	172,095				
1998	-29,924	2,099	1,472	1,435	1,979	11,326	5,395	3,962	83,616			
1999	-29,924	2,099	1,472	1,435	1,979	11,326	5,395	3,962	2,219	121,385		
2000	-29,924	2,099	1,472	1,435	1,979	11,326	5,395	3,962	2,219	2,859	100,194	
2001	-29,924	2,099	1,472	1,435	1,979	11,326	5,395	3,962	2,219	2,859	2,200	92,236
Exiting at:				**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:				**52.6%**	**45.4%**	**36.3%**	**24.8%**	**33.6%**	**20.9%**	**23.1%**	**19.7%**	**17.8%**

J.5 Port of Marlborough – Equity-only IRR

Equity-only calculation

As at / Period ended		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Shares Purchased	11,200		800						163					
Dividend Payments		0	493	696	648	540	600	1,548	1,320	2,347	11,007	1,790	3,442	1,362
Enterprise Value (EV / EBITDA basis)						8,432	44,902	48,118	46,048	65,785	74,682	68,855	58,665	63,937
Core debt						1,143	1,126	1,108	1,088	1,065	1,041	1,014	6,600	8,200
Equity Value						7,289	43,776	47,010	44,960	64,720	73,641	67,841	52,065	55,737

Deflated to June 2000 Values

Share Purchases	15,615													
Dividends		0	619	866	793	645	705	1,805	1,530	2,717	12,576	2,049	3,721	1,362
Share Sale Price						8,702	51,454	54,806	52,097	74,918	84,141	77,669	56,289	55,737
Real cash stream for exit at end of financial year:														
1993	-15,615	0	619	866	793	9,346								
1994	-15,615	0	619	866	793	645	52,159							
1995	-15,615	0	619	866	793	645	705	56,610						
1996	-15,615	0	619	866	793	645	705	1,805	53,626					
1997	-15,615	0	619	866	793	645	705	1,805	1,530	77,635				
1998	-15,615	0	619	866	793	645	705	1,805	1,530	2,717	96,717			
1999	-15,615	0	619	866	793	645	705	1,805	1,530	2,717	12,576	79,718		
2000	-15,615	0	619	866	793	645	705	1,805	1,530	2,717	12,576	2,049	60,011	
2001	-15,615	0	619	866	793	645	705	1,805	1,530	2,717	12,576	2,049	3,721	57,099
Exiting at:						**Jun-93**	**Jun-94**	**Jun-95**	**Jun-96**	**Jun-97**	**Jun-98**	**Jun-99**	**Jun-00**	**Jun-01**
Real post-tax IRR:						**-6.2%**	**24.2%**	**22.2%**	**19.1%**	**21.8%**	**22.5%**	**20.3%**	**17.1%**	**16.3%**

J.6 Port of Napier – Equity-only IRR

Equity-only calculation

As at / Period ended	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Shares Purchased	21,000													
Dividend Payments		400	1,000	1,052	1,255	1,910	2,415	2,100	2,100	17,940	2,934	2,867	2,982	3,803
Enterprise Value (EV / EBITDA basis)						74,588	84,303	93,114	75,950	167,740	81,987	161,452	154,673	127,939
Core debt						1,662	1,330	998	3,184	16,733	15,035	9,835	387	3,006
Equity Value						72,926	82,973	92,116	72,766	151,007	66,952	151,617	154,286	124,933

Deflated to June 2000 Values

Share Purchases	29,277													
Dividends		518	1,257	1,309	1,525	2,261	2,824	2,441	2,431	20,663	3,352	3,234	3,104	3,728
Share Sale Price						86,336	97,028	107,064	84,233	173,924	76,497	171,016	160,592	122,475

Real cash stream for exit at end of financial year:

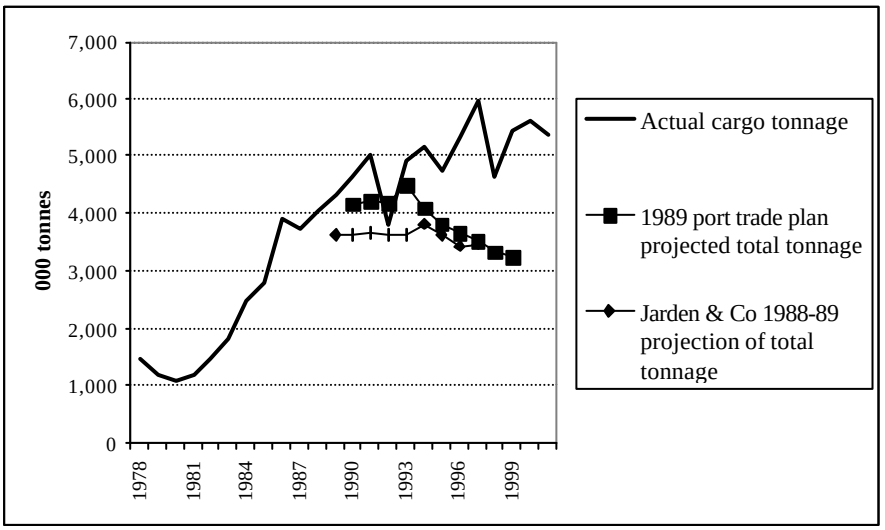
1993	-29,277	400	1,257	1,309	1,525	88,597								
1994	-29,277	400	1,257	1,309	1,525	2,261	99,852							
1995	-29,277	400	1,257	1,309	1,525	2,261	2,824	109,504						
1996	-29,277	400	1,257	1,309	1,525	2,261	2,824	2,441	86,664					
1997	-29,277	400	1,257	1,309	1,525	2,261	2,824	2,441	2,431	194,586				
1998	-29,277	400	1,257	1,309	1,525	2,261	2,824	2,441	2,431	20,663	79,849			
1999	-29,277	400	1,257	1,309	1,525	2,261	2,824	2,441	2,431	20,663	3,352	174,250		
2000	-29,277	400	1,257	1,309	1,525	2,261	2,824	2,441	2,431	20,663	3,352	3,234	163,696	
2001	-29,277	400	1,257	1,309	1,525	2,261	2,824	2,441	2,431	20,663	3,352	3,234	3,104	126,204
Exiting at:						**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
Real post-tax IRR:						**26.9%**	**25.0%**	**23.4%**	**17.7%**	**25.8%**	**16.5%**	**21.8%**	**19.9%**	**17.2%**

Appendix K. Establishment Expectations

Actual Cargo Volume, Revenues and Profitability Relative to Expectations at Time of Establishment.

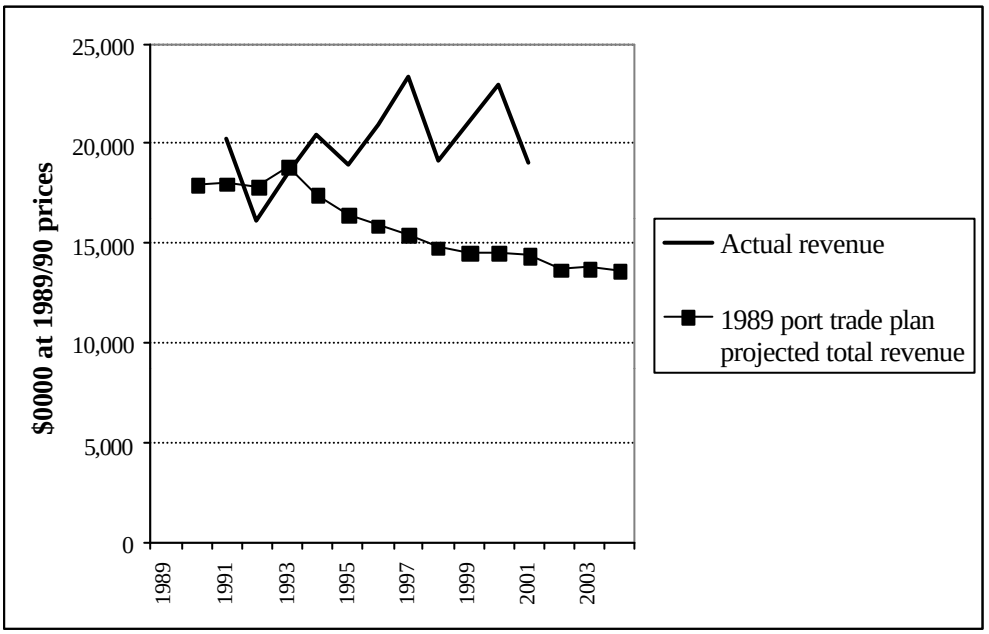
Westgate Projected and Actual Cargo Tonnage

	Jarden & Co 1988-89 projection of total tonnage	1989 port trade plan projected total tonnage	Actual cargo tonnage
1978			1,455
1979			1,193
1980			1,061
1981			1,169
1982			1,458
1983			1,816
1984			2,499
1985			2,784
1986			3,900
1987			3,707
1988			4,034
1989	3,624		4,319
1990	3,635	4,164	4,630
1991	3,657	4,218	5,004
1992	3,618	4,194	3,807
1993	3,620	4,505	4,915
1994	3,818	4,103	5,157
1995	3,628	3,803	4,750
1996	3,442	3,653	5,320
1997	3,462	3,521	5,950
1998		3,329	4,650
1999		3,263	5,470
2000			5,620
2001			5,390



Westgate Projected and Actual Real Revenue

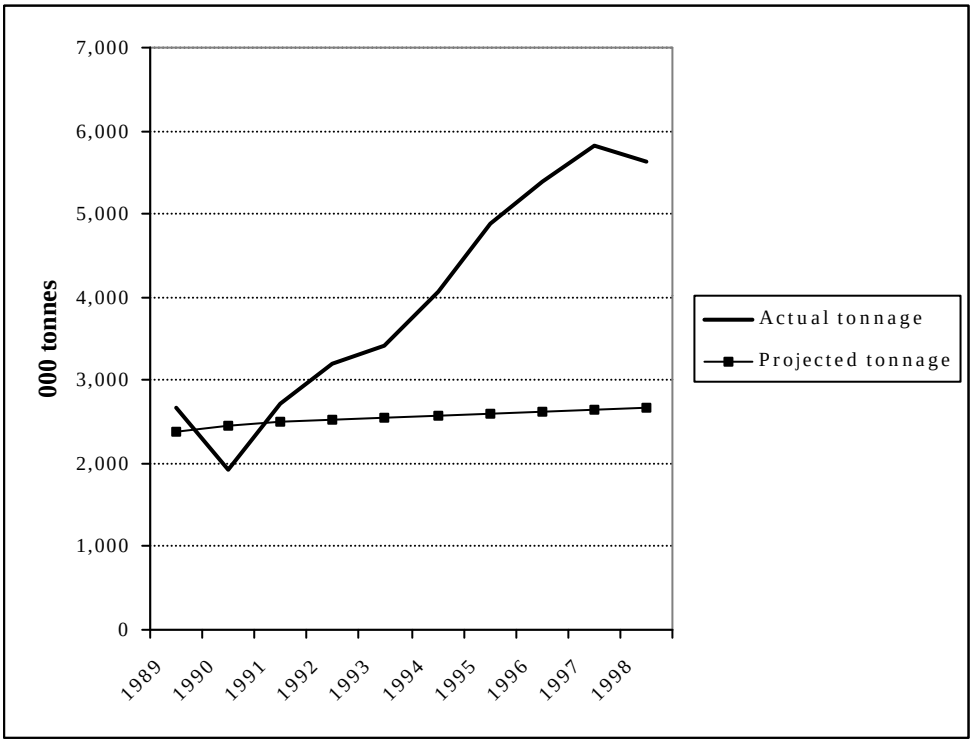
	1989 port trade plan projected total real revenue 1989/90 $000	Actual real revenue 1989/90 $000
1989		
1990	17,938	
1991	17,973	20,175
1992	17,833	16,056
1993	18,833	18,569
1994	17,464	20,408
1995	16,460	18,939
1996	15,919	20,931
1997	15,459	23,326
1998	14,779	19,161
1999	14,544	21,029
2000	14,496	22,970
2001	14,398	18,992
2002	13,706	
2003	13,768	
2004	13,581	



Port of Lyttelton Projected and Actual Cargo Tonnage

Year	Projected tonnage	Actual tonnage
1989	2,380	2,661
1990	2,450	1,915
1991	2,490	2,720
1992	2,520	3,208
1993	2,550	3,420
1994	2,570	4,074
1995	2,600	4,880
1996	2,620	5,398
1997	2,650	5,823
1998	2,670	5,632

Projected tonnage from Lyttelton Establishment Unit 5 July 1988 "Port Valuation" p.5.

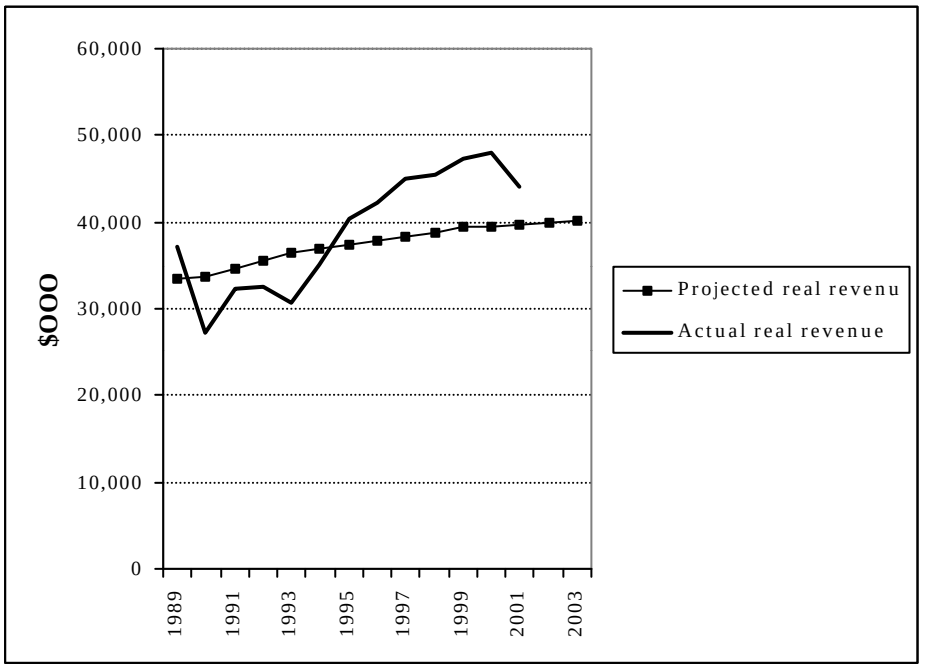


Port of Lyttelton

Projected and Actual Real Revenue $000

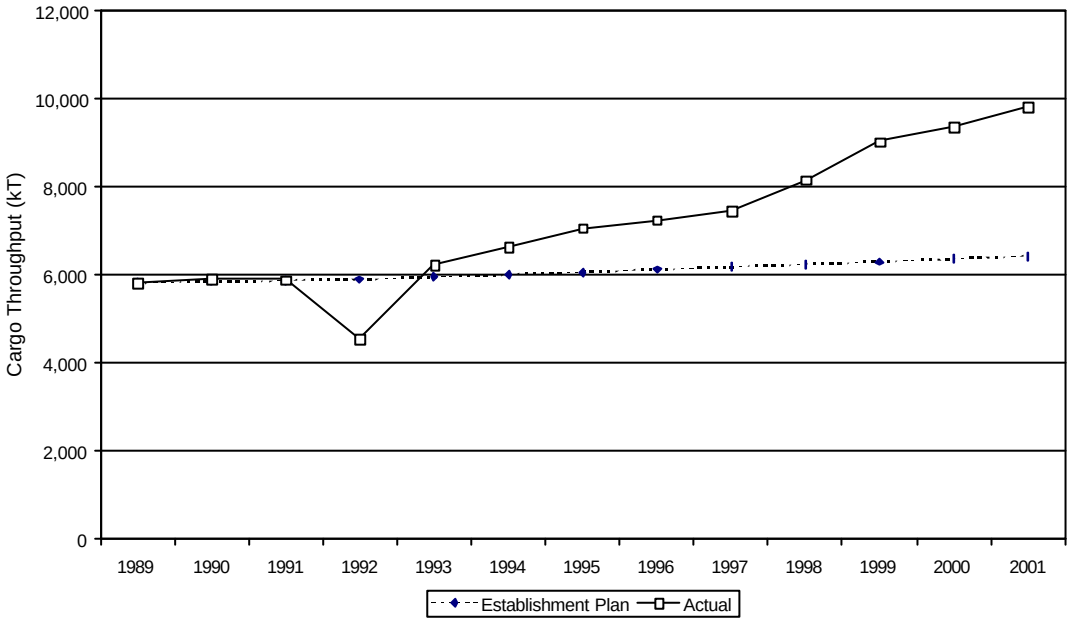
Year	Projected revenue	Projected price index	Projected real revenue	Actual nominal revenue	Actual real revenue
1989	33,401	106	33,401	36,567	37,252
1990	35,405	111	33,719	28,538	27,182
1991	38,286	117	34,725	34,641	32,295
1992	41,009	123	35,425	35,290	32,564
1993	43,810	128	36,388	33,985	30,586
1994	46,360	133	37,027	39,688	35,010
1995	48,800	138	37,476	46,289	40,417
1996	51,361	144	37,926	48,571	42,120
1997	54,076	149	38,395	52,106	45,072
1998	56,948	155	38,877	52,880	45,386
1999	59,986	161	39,376	55,223	47,338
2000	62,666	168	39,556	58,067	47,919
2001	65,534	175	39,774	58,249	44,186
2002	68,537	182	39,996		
2003	71,682	189	40,224		
2004	74,974				

Revenue projections from Arthur Young, "Port of Lyttelton – Revised Valuation", 12 October 1988, table attachment.



Centreport Cargo Volumes: Establishment Plan compared with Actuals

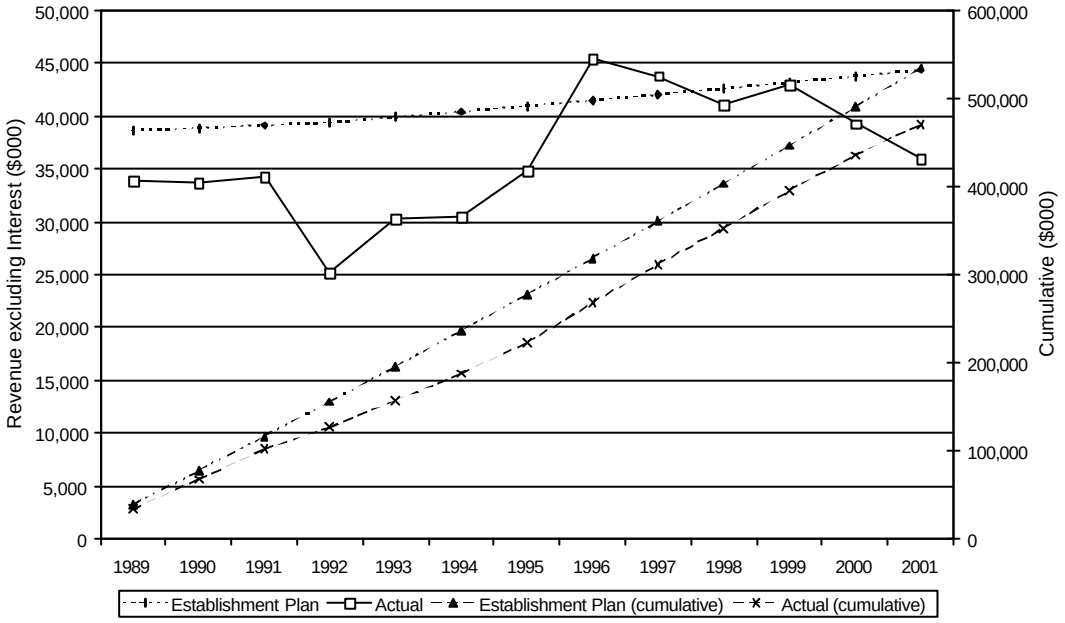
	Establishment Plan	**Actual**
1989	5,809	5,809
1990	5,835	5,912
1991	5,861	5,885
1992	5,888	4,556
1993	5,943	6,231
1994	5,998	6,639
1995	6,055	7,056
1996	6,112	7,249
1997	6,171	7,456
1998	6,231	8,148
1999	6,292	9,022
2000	6,354	9,348
2001	6,418	9,800



Sources: Company Annual Reports for actual tonnages, Establishment Plan assumptions and 1989 actuals used to derive "Establishment Plan" projections.

Centreport Projected and Real Revenue

	Establishment Plan	Actual
1989	38,630	33,840
1990	38,876	33,641
1991	39,128	34,293
1992	39,381	25,198
1993	39,894	30,319
1994	40,415	30,486
1995	40,948	34,820
1996	41,489	45,366
1997	42,043	43,804
1998	42,607	41,077
1999	40,816	43,023
2000	43,770	39,285
2001	44,370	35,943



Sources: Establishment Pland and Annual Reports. Statistics New Zealand PPI (inputs) series used to convert to June 2000 $.

Appendix L. Table of HS2 Classifications

HS2 Code	Description
01	Animals; live
02	Meat and edible meat offal
03	Fish and crustaceans, molluscs and other aquatic invertebrates
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
05	Animal originated products; not elsewhere specified or included
06	Trees and other plants, live; bulbs, roots and the like; cut flowers and ornamental foliage
07	Vegetables and certain roots and tubers; edible
08	Fruit and nuts, edible; peel of citrus fruit or melons
09	Coffee, tea, mate and spices
10	Cereals
11	Products of the milling industry; malt, starches, inulin, wheat gluten
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder
13	Lac; gums, resins and other vegetable saps and extracts
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
15	Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes
16	Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof
17	Sugars and sugar confectionery
18	Cocoa and cocoa preparations
19	Preparations of cereals, flour, starch or milk; pastrycooks' products
20	Preparations of vegetables, fruit, nuts or other parts of plants
21	Miscellaneous edible preparations
22	Beverages, spirits and vinegar
23	Food industries, residues and wastes thereof; prepared animal fodder
24	Tobacco and manufactured tobacco substitutes
25	Salt; sulphur; earths, stone; plastering materials, lime and cement
26	Ores, slag and ash
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
28	Inorganic chemicals; organic and inorganic compounds of precious metals; of rare earth metals, of radio-active elements and of isotopes
29	Organic chemicals
30	Pharmaceutical products
31	Fertilizers
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints, varnishes; putty, other mastics; inks
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
34	Soap, organic surface-active agents; washing, lubricating, polishing or scouring preparations; artificial or prepared waxes, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster
35	Albuminoidal substances; modified starches; glues; enzymes
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations
37	Photographic or cinematographic goods
38	Chemical products n.e.s.
39	Plastics and articles thereof
40	Rubber and articles thereof
41	Raw hides and skins (other than furskins) and leather
42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)
43	Furskins and artificial fur; manufactures thereof
44	Wood and articles of wood; wood charcoal
45	Cork and articles of cork
46	Manufactures of straw, esparto or other plaiting materials; basketware and wickerwork
47	Pulp of wood or other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard

HS2 Code	Description
48	Paper and paperboard; articles of paper pulp, of paper or paperboard
49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans
50	Silk
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
52	Cotton
53	Vegetable textile fibres; paper yarn and woven fabrics of paper yarn
54	Man-made filaments
55	Man-made staple fibres
56	Wadding, felt and nonwovens, special yarns; twine, cordage, ropes and cables and articles thereof
57	Carpets and other textile floor coverings
58	Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery
59	Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use
60	Fabrics; knitted or crocheted
61	Apparel and clothing accessories; knitted or crocheted
62	Apparel and clothing accessories; not knitted or crocheted
63	Textiles, made up articles; sets; worn clothing and worn textile articles; rags
64	Footwear; gaiters and the like; parts of such articles
65	Headgear and parts thereof
66	Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof
67	Feathers and down, prepared; and articles made of feather or of down; artificial flowers; articles of human hair
68	Stone, plaster, cement, asbestos, mica or similar materials; articles thereof
69	Ceramic products
70	Glass and glassware
71	Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin
72	Iron and steel
73	Iron or steel articles
74	Copper and articles thereof
75	Nickel and articles thereof
76	Aluminium and articles thereof
78	Lead and articles thereof
79	Zinc and articles thereof
80	Tin; articles thereof
81	Metals; n.e.s., cermets and articles thereof
82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof, of base metal
83	Metal; miscellaneous products of base metal
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles
86	Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds
87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof
88	Aircraft, spacecraft and parts thereof
89	Ships, boats and floating structures
90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories
91	Clocks and watches and parts thereof
92	Musical instruments; parts and accessories of such articles
93	Arms and ammunition; parts and accessories thereof
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.s.; illuminated signs, illuminated name-plates and the like; prefabricated buildings
95	Toys, games and sports requisites; parts and accessories thereof
96	Miscellaneous manufactured articles

HS2 Code	Description
97	Works of art; collectors' pieces and antiques
98	New Zealand miscellaneous provisions
99	Non-merchandise trade

Appendix M. Export Items for which Data is Confidential

The first two digits of the “HS Code” in the following table correspond to the HS2 categories in the table in Appendix L

HS Code	HS Description	Suppressed
0604.10.01.01	sphagnum moss	12 months
0709.51.00.00	vegetables; mushrooms, fresh or chilled	12 months
1107.10.00.01	malt; not roasted; for use in brewing	12 months
1210.20.01.00	hop cones; ground, powdered or pellets	12 months
2507.00.00.00	Kaolin	24 months
2701.12.00.00	Coal; bituminous, whether or not pulverised, but not agglomerated	24 months
2847.00.00.00	hydrogen peroxide	12 months
2905.11.19.00	methanol	12 months
3803.00.00.00	tall oil	12 months
3805.20.00.00	terpenic oils; pine oil	12 months
3805.90.00.00	terpenic oils, other	12 months
3806.10.00.00	rosin	12 months
3823.13.00.00	fatty acids, from refining; tall oil fatty acids	12 months
4102.10.00.01	Skins; raw, slink skins, with wool on, fresh or preserved but not tanned, parchment-dressed or further prepared, whether or not split	12 months
4801.00.90.01	newsprint; in rolls	12 months
4814.20.09.01	Wallpaper and similar wall coverings; vinyl coated on the face side, with a grained, embossed, coloured, design-printed or otherwise decorated layer of plastics, not laminated	12 months
4814.20.09.09	Wallpaper and similar wall coverings; coated or covered on the face side, with a grained, embossed, coloured, design-printed or otherwise decorated layer of plastics, not laminated, other than vinyl	12 months
5702.41.11.01	woven carpets; of wool	12 months
7213.91.90.01	Iron or non-alloy steel; bars and rods of circular cross-section measuring less than 14 mm in diam., n.e.s. in item no.7213.91.10, containing by weight less than 0.25% of carbon	12 months
7213.91.90.05	Iron or non-alloy steel; bars and rods of circular cross-section measuring less than 14 mm in diam., n.e.s. in item no.7213.91.10, containing by weight 0.25% or more but less than 0.6% of carbon	12 months
7318.15.09.19	iron and steel; threaded bolts and bolt ends	12 months