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Results of Railway Privatization in Australia and New Zealand

Robert Williams
David Greig
Ian Wallis

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1818 H Street NW
Washington, DC 20433
Telephone 202-473-1000
Internet www/worldbank.org
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TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

PREFACE

In 2003, the World Bank's Transport and Urban Development Department initiated a review of international experience of railway privatization. Many of the Bank's countries of operation have adopted such policies over the last fifteen or so years, many with World Bank support or endorsement. The issue of whether to increase private participation in the railway sector remains a live policy issue in many other countries in which the Bank is active. It seemed wise to review the outcomes in countries where it has already been done.

An early report in this series was a review of British Railways privatization published in September 2004. At the same time, the Bank initiated three separate and independent reviews of experience in the three continents where private participation in railways has most substantially increased in recent years: Latin America, Australasia and Africa. This report describes the review of rail privatization in Australia and New Zealand.

The consultants selected for these reviews were asked to give greatest attention to the ***results*** of rail privatization. This was partly a matter of resources; over the three continents more than 60 individual railway concessions or sales were implemented. Each country and case has its own history, market characteristics, political context and administrative process: the intention of this work was to look beyond the details of each privatization process and focus on what they actually achieved. Taken over the whole range of experience, the merits or otherwise of private sector participation in railways as a broader policy principle might be discerned.

The terms of reference for the review in each continent were very similar. The authors were asked to consider impacts on the role of rail, productive (or technical) efficiency, allocative efficiency; investment in the rail system (including renewal of assets); accessibility of the rail system to passenger and freight users; and, in the case of Latin America and Africa, possible impacts on the poor. This was a tall order for the very modest budgets available, not least because rail privatization has, in many cases, led to a marked reduction in publicly available information about the railways involved. None of the reviews has been able to come to definitive conclusions on all criteria. But, taken in the round, the three reviews greatly improve our understanding of what may be expected to happen when a railway is privatized.

The authors were asked to take an independent view. The reports are published and disseminated as an input to continuing debate in an area of public policy that is of interest to many of the Bank's countries of operations. The authors' conclusions are their own and carry no specific or implied endorsement by the World Bank.

Paul Amos
Transport Adviser
Transport and Urban Development Department
World Bank

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The information compiled in this report has been obtained from public sources, personal contact with rail industry executives and from the experience and observations of the authors. While care has been taken to ensure the consistency and efficacy of the data, errors may remain. Any opinions expressed in this report reflect the personal views of the authors and not their employers (Robert Williams and Ian Wallis are with Booz Allen Hamilton and David Greig is with ACIL Tasman).

The authors also greatly appreciate the assistance of Christine Ware, Matt Amor and JJ Lee in compiling the research for this paper and the review and comments of Paul Amos, Robin Caruthers, Dick Bullock, Margaret Starrs, Graham Smith and Murray King.

EXECUTIVE SUMMARY

KEY FINDINGS

i. Australia and New Zealand have had a rich experience in railway privatization over the past 12 years: seven freight railway privatizations, a long distance passenger rail privatization, three passenger rail concessions (two urban and one urban/rural), and four build, own, operate and transfer (BOOT) concessions (a new freight line, two airport links and a light rail).

ii. These privatizations should be seen as a part of wider moves by government in both countries towards market liberalization and greater private sector involvement in traditional public sector businesses (for example, electricity, telecommunications, and ports). In the railway sector, market liberalization and increased competition were seen as means to improve both the productive efficiency and allocative efficiency of railway businesses. In this context, some governments no longer regarded public ownership of all such businesses as necessary or desirable, and saw advantages in private sector management.

iii. Overall the rail freight privatization experience in Australia and New Zealand, taken in concert with other market and structural reforms, has been positive, although not uniformly so:

- In Australia, the largely privatized rail freight industry is markedly stronger today than at any time over the last few decades and is competing aggressively for a greater role in the national transport and logistics market; and
- In New Zealand, the initial success of privatization with increased rail traffic and increased profits has not been sustained: the government has been obliged to take back the network and to commit significant public funds to address deficiencies in the network assets.

iv. Privatization of freight railways has allowed industry consolidation in Australia, particularly across state boundaries. This has improved overall rail economics and viability, but has not been enough to overcome the inherent poor economics of some regional and light density railways, with governments inevitably the funder of last resort.

v. Similarly, private sector participation in some public private partnership (PPP) schemes has not guaranteed success and overcome the inherently poor economics of some projects. Typically these schemes have been implemented successfully, but have then struggled to meet the optimistic demand forecasts and operating performance targets of their sponsors.

vi. The sale structure, in terms of vertical integration and integrated sale of track and train operations versus sale of train operations only, has not yet been a major factor in the perceived success of the privatizations although there seems to remain a strong operator preference for integration.

vii. The relatively-simple long-distance passenger privatization in Australia appears to have been successful, with improved marketing and profitability, although questions remain about its ability to fund renewal of capital.

viii. The urban and rural passenger rail concessions in Victoria proved difficult: they suffered from some design flaws, including attempts to transfer too much risk to the private sector and over-optimistic bidding. As a result, the State government had to step in to re-design and re-negotiate concessions, although we would judge the outcomes to date on balance represent a qualified success.

PRIVATIZATIONS

New Zealand Rail Ltd

ix. Despite major reforms under public ownership in the 1980s, New Zealand railways were sold to a consortium of US and NZ investors (the freight and passenger operations plus a long term lease of the track) for NZ$400m in 1993. There is 4000 kilometers of narrow gauge (1067mm) track in NZ – mostly short haul routes. NZ railways transport containers, coal, forest and agricultural products, and also have upwards of 10 million passenger boardings per annum.

x. The new owners increased labor and freight car productivity, introduced new technology and for the first few years made increasing profits. Financial distress arose from about 2000 due to the cost and service impacts of inadequate track maintenance, ineffective commercial strategies and increasing road competition. The government took control of the deteriorated network in 2004 and is spending at least NZ$200 million upgrading the infrastructure.

Australian National

xi. In 1997, the Commonwealth Government offered AN for sale, citing among other things its continued financial losses (much of its more profitable freight business had been transferred to the newly formed national interstate freight operator in 1993). Over the preceding five years losses were in excess of A$720 million, including a A$250 million loss in 1995/96 alone. Australian National was unbundled into four core business units, with three of the business units offered as trade sales:

- Long Distance Passenger Rail - operating the Indian Pacific (between Sydney and Perth), the Ghan (between Adelaide and Alice Springs – and now Darwin) and The Overland (between Adelaide and Melbourne) to a consortium including Serco for A$16 million (Serco subsequently took full control of the business).
- SA Rail - South Australian-based intrastate freight haulage of grain, gypsum, coal etc. Assets included rolling stock, workshops, terminals and infrastructure maintenance services. Most of the South Australian country rail network was included under a long term lease. SA Rail was sold to Genesee & Wyoming Inc Consortium for A$57 million.
- Tasrail - Tasmania's rail system carries 3-4 million tonnes p.a. of general container freight, coal and forest products, and cement and newsprint. There are 620 kilometers of narrow gauge track. The operation, with a long term lease of the track, was privatized through a trade sale to a group including Wisconsin Central and TranzRail for A$22m in 1997.
- AN Track Access – interstate network assets – were then transferred to ARTC (a corporatized Commonwealth Government rail infrastructure company) to operate under commercial terms in 1998.

xii. The long distance passenger services have benefited from the private owner's focus on the high-end tourist market using refurbished rolling stock.

xiii. Initially the main changes to the South Australia freight railway were cost cutting. Later it became part of the larger and successful Australian Railroad Group (see below).

xiv. The new owners of Tasrail cut costs and improved efficiency and customer focus, and made the railway's first ever recorded profit. However, after a few years it became clear that the railway was not earning enough to cover the long term maintenance of infrastructure. It was on-sold for a reported A$13m to Pacific National (PN, described below) in 2004, and the Tasmanian Government is considering how it may best contribute to infrastructure investment going forward.

Westrail Freight

xv. What was the Western Australia Government rail system has 5300 km of track in two gauges.[1] Freight of about 30 million tonnes p.a. is mainly grain, iron ore, bauxite, alumina and gypsum. The business, with a long-term infrastructure lease, was sold to a consortium of Genesee & Wyoming and Wesfarmers for A$585 million in 2000. The West Australian and SA Rail networks were combined to form the Australian Railroad Group.

xvi. It appears from the limited information available that, post-sale, operational improvements have been made, asset utilization and monitoring has been improved, costs have been cut, and that profitability has improved.

V/Line Freight

xvii. Victoria's V/Line Freight was seen by its customers as relatively well run, but struggled to break even on its small volumes of around 6 million tonnes per annum (over half of which is grain). The Victorian Government sold V/Line Freight as a vertically integrated business (the operation and a long term lease of much of the rural railway infrastructure – excluding the interstate network) in 1999 to Rail America for A$165 million.

xviii. The privatized railway made improved and increasing profits for the first three years. It then suffered losses as its strong reliance on grain was exposed by a sustained drought. Rail America sold the track and rolling stock to PN in 2004 for A$285 million.

Freight Corp/National Rail Corporation

xix. New South Wales' Freightcorp carried 89 million tonnes per annum and was moderately profitable thanks to coal, but was seen as relatively inefficient. The National Rail Corporation, established in 1993 and jointly owned by the Commonwealth (federal), NSW and Victorian governments, operated interstate freight services between the main cities throughout Australia. It carried mainly containers and steel, and by the end of the 1990s had just achieved profitability. Freightcorp and National Rail were sold together to Australian transport companies Toll and Patrick for A$1.2 billion in 2002. The combined rail company is now named Pacific National (PN) with Toll and Patrick holding a 50 percent share each.

xx. PN has consistently reported strong financial growth and profits since the acquisition. An integrated logistic chain, more productive labor agreements, investment in IT and asset upgrades, and other improvements underlie much of the financial gains. PN reports that further growth is constrained by inadequate infrastructure and is looking to the Commonwealth Government for significant capital investment to upgrade the national rail network.

CONCESSIONS/PUBLIC PRIVATE PARTNERSHIPS

AustralAsia Railway BOOT Project

xxi. The AustralAsia rail project, completed in 2004, is a 1420 kilometer construction of a north-south line through the centre of Australia. It connected to the existing inter-capital network at Alice Springs and extended it to Darwin. The package involved the construction of the new line, the leasing and maintenance of the existing line (north of Tarcoola), ports and railway terminal developments in Darwin, and operation of infrastructure and trains for 50 years before the network reverts back to government. Governments provided A$480 million, effectively as grants and another A$79 million loan on commercial terms. The private sector funding contribution was around A$750 million. There is no on-going government subsidy support for the operation.

xxii. Despite the line being completed on time and almost on budget and having no significant operational problems, freight revenue, though initially up to expectations, is now running behind forecasts. There have been press reports suggesting that two of the shareholders are considering exit plans and that one firm has written off its investment. The "land-bridge to Asia" aspect, aimed at

[1] Excludes the private iron ore railways in the Pilbara region in the north of the State.

developing fast shipping links to Asia from Darwin with land distribution by rail, has so far had little success.

Sydney Airport Rail Link

xxiii. For Sydney's Airport Rail Link, a private consortium constructed four underground stations with a concession to operate them, with a sharing of revenue, for 30 years. The Government financed the building of the line, in a tunnel, for approximately A$600 million while the consortium paid approximately A$200 million to build the four underground stations. The Government's CityRail operates the trains which are part of the suburban system.

xxiv. The line opened in time for the Olympic Games in 2000 but suffered from woeful patronage – 66 percent fewer passengers than expected by the Government and developers. The reasons included poor publicity, poor signage, improvements to parallel roads and good competing bus services. The link was a financial failure and entered into administration reasonably soon after opening. Patronage is now growing after initial operational problems were addressed and following strong growth in air travel stimulated by airline competition.

Brisbane Airport Rail Link

xxv. The 8.5km Brisbane Airport Rail Link was built by the private consortium Airtrain Citylink, in a private-public partnership with the Queensland Government. The consortium built the extension at no cost to the state government (or to Queensland Railways [QR] which operates the service) for A$223 million. Revenues and operating costs are shared with QR through a formula. The concession period is 35 years.

xxvi. The line opened in 2001 but patronage was 88 percent below the over-optimistic expectations, for similar reasons to Sydney. There was a large financial write-down; however patronage is now reportedly growing strongly.

Melbourne Urban Passenger & V/Line Passenger

xxvii. In 1999 three concessions were awarded to private operators, two of 15 years for the urban area and one of 10 years for the country trains. One of the urban concessions was awarded to a French group trading as Connex, and the other two were awarded to National Express (UK), each on the basis of a range of management criteria and of minimum subsidy requirement.

xxviii. The operators improved service quality, added some additional off-peak services, and introduced some new rolling stock. However soon they were bogged down in disputes including revenue allocation, and they failed to negotiate major productivity improvements with staff. Patronage growth, a healthy 3 percent per annum, was much less than the over-optimistic forecasts. Within two years the companies were in financial distress and at the end of 2002 National Express exited, taking a large financial write-off. A new (2004) contract, under which Connex has a concession over the whole system for 4-6 years, draws on the previous lessons and appears to be more successful. The country train concession also awarded to National Express was not successful and was handed back to the Government.

RESULTS OF RAILWAY PRIVATIZATION IN AUSTRALIA AND NEW ZEALAND

1 INTRODUCTION

This paper has been prepared for the World Bank as one of a series of research papers focusing on rail privatization experience throughout the world. The scope of this paper covers rail privatization experience in Australia and New Zealand, much of which occurred over the ten year period from 1993 to 2003.

1.1 History of Railways in Australia and New Zealand

The Australian railway system was developed in the latter half of the nineteenth century, with major expansion in the 1890s and in the 1920s. The system was built, with a few early private sector exceptions, by colonial governments to meet their own needs, primarily providing transport between the coastal towns and the interior. These colonial authorities (which became state-based following federation in 1901) remained the basis of the Australian railway industry for over one hundred years, providing freight and passenger services on a vertically integrated basis.

The development of railways in colonial Australia was characterized by different choices of track gauge, inconsistent standards, and orientation of the networks to the ports in the states concerned, with little consideration given to development of a national network. The difference in track gauge between states is the most significant legacy of this piecemeal development, with three track gauges common across the nation – 3'6" or 'narrow gauge' in Queensland, Western Australia and Tasmania, 4'8½" or 'standard gauge' in New South Wales (NSW) and 5'3" or 'broad gauge' in Victoria and all three in South Australia.[2]

Until 1950, the freight railways mainly serviced the ports; long distance interstate freight was minimal with coastal shipping the dominant mode. The Commonwealth[3] built and operated the standard gauge transcontinental railway from South Australia to Kalgoorlie in Western Australia, and a narrow gauge line (later realigned and standardized) as part of a link to the Northern Territory. Standard gauge connections were progressively installed between the 1930s and 1990s[4] to deliver a uniform gauge interstate network.

The ownership and development of the railways by the Australian states continued until the 1960s, largely protected from intrastate road competition though 'co-ordination' regulation.[5] During the early 1970s, however, these railway systems began to become a net cost to the governments, caused by the ending of protection, excess resources, high wage inflation and emerging road competition from larger trucks and better roads.

As this problem emerged, the Commonwealth Government proposed to the states that their railways be transferred to it, as a basis for the formation of a national railway system. In the event, only the railways of South Australia and Tasmania were transferred to the Commonwealth, to be joined with the Commonwealth Railways to form Australian National in 1974-75.

By the late 1980's the Australian railway industry was characterized by a series of independent state-based modal monopolies, with connections at the various state borders. Interstate freight movements, defined as "intersystem" traffics, were transferred between the state railway systems, including the Commonwealth-owned Australian National, according to agreed revenue and cost sharing formulas developed under the banner of the Railways of Australia (ROA) – an advisory body representing the interests of the Australian railway operators. This system was cumbersome, inefficient and inequitable and rail was continuing to struggle to compete with increasingly efficient road transport.

In order to improve the competitiveness of rail in interstate rail markets and to stem the significant financial losses the railways were incurring on intersystem freight, a national rail freight initiative was

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[2] Pockets of 2' and 2'6" gauge track were also constructed.

[3] The Commonwealth of Australia; i.e., Australia's federal government.

[4] In the 1930s between New South Wales and Brisbane, in the 1960s between NSW and Melbourne, in the early 1970s between Kalgoorlie and Perth in the west and Broken Hill and Port Pirie in South Australia and finally between Melbourne and Port Pirie via Adelaide in the early 1990s.

[5] Following a 1955 court case, rail was subject to fierce interstate competition in the Eastern States under a section in the Australian constitution which prohibits impediments to interstate trade.

established to create a single national rail freight operator to run integrated rail freight services between capital city markets. The National Rail Corporation (NRC) was created in 1992, as a government-owned corporation, from the "intersystem" businesses of each of the state railways, including Australian National. The Commonwealth and the States of NSW and Victoria were its shareholders. In addition to all of the interstate business, various assets (including terminals, motive power and rolling stock, but not the track) were also transferred to NRC.[6] Intrastate rail services continued to be operated by state railways.

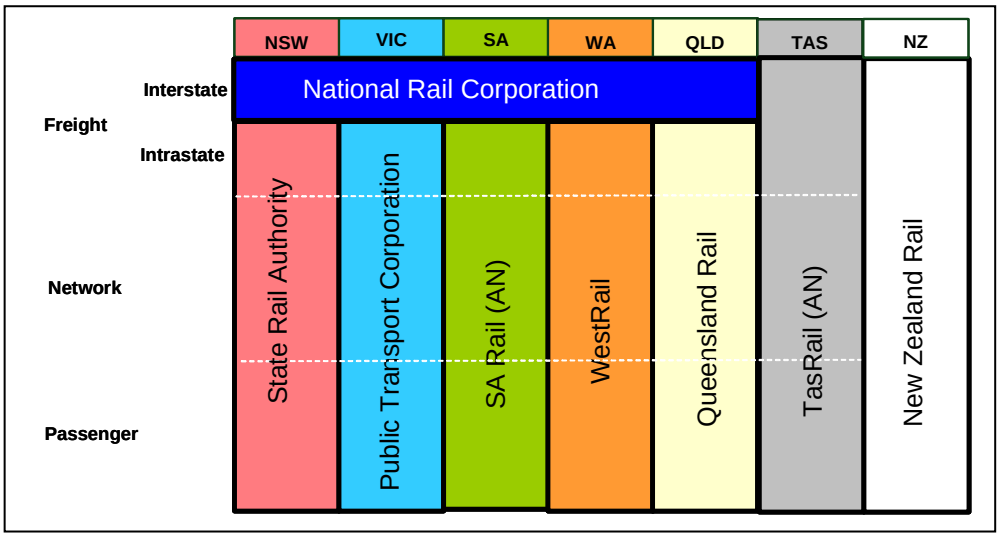
Separate private specialized railways were developed by mining interests in the Pilbara region of Western Australia, South Australia and in Queensland, and by the sugar industry in Queensland; these are not covered in this paper.

In New Zealand, the railways similarly played a key role in the nation's economic development with heavy restrictions on road competition. However, by the early 1980s the railways were becoming a significant financial drain on the economy and a radical reform program commenced. At the same time, trucking was largely deregulated, placing further financial pressure on the railways. The railways were corporatized in 1982 and were further restructured in 1990. From 1982/83 onwards, strenuous efforts were made to improve the railways financial position, through improvements in efficiency and rationalization of services: the workforce reduced by more than half from 1983 to the early 1990s. By then the railways were cash positive but still not profitable.

1.2 The Rail Industry in 1993

It will be useful to take a snapshot of the rail industry in 1993, prior to the commencement of rail privatizations in Australia and New Zealand. In 1993, most public railways were vertically integrated modal monopolies, typically with a mix of passenger and intra-state freight operations. Each Australian state railway retained responsibilities for the rail network within its borders. Interstate freight had transferred to NRC. The industry structure is illustrated in Figure 1-1. A map of the Australian and New Zealand rail networks is shown in Figure 1-2.

Figure 1-1. Structure of the Australian Rail Industry in 1993.



By 1993, there had already been plenty of reform under government ownership, although significant productivity gaps remained. The progress of reform is discussed further in Chapter 2.

[6] Assets were progressively transferred to NRC in return for equity. Functions, such as maintenance, that were initially performed by the state railways on behalf of NRC were charged to NRC at efficient cost, with any inefficiencies quarantined to the state railways. All functions had formally transferred to NRC after a 3 year transition period.

1.3 Rail Privatization and Concessioning in Australia and New Zealand

Since 1993, a number of rail privatizations have occurred:

- New Zealand Rail Ltd (1993);
- Australian National (1997);
- Westrail Freight (1998);
- V/Line Freight (1999); and
- FreightCorp and NRC (2002).

In addition, the private sector has been involved in a number of private concessioning arrangements:

- Melbourne rail passenger franchising – light and heavy rail franchising of urban rail and tram operations and country rail operations (1999);
- AustralAsia Railway Project – A Build, Own, Operate, Transfer (BOOT) project including construction of 1,400 kilometers of new railway track between Alice Springs and Darwin (commenced in 2001);
- Sydney Light Rail Project – a BOOT project for construction and operation of a 13km light rail system in Sydney (1996);
- Sydney Airport Rail Link – new stations and track connections to Sydney Airport (2000); and
- Brisbane Airport Rail Link – BOOT project for construction and operation of a new rail connection to Brisbane Airport (2001).

1.4 Objectives of This Paper

Each of the transactions will be reviewed in terms of the following:

- Specific details of the transaction including timing, payments made, parties involved, model adopted;
- Nature of the deal including degree of private sector participation and the rationale behind it; and
- Background and the operating environment.

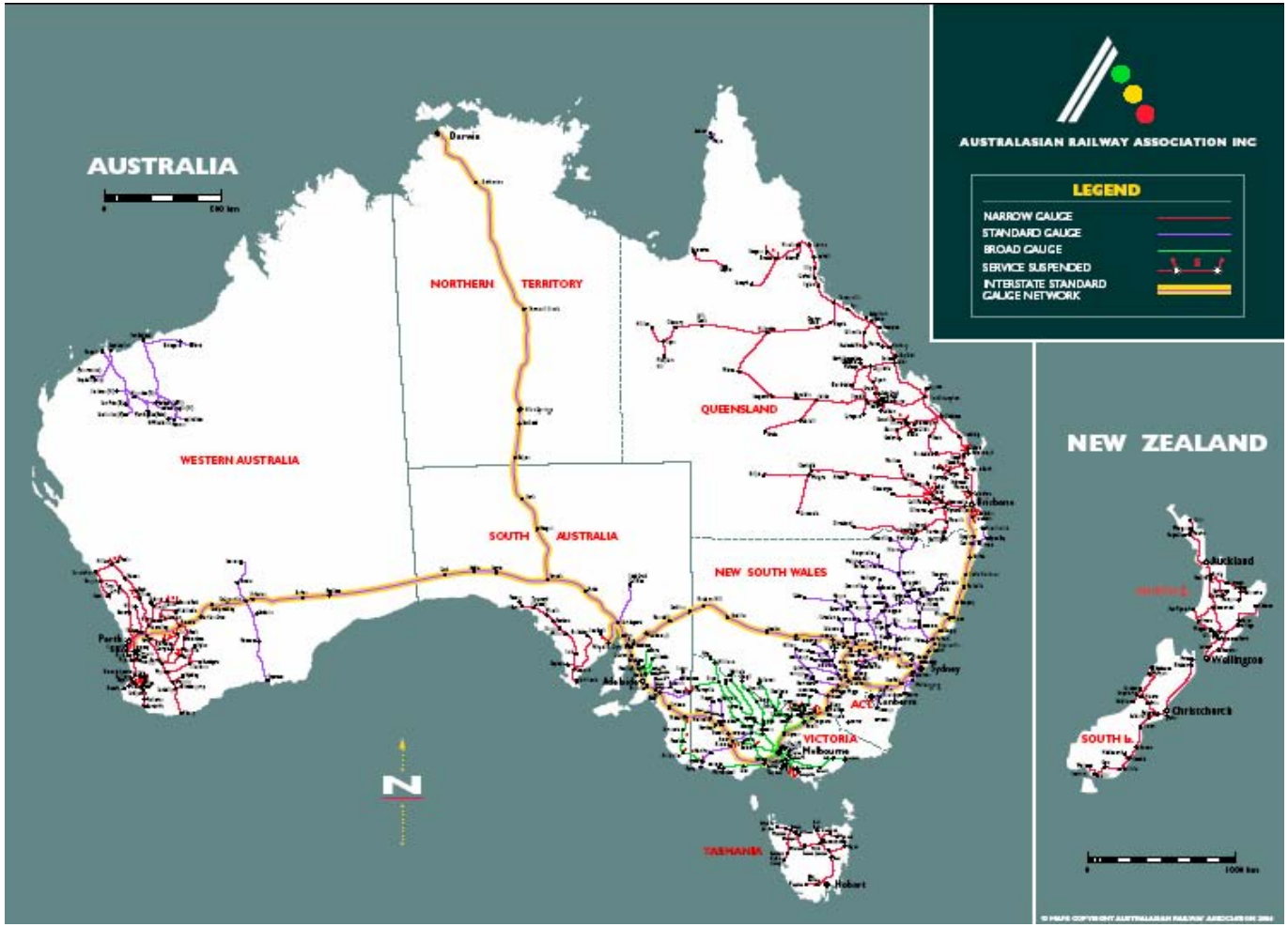
Once the background to each transaction has been established, each of the arrangements will be reviewed using:

- Quantitative measures before and after the transaction took place – productive efficiency, allocated efficiency, investment in the rail system, accessibility for users and financial performance; and
- Qualitative measures before and after the transaction took place – how smoothly the transition occurred, lessons learned and implications for the future.

While it is always difficult to compare like with like before and after privatization, improvements in productive efficiency are generally related to increased productivity and reductions in unit costs. Improvements in allocative efficiency are more difficult to establish but are generally related to more cost reflective pricing and service rationalization that eliminates loss making services. Improvements in service quality will also imply an improvement in allocative efficiency as distortions from relatively poor service quality (of rail) are removed. Investment is typically a key driver of dynamic efficiency and the ability of the rail businesses to innovate and to respond to changing customer needs.

Information for the different cases was from a variety of sources but there remain many gaps, usually because of the limited information that some of the companies choose to publicly release. The gaps have been partly filled by related information and informed judgment, but inevitably the treatment is not always as robust as we would like, and the treatment varies from one case to the next. However, there is enough information to cover the main issues relevant to privatization and to draw a number of conclusions and key findings.

Figure 1-2. Map of the Australian Rail Network.



2 RAIL REFORMS

2.1 Background to Reforms in Australia

Any analysis of rail privatization needs to be considered in the appropriate policy and industry context. Australia's railways, in the early 1990s and before, were characterized by poor profitability and performance. While some railways had significantly improved financial and operation performance through reforms under government ownership, others lagged well behind comparable best practice performance.

The Productivity Commission (1999) reported that in 1990 the productivity gap between railways in Australia and the US and Canada was significant, with Australian productivity performance 63 percent below the US and 52 percent below Canada. Although by 1997 the gap had been closing Australia's freight rail system still had a productivity level of only about half that in the United States (in 1997) and about 35 percent below that of Canada (in 1996). While these were very partial comparisons, and the methodology used may have exaggerated the gaps, clearly Australian rail productivity was well below international best practice.

In addition to the continued poor productivity of Australia's government railway systems, the railways were facing increasing competition from road and sea transport, particularly on longer hauls where railways had enjoyed a comparative advantage for some 20-30 years.

Five primary modes of freight transport exist in Australia: road, rail, sea, air and pipelines. Unlike North America and Europe, inland waterways are not a significant component of the transport system. While there is some competition between all the modes, the primary intermodal domestic competition tends to be between road and rail, with sea transport an important competitor between States only in select cases (for example, bulk minerals).

The total rail freight task in Australia is over half a billion metric tonnes with an average haul length of 275kms. Rail market share is around 25 percent of total tonnage and around 38 percent of total net tonne-kilometers as shown in Table 2-1.

Table 2-1. Total Domestic Freight and Passenger Task, 2001-2002.

	Road	Rail[1]	Air[2]	Sea	Total
Tonnes carried (millions)	1,664	568	167	52	2,285
Ntkm (billions)	141	156	225	110	408
Av. haul length (km)	103.5	275	1,352	2,106	178
Passengers (million trips pa)	Na	600[3]	30	189	Na

1. Rail TKM and Av distance are BTRE estimates based on train km.
2. Includes scheduled activity only (domestic and regional).
3. Estimated from ARA Australian Rail Industry Report, 2003.
NA = not available.
Source: BTRE Australian Transport Statistics 2004 unless otherwise stated.

About 83 percent of the task is bulk coal and ores. Table 2-2 shows the break up of the rail freight task by commodity (the numbers are not directly comparable with Table 2-1, coming from different sources and covering a different period).

Table 2-2. Break Up of Australian Rail Freight Task by Commodity (Million Tonnes).

Commodity	Commercial Freight Services[1]				Ancillary Services[2]		Total	
	Intrastate	Column %	Interstate	Column %		Col %		Column %
Top five bulk commodities								
Coal	226.1	71.3%					226.1	41.5%
Ore	11.5	3.6%			211.6	98.8%	223.1	41.0%
Grain	12.9	4.1%	0.3	2.4%			13.2	2.4%
Alumina	9.4	3.0%					9.4	1.7%
Bauxite	7.7	2.4%					7.7	1.4%
Other bulk traffics	43.0	12.6%	3.7	27.8%	2.6	1.2%	49.3	9.1%
Subtotal	310.6	100.0%	4.0	30.2%	214.2	100.0%	528.8	97.1%
Non bulk traffics	6.5	2.0%	9.3	69.8%	0.0	0.0%	15.8	2.9%
TOTAL	**317.1**	**100.0%**	**13.3**	**100.0%**	**214.2**	**100.0%**	**544.6**	**100.0%**

Source: ARA Australian Rail Industry Report 2003.
1. Services provided for hire and reward;
2. Services that are ancillary to a production task (for example, integrated with a mining operation).

Intra-modal competition for the transport of freight is most developed within the road transport industry, where there are relatively low barriers to entry and numerous competitors. With the recent relaxation of cabotage restrictions, competition between sea freight operators for coastal trade is increasing, and third party access is progressively providing further opportunities for on-rail competition.

Regulations which required certain commodities to be carried by rail were progressively phased out over a 30 year period between 1965 and 1995.[7]. There are few, if any, remaining regulatory restrictions which limit road transport's ability to compete with rail in intrastate markets and road has proven to be a highly effective competitor in most rail markets, including some bulk traffic, such as short-haul grain and coal. High capacity truck configurations, (for example, B-doubles and road trains[8]) have greatly boosted road productivity and now a significant proportion of the rail freight task, is road competitive (the exceptions being most coal and steel, ores, and longer haul grain).

There is another level of vigorous competition within the general freight transport market in Australia, and that is between freight forwarders, or transport logistics managers. These companies handle their customers' transport needs from origin to destination, utilizing multi-modal transport of the goods and often providing value added services such as warehousing, consolidation/deconsolidation. In some cases they also own and operate the actual means of transport on one or more legs of the journey, or they may subcontract the actual carriage of the goods entirely to third parties.

Rail had been losing market share in many of its traditional freight markets. In the interstate transport of containerized freight, the rate of growth in the volume of freight carried on road is about three times that for rail. In the transport of agricultural products (other than grain), livestock, fertilizers and cement, rail

[7] In 1965 in SA and 1972 in NSW.
[8] The term B-Double refers to a type of two-trailer configuration; road trains typically have three or more trailers.

had gone from being the dominant form of transport to, in most cases, a minor player. Additionally, rail was no longer a significant provider of non-urban passenger transport.

The rail passenger business in Australia covers both heavy rail and light rail, urban and non-urban. In total, about 595 million passenger journeys are undertaken each year, about 78 percent on heavy rail urban transport. Table 2-3 shows a break-up of passenger journeys.

Table 2-3. The Australian Passenger Task, 2002-2003.

		Light Rail		Heavy Rail				
Task	Year	Urban	Row Percent	Urban	Non Urban	Subtotal	Row Percent	Total
Passenger journeys (million)	2002/03	120.0	20.2%	466.0	8.92	474.9	79.8%	594.9
Passenger kilometers (billion)	2002/03	0.54	4.9%	8.26	2.36	10.62	95.1%	11.16

Source: ARA Australian Rail Industry Report 2003.

This lack of competitiveness of rail in the freight sector particularly led governments to seek alternative solutions to the management of their rail industry operations. The early moves to privatize firstly in New Zealand in 1993 and then in Australia (Australian National) in 1997 were endorsed by various industry studies. For instance, a 1999 report Revitalizing Rail: The Private Sector Solution (Smorgon Report), recommended that all Commonwealth and State Government rail freight operators should be privatized.

2.2 Market Reforms and Open Access

In April 1995, the Commonwealth, State and Territory Governments signed a suite of three agreements which together comprise the National Competition Policy (NCP). These were:

- The Conduct Code Agreement, which extended the anti-competition prohibitions in Part IV of the *Trade Practices Act 1974* to all businesses, including government-owned businesses;
- The Competition Principles Agreement, which set out the framework for a number of pro-competitive reforms to be undertaken by governments; and
- The Agreement to Implement the National Competition Policy and Related Reforms, which set out the financial arrangements for implementation of the reform agreements and related reforms in selected industries, incorporating payments from the Commonwealth to the States and Territories as both an incentive and an equitable sharing of the benefits of competition reform.

These Agreements committed governments to implement reforms which *inter-alia* included:

- Extension of the *Trade Practices Act (1974)* to State government businesses;
- Application of competitive neutrality principles to government business enterprises;
- Restructuring of public sector monopoly businesses; and
- Providing for third party access to nationally significant infrastructure.

Part IIIA of the *Trade Practices Act*, which ultimately gave effect to third party access to essential facilities, including railways deemed to be nationally significant, opened the network more generally to new operators and the ultimate lifting of state operational boundaries to rail operations. This legislation applies to all sectors of the economy; however, its principal application has been in respect of railways, gas pipelines, electricity grids and telephone lines.

Notwithstanding the alternative mechanisms used for establishing open access across the states, open access to railway lines is now established government policy in most jurisdictions (except Tasmania and New Zealand) to encourage on-rail competition and contestability. It has fundamentally changed the

competitive environment for rail transport with ownership of the rail property no longer a barrier to entry to competitors.

Open access has been applied to almost all rail markets, irrespective of the degree of inter-modal competition. Arguably the incremental competitive benefits from on-rail contestability will be small in many cases, particularly in light density regional markets, however, the view was that the market would determine the degree of sustainable on-rail competition and a comprehensive policy position on open access was preferred.

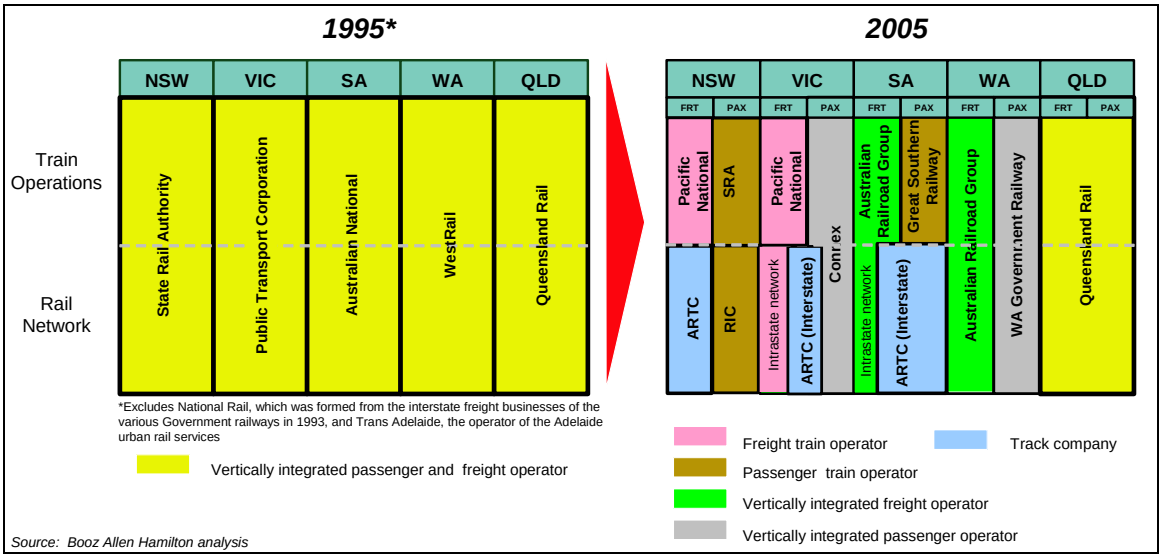
The rail freight market in Australia has become a national market with previous state-based operators crossing borders to compete in other states. Much of the early on-rail competition focused on existing rail markets, rather than attracting freight from other modes, but the entry of multi-modal operators into the rail market and the consolidation of railway operators (post-privatization) has meant that rail is now well positioned to compete for road freight business.

2.3 Structural Reforms

The way in which governments have supported the access principles when applied to railways varies substantially. Some have adopted structural models which strongly support open access, by vertically separating the 'above rail' businesses from the 'below rail.' This model was adopted by the Commonwealth (for interstate rail) and New South Wales, with the creation of the Australian Rail Track Corporation and the NSW Rail Access Corporation respectively.[9] Others (Queensland, Victoria, Western Australia and, when privatizing the intrastate freight businesses of AN, the Commonwealth) have retained an integrated structure with provision for third party access.

The Australian rail industry is now characterized by a range of structural models as illustrated in Figure 2-1 below.

Figure 2-1. Rail Industry Reform, 1995-2005.



2.4 Australian Rail Track Corporation

The Commonwealth and states reached agreement at the September 1997 Rail Summit to establish national arrangements for access by all operators to the interstate rail network. At the November 1997 meeting of the Australian Transport Council it was further agreed that the Commonwealth establish the

[9] The NSW Rail Access Corporation which subsequently became the Rail Infrastructure Corporation has recently been disbanded with the urban network reintegrated with the above rail operator (State Rail) to become Railcorp and the country network assigned to ARTC under a long term lease.

Australian Rail Track Corporation (ARTC) as a Commonwealth owned company under Corporations Law.[10] ARTC was incorporated on 25 February 1998 and its foundation asset was the residual Australian National track business (AN Track Access).

ARTC manages access and infrastructure development on the interstate track. It is required to:

- Provide efficient and seamless access to the interstate rail network;
- Enter into access agreements with track owners;
- Manage track maintenance and construction, timetables and train control on track owned or controlled by the company;
- Manage (in consultation with rail operators and track owners) a program of commercial and public funded investment for the interstate rail network; and
- Promote operational efficiency and (by working with other track owners) uniformity of operating, technical and safety standards and practices on the interstate rail network.

ARTC controls and provides access to the Victorian, NSW and South Australian interstate track and is responsible for interstate access by way of agreements with Western Australia and Queensland. Transfer of track from Australian National and lease arrangements for the Victorian interstate track were put in place on 1 July 1998. Lease arrangements with the NSW Government to manage and take financial responsibility for the interstate network in New South Wales (NSW) and separately to operate and manage the NSW country rail network were put in place in late 2004.

2.5 New Zealand Rail Reforms

For many years up until 1993, New Zealand had a single, fully-integrated, government-owned railway system. While around three-quarters of the railway's revenue was from freight, it also operated suburban passenger services (by rail in Wellington and Auckland, and by bus in a number of urban areas), some long-distance rail passenger services, and a profitable inter-island ferry service (carrying passengers and freight).

The railway started to come under financial pressure from the 1960s onwards, in large part as a result of improvements to the road system and the increase in truck, car and bus transport. This pressure was increased with the deregulation of freight haulage in 1983. In response, the railways were changed from a government department to a government-owned business corporation: very substantial staff reductions, efficiency improvements and rate reductions were made through the 1980s and into the early 1990s. Despite very significant gains under public ownership, privatization followed in 1993.

3 PRIVATIZATION TRANSACTIONS

3.1 Introduction

This Section covers the five major privatization transactions in the Australian and New Zealand rail sector, covering:

- New Zealand Rail Ltd (1993);
- Australian National (1997);
- Westrail Freight (1998);
- V/line Freight (1999); and
- FreightCorp and NRC (2002).

Each of the transactions is covered in turn below.

[10] A Corporations Law company has to operate with a higher degree of compliance with standard commercial reporting and accounting principles than a normal government business enterprise.

3.2 New Zealand Rail Ltd

3.2.1 Background

New Zealand consists of two main hilly/mountainous islands with a total population of around four million. Its early non-urban transport was initially by coastal ship, followed by railways, and much later by road freight.

The route length of the rail network is almost 4,000 kilometers, in narrow gauge (3 ft 6 in or 1,067 millimeters). The difficulty of the terrain is indicated by the 149 tunnels and over 2,000 bridges. Traffic densities are low by international standards with approximately 14 million tonnes and 3.8 billion NTK per annum of freight (average length of haul 270 kilometers.) Relative to railways internationally, the railway carries a low proportion of bulk commodity freight (mainly coal and logs), but substantial general freight (containers carrying manufactured and agricultural products, milk tankers etc). Freight accounts for approximately 75 percent of total system revenue and passengers for most of the rest.

Suburban passenger services operate in Wellington (approximately 10 million boardings per annum) and Auckland (approximately 3 million boardings), under contract to and subsidized by the regional councils; long-distance, tourist-oriented passenger services still operate on a few routes; and road/rail ferries (for passengers and freight) link the two main islands.

While some of the pioneer railways were private companies, by the early 20th century the whole railway was a government operation. It was successful for the first half of the 20th century (when it faced very limited competition in most markets), but started to experience problems as roads and road vehicles improved in the second half of the century. The competitive weakness of the railways was disguised somewhat by regulations that prohibited road haulage of most items beyond 40 miles, later extended to 150 kilometers; however this protection was lost in 1983, following the decision to deregulate in response to widespread customer dissatisfaction with poor service (long and unreliable delivery times, losses, damage, lack of responsiveness to customers etc.). Shortly before that, in the late 1970s, the method of charging trucks and buses for the use of roads was changed to reflect axle weights and distance, a move which enhanced the competitive position of the railways somewhat (and significantly improved the recovery of road costs from heavy vehicles).

From the 1970s onwards, the railways' financial position deteriorated and required financial injections by the government every few years. This led to pressure to change the railways from a government department into a government-owned business corporation. The 1982 corporatization (which created the NZ Railways Corporation) together with the pressures resulting from the deregulation of road freight led to substantial efficiency improvements through introduction of new technology, enhanced work practices and reduced staff numbers: staff numbers reduced from some 21,600 in 1982 to 8,400 in 1990. NZ Rail Ltd was created in 1990, and continued to improve asset utilization, enhance customer focus and transition the railways towards a multi-modal transport company. It was also required to sell its substantial local and long-distance bus services as going concerns to the private sector. Staff levels reduced further, to some 5,300 in 1993.

More detailed commentary on the developments in the NZ railways system up to the time of privatization is provided in an earlier report for the World Bank.[11]

3.2.2 Privatization Details

Despite the relative success of these reforms under government ownership, in 1993 the New Zealand Government decided to take the next step, to privatize the railway system. This decision was intended to lock in the gains that had been achieved, to enable the business to operate most effectively in a competitive market, to reduce financial risk (the railways were still not earning economic profits) and to raise funds for the government. It was consistent with the then–prevailing NZ Government view to divest itself of such predominantly commercial business enterprises.

[11] Kopicki, R, and L.S. Thompson. 'Best Methods of Railway Restructuring and Privatization.' CFS Discussion Paper Series, No 111, World Bank, August 1995.

The system was privatized[12] as a single entity – covering the freight and passenger businesses, including all infrastructure, buildings, rolling stock, inter-island road/rail ferries and other assets (only the land was retained in government ownership, but leased on a long-term basis – 80 years – to the new owner). The sale conditions imposed minimal obligations on the new owner, in part to maximize the sale price: no access provisions were stipulated, so the owner/operator had an effective monopoly over rail transport in New Zealand – but faced strong competition from road and/or sea-based transport across almost all its markets.

The businesses offered for sale were principally:

- Rail freight business, including road distribution;
- Rail passenger business, including Wellington and Auckland suburban railways and various long-distance passenger services; and
- The inter-island ferry service (which were much more profitable than the railway).

Key details of the sale transaction are given in Table 3-1.

Table 3-1. Key Transaction Details for NZ Rail.

Aspect of Transaction	Details
Date	1993
Purchaser(s)	▸ Consortium led by the US railroad Wisconsin Central, together with US financial group Berkshire Partners and a New Zealand investment bank Fay Richwhite. ▸ The company was rebranded as Tranz Rail and an initial public offering was made in 1996.
Transaction Cost	▸ NZ$400 million. (NZ$328.3 million cash and NZ$71.7 million assumption of debt).
Sale Commitments	▸ The government retained ownership of the right-of-way but a long-term lease of the land and sale of the track and other infrastructure assets gave the railway de facto ownership. ▸ The new owner inherited the high-level service obligations (relating to minimum threshold traffic levels) previously imposed on NZ Rail Ltd. No additional obligations were imposed on the new owner, even for passenger services (contracts and subsidies for the suburban passenger services were negotiated between the rail operator and the relevant regional councils).

3.2.3 Post-Sale

The Early Years

For the first few years the privatized railway was commercially successful. Volumes, revenues and productivity continued to improve, as illustrated below (note that the productivity improvements in the last two years mainly reflect outsourcing).

[12] The transaction, a competitive trade sale based largely on price, was managed by the Treasury Department.

Figure 3-1. Total Revenue (Net) Tonne Kilometers for NZ Railways.

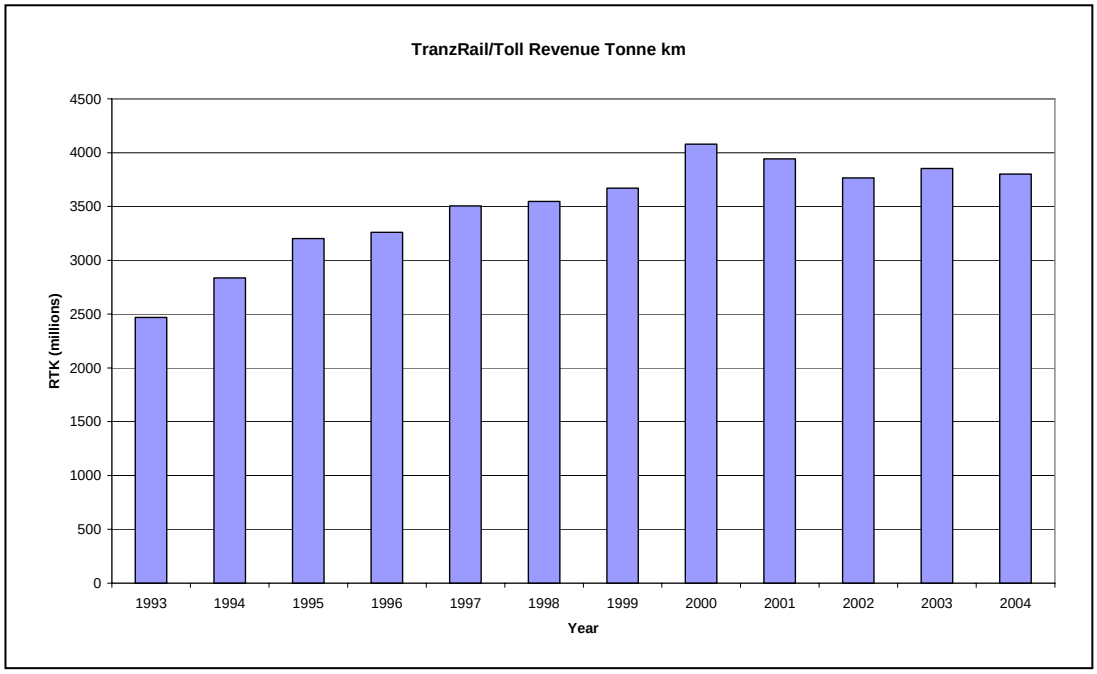


Figure 3-2. Total Revenue for NZ Railways.

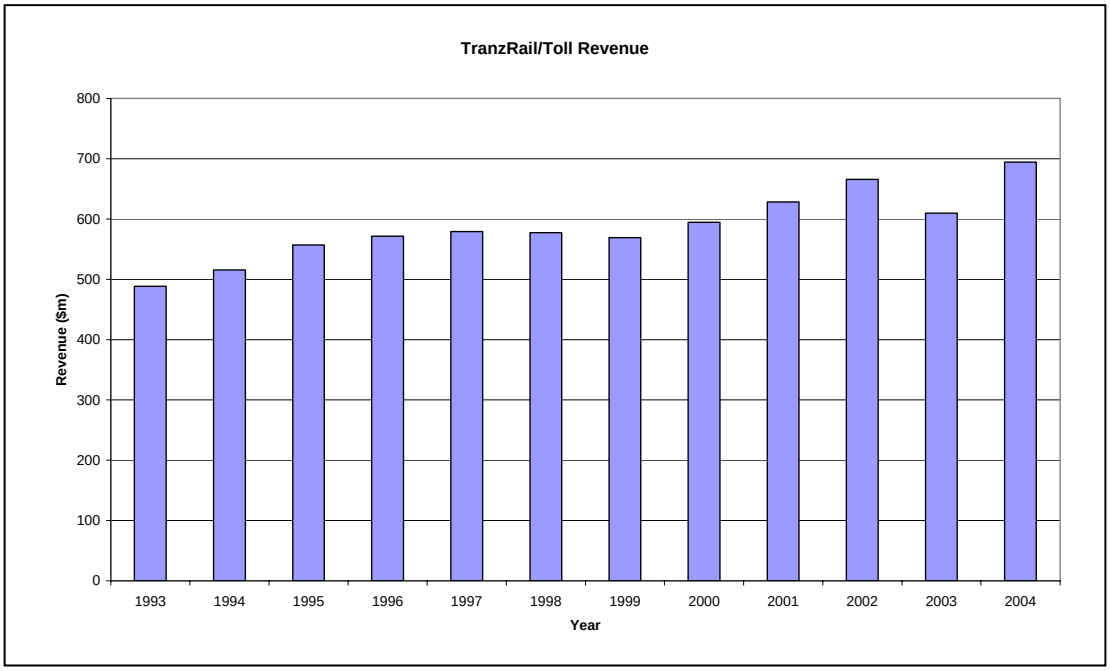


Figure 3-3. Total Staff Numbers for NZ Railways.

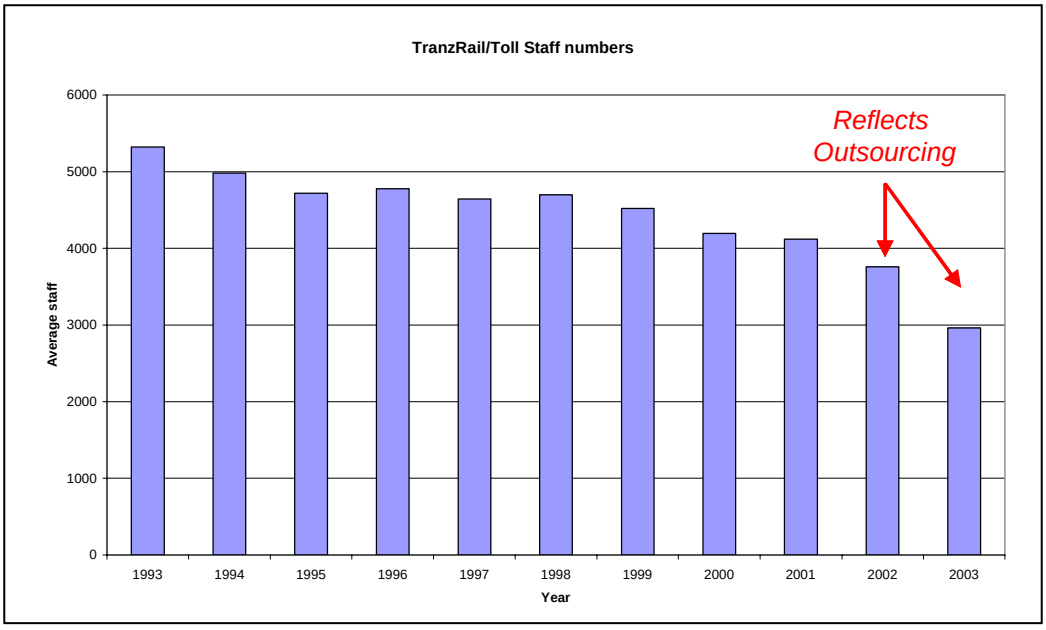
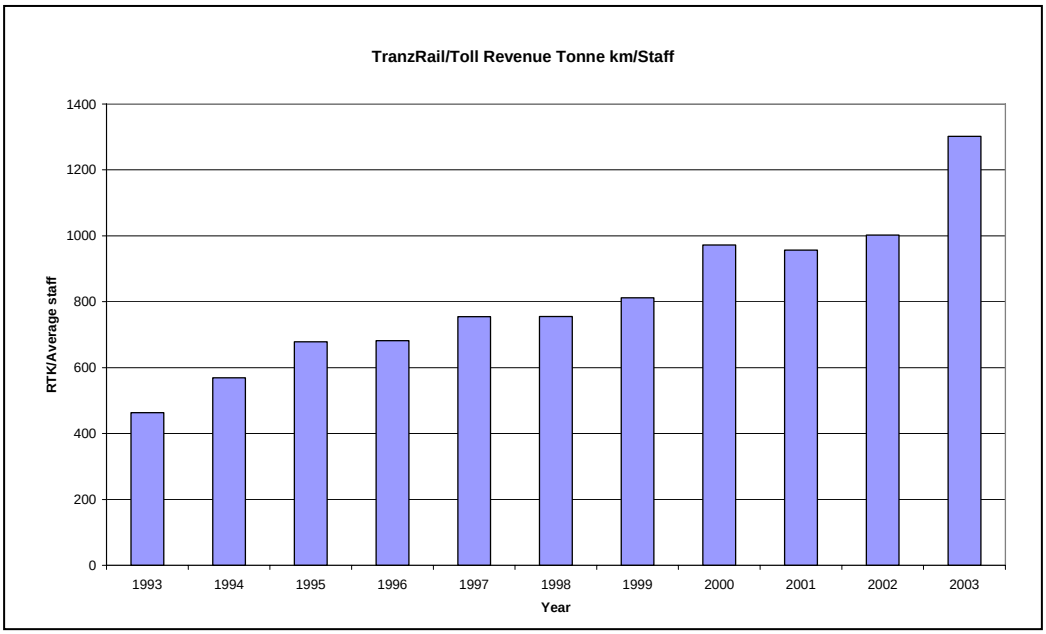


Figure 3-4. Total Revenue (Net) Tonne Kilometers / Staff Numbers for NZ Railways.



Total freight traffic remained much the same between the late 1980s and 1993 (between 8.3 million tonnes and 8.9 million tonnes per annum) but then increased steadily to 11.5 million tonnes by 1997 and 14.7 million tonnes by 2000. In part the upturn reflected the end of an economic recession in the early 90s, but in part was the result of the stabilization of market share: the rail share of the total freight market had declined from 20 percent to 14 percent between 1989 and 1994 but remained at about that level from 1994 onwards.

From 1993, the year of privatization, to 1996:[13]

- Labor costs declined from 46 percent of revenue to 34 percent;
- Labor productivity (000 revenue tonne kilometers per employee) increased from 464 to 682;
- Trips per freight car per month increased from 6.6 to 10.1;
- Revenue increased from NZ $489 million to NZ $572 million;
- Operating profits increased from NZ $54 million to NZ $111 million; and
- Net income almost doubled in the first two years to NZ $54 million, but then declined to NZ $49 million in 1996.

Key drivers behind the improvements (some started before the sale) were:

- Removal of government controls and interference;
- New private sector board and management;
- Staff reductions, for example, single drivers, removal of guards vans, multi-skilling, radio controlled shunting (the latter developed locally and exported to the US);
- Cessation of non-core functions, for example, staff housing, sale of non-core assets;
- Workshops reduced from 10 to 2;
- More larger wagons (56 net tonnes instead of 15 net tonnes), a new larger ferry, replacement of some old locomotives by newer and more powerful reconditioned locomotives;
- Faster turnaround of trains and ferries;
- Information technology, mechanization of track-work, improved signaling; and
- Internal cultural change, including a shift to greater customer focus.

Productive efficiency (unit costs) of the business improved through the 1980s and 1990s, through the period of corporatization and then privatization, and in part in response to the pressures imposed through the 1983 deregulation. Deregulation also forced the railways to improve their quality of service, and this trend was continued under the more customer-focus private owners. It also necessitated reductions in rail freight rates (improvements in allocative efficiency): real rates declined by about two-thirds from 1983 to the late 1990s.[14] Over this period the freight business moved from loss into profit (although the true position was obscured by limited investment in the infrastructure – see below).

'Allocative efficiency' related to long-distance passenger trains was arguably improved by a policy of refurbishing and upgrading the carriages to make them suitable for up-market "experience" tourism, and of rebranding and refocused marketing, which allowed for substantial real price increases while also achieving increases in passenger numbers. If data were available we expect it would show that the services moved from loss into profit.

In regard to the suburban passenger services, there were some improvements in productive efficiency in the 10 years prior to privatization, but relatively little change since (the easier improvements having already been made). Service levels have shown some modest improvements, while fares have varied little in real terms. However, national and regional governments have been placed in a difficult position in regard to these services: while the governments wish to retain the services, they have had to negotiate over asset replacement, new investment and subsidy levels with a monopoly supplier. The solution adopted in Auckland was for the government to repurchase the suburban rail network (including infrastructure and rolling stock), and for the Auckland Regional Council to contract out its operation to a new operator (Connex).

[13] The source for much of the data in this section is conference and other papers from Murray King, a former Tranz Rail manager and now independent consultant.
[14] Privatisation International Utility Regulation Series Volume 5.

Capital Expenditure

A reliable before-and-after data series of capital expenditure is not available because of the change in accounting policies on capitalized expenses. High levels of capital expenditure were incurred under public ownership in the early 1980s, principally on the uneconomic electrification of the more mountainous part of the main North Island line.[15] Absolute levels under private ownership were much lower than in those years, but were better focused on the efficiency-improving items noted above.

Most commentators (for example, the NZ Institute for the Study of Competition and Regulation Inc [16]) consider that the rate of capital expenditure over most of the period since privatization has been insufficient to retain the asset base in a long-run steady-state condition. Given the variations in accounting policies over the period, it is difficult to verify this view. It is almost certainly valid for the passenger operations, which have experienced very limited capital expenditure over the period since privatization. It is less clear whether it is valid for the freight operations. We understand that the infrastructure was generally in reasonable condition when sold. A 2002 consultant review for the NZ Land Transport Safety Authority concluded that "the rail network is generally 'fit for purpose' for current freight operations. [17] However, it is generally recognized that there is a need for investment to address a serious backlog of deferred maintenance, which is constraining the ability of rail to compete for more freight business in some areas."[18]

More Recent Experience

By 2002/03 the railway was carrying 14.8 million tonnes, some 75 percent more than in 1993. Its share of the total freight market had remained almost constant, at around 14 percent, over this 10-year period.[19] However, its share of import/export trade volumes declined: from 1996 to 2002 NZ's compound annual growth rate for exports was 8.3 percent p.a. while the railway's compound growth rate for freight was 0.3 percent p.a. Meanwhile the volume of heavy truck traffic was increasing substantially faster than GDP.

From about year 2000 onwards, Tranz Rail's financial position seriously deteriorated. Increasing debt and declining returns combined to undermine the company's value and sustainability, as illustrated in Figures 3.5, 3.6 and Table 3.2.

Figure 3-5. Tranz Rail Operating Margin.

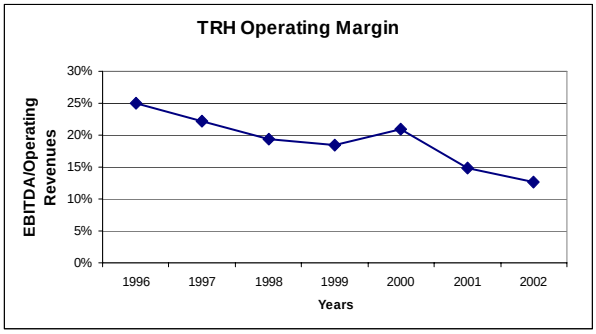
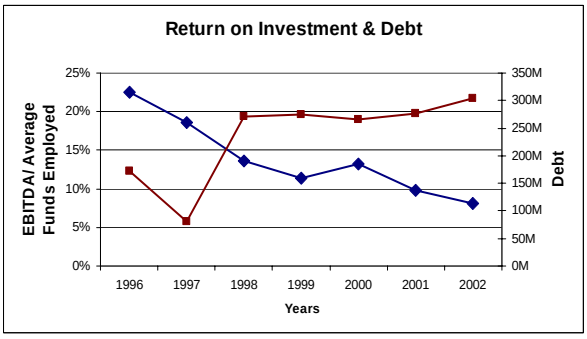


Figure 3-6. Tranz Rail Debt and Return on Investment



Source. TRH Annual Reports, TRH Web Site.

[15] The weak case for electrification depended on lower locomotive maintenance costs (since changed by improvements in diesel traction technology) and growing freight volumes which instead fell following the decision to deregulate road transport a year later. The government of the day attached importance to large energy and infrastructure projects of which this was an example; all of the projects turned out to be uneconomic.

[16] NZ Institute for the Study of Competition and Regulation Inc. 'The Privatisation of New Zealand Rail.' NZ Treasury Working Paper 99/100.

[17] Report by Halliburton KBR for NZ Land Transport Safety Authority, 2002.

[18] Report by Halliburton KBR for NZ Land Transport Safety Authority, 2002.

[19] NZ Ministry of Transport. 'Draft National Rail Strategy to 2014.' September 2004.

Table 3-2. Tranz Rail Key Financial Performance Statistics.

	1996	1997	1998	1999	2000	2001	2002	2003
Operating Revenues NZ $m [1]	546	557	554	552	573	607	574	579
Operating Margin (percent)	24%	21%	19%	18%	20%	14%	12%	15%
Interest Cover (X)	3.5x	7.9x	7.0x	2.6x	2.6x	1.3x	0.8x	na
EBITDA/Funds Employed	23%	19%	14%	11%	13%	10%	8%	na

[1] *Passenger and Freight (including Ferry) Operating Revenues.*
Source. TRH Annual Reports; TRH Web Site.

In 2003, after protracted negotiations, Tranz Rail and the NZ Government entered a Heads of Agreement for the transfer of the rail network back to the Government for a nominal fee. The Government would take over financial responsibility for maintaining and operating the network and Tranz Rail would pay access charges. The Government was not interested in getting back into train operations and the attendant commercial and financial risks but was prepared to take control of the infrastructure in the public interest.

Subsequently, Toll Holdings, a large and successful Australian freight and logistics group, acquired 84 percent of the stock and took management control of the company in October 2003. The company was renamed Toll NZ Ltd. Toll negotiated its own agreement with the Government, which involved an increased commitment from the Government for investment in the track and commitments from Toll for investment in rolling stock. The Government has committed to an investment of NZ$200 million over four years ($100 million for a 'catch-up' infrastructure renewal program and NZ$100 million for (as yet unspecified) network enhancements). The Government has since confirmed that the rail network is now in appalling shape and more than NZ$200 million would be needed and the government would not earn an economic return on the investment.[20]

3.2.4 Conclusions

The experience with the first few years of New Zealand rail privatization was positive in that it achieved marked improvements in productive efficiency and in customer focus. However the last five years or so, prior to its being taken over by Toll, were ones of deteriorating financial performance and, apparently, increasing maintenance backlog.

Factors contributing to this deterioration over the last five years or so include:

- The basic economics of rail in competing with road trucks for the carriage of non-bulk freight, in a situation of low/moderate traffic densities, short/medium haulage distances and a reasonably good road system. In such circumstances, rail revenues are barely sufficient to maintain the rail system in a steady state, never mind fund investment to improve or expand the infrastructure.
- Improvements in technology (for example, engines, transmissions and suspensions) mean that trucks have become relatively more efficient for general freight, which traditionally has accounted for much of New Zealand railways' business.
- Inadequate maintenance to sustain the business in the longer term (with capitalization of maintenance distorting short term earnings), leading to a downward spiral of deteriorating service, loss of revenue and further expenditure cuts.

The experience of the last five years would suggest that, in the current deregulated market, the medium/long term commercial viability of the NZ railway system in its current configuration is dubious. The viability of the system overall would improve if the Government were to significantly increase road user charges imposed on trucks (but noting that this would increase the costs of freight transport in general). However, in the shorter term, it has decided to contribute to the railway's commercial viability

[20] Reported in The Dominion, 16 June 2005.

by renationalizing and providing funding for the rail infrastructure network. Whether it will continue to subsidies the rail mode in this way in the longer term is so far unclear.

This initial funding injection plus the introduction of the new owner (with a successful Australian track record of profits and growth) provide some grounds for optimism that the commercial position of the rail business will improve compared to recent years. Toll is reported to have had, at an early stage at least, "a relatively optimistic view of the viability of rail in New Zealand."[21]

In our view, the counter-factual to privatization (i.e., continued public sector operation), would most likely have been less successful. It would have been difficult to continue (as the private owner did) the efficiency improvements and increased customer focus started in the late 80s/early 90s under public ownership. As the study 'The Privatization of New Zealand Rail'[22] said, "the position in 1993 was reached with rail as a public enterprise but with the commitment (by the Board and management) to privatization in place. This most likely represents the position of best commercial performance attainable as a public enterprise".

3.3 Australian National

3.3.1 Background

Following the transfer of its principal interstate freight operations to NRC in 1993, Australian National retained the intrastate freight and associated support operations in South Australia and Tasmania, and the interstate passenger services.

In 1997, the Commonwealth Government offered AN for sale, citing the continued loss making operations as a partial rationale. In media releases regarding the sale, the Government referred to financial risk and losses Australian taxpayers had been carrying. Over the preceding five years the losses were in excess of A$720 million, including a A$250 million loss in 1995/96 alone.[23]

Australian National was unbundled into four core business units, with three of the business units offered for sale:

- **Tasrail** - a vertically integrated rail operator providing freight haulage services in Tasmania. Assets include track infrastructure, rolling stock, terminals and a workshop. For an island of its size, Tasmania has a considerable rail freight network of 620 km of narrow gauge (3ft 6 in) track in operation (including a private line, Emu Bay, subsequently bought by Tasrail).
- **Passenger Rail** - operating the Indian Pacific (between Sydney and Perth), the Ghan (between Adelaide and Alice Springs – and now Darwin) and The Overland (between Adelaide and Melbourne).
- **SA Rail** - a vertically integrated rail operator managing all of AN's South Australian-based intrastate freight haulage. Assets include rolling stock, workshops, terminals and infrastructure maintenance services. Most of the South Australian country rail network was included under a long term lease[24].
- **AN Track Access** – interstate network assets, which were the foundation assets for the ARTC (see Section 2.4).

All businesses were sold without any ongoing subsidies or service obligations but with a variety of commitments set down for the new owners as detailed in the next section. In preparation for the sale,

[21] NZ Treasury Paper, 9 June 2003.

[22] NZ Institute for the Study of Competition and Regulation Inc. 'The Privatisation of New Zealand Rail.' NZ Treasury Working Paper 99/10.

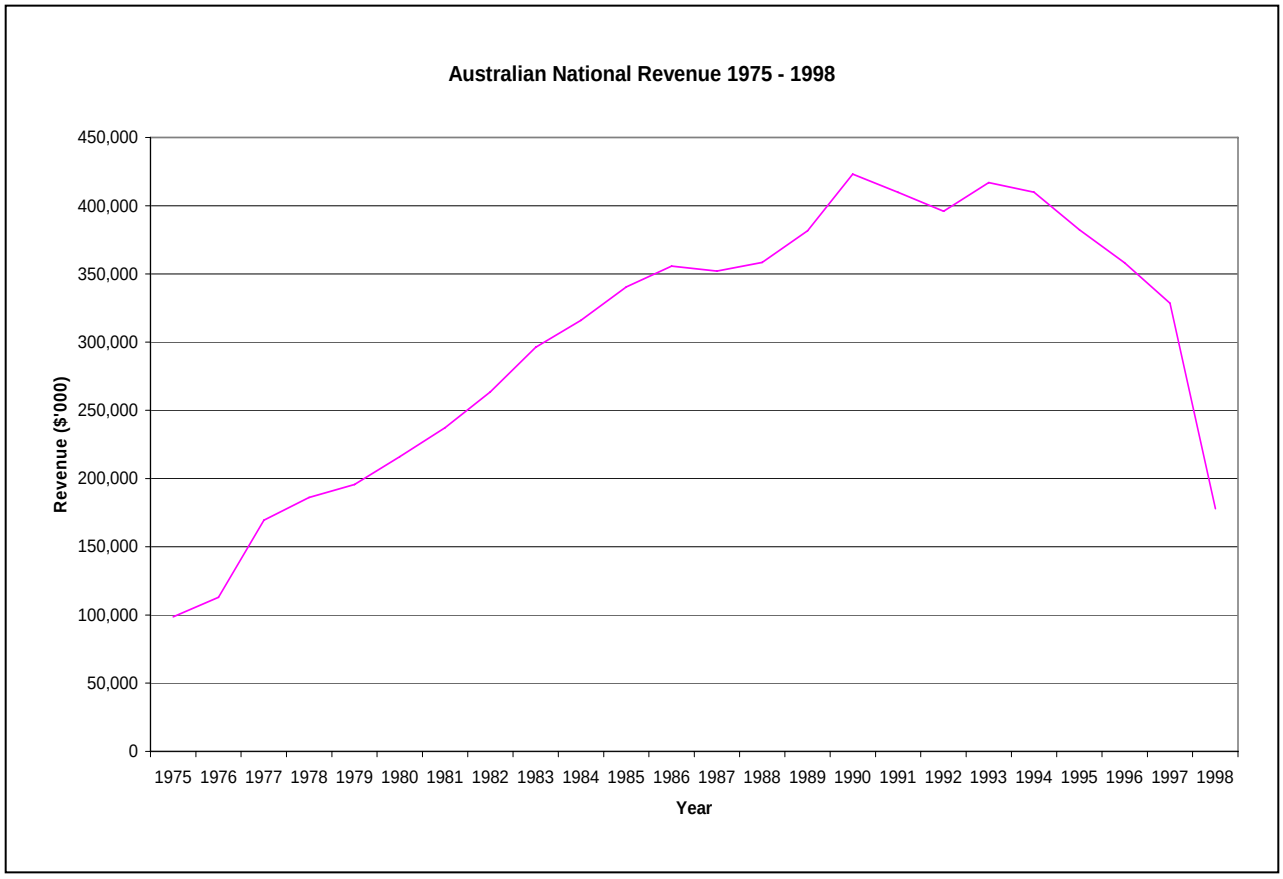
[23] This loss reflected, in large part, the misguided attempt by the residual AN business to compete with the newly formed National Rail Corporation, which was set up from the intersystem businesses of all the state railways, including AN itself.

[24] Control of the Leigh Creek line was given back to the South Australian Government as its electricity generation company was the sole freight customer on the line and AN charges had been an issue of contention with the SA Government.

the Government announced that the AN businesses would be sold free of debt. All of AN's debt and other financing obligations were either taken over directly by the Commonwealth or retired.[25]

Figure 3.7 below shows AN's revenue from 1975-1998 in the lead-up to privatization. Note the revenue numbers post 1994 reflect the transfer of AN's intersystem business to NRC.

Figure 3-7. AN Revenue.



[25] These competitive trade sales were managed by the Commonwealth Government. The process was subsequently criticised by bidders for inadequate or late documentation, which caused uncertainty about some of the assets that were included.

3.3.2 Details of Transaction

Table 3-3. Key Transaction Details for Australian National.

Aspect of Transaction	Details
Date	August 1997
Purchaser(s)	▸ Australian Transport Network (ATN) was the purchaser for AN's Tasmanian freight business for A$22 million. ▸ The Genesee & Wyoming Inc Consortium (GWI) were selected as the purchaser for AN's South Australian intrastate freight and maintenance business for A$57.4 million. ▸ The Great Southern Railway Consortium (GSR) was selected as purchaser of AN's interstate passenger business for A$16 million.
Transaction cost	▸ The three agreements resulted in combined payments to the Commonwealth of A$95.4 million, with the consortia contracted to spend a further A$97 million on capital expenditure programs for the businesses over the next four to six years.
Sale Commitments	▸ **Tasrail - Australian Transport Network (ATN)** - No ongoing taxpayer subsidy. - Commitment to maintain all existing operational lines for minimum of five years. - Commitment to spend A$20 million on locomotives, rolling stock and track over next four years. - Commitment to continue East Tamar workshop. - Commitment to continue all existing apprenticeships. - Introduction of cash and share bonus schemes for all employees. - Undertake feasibility of re-opening Burnie/Wiltshire/Scottsdale line to meet growing industry freight needs. ▸ **Passenger Rail - Great Southern Railway (GSR)** - Travel concessions will continue for those who currently receive them. - Not only commitment to maintaining the passenger services but also plans to extend the Indian Pacific to Melbourne, The Ghan to Sydney and improving The Overland's connection in Adelaide. - Continuation of The Indian Pacific route through Broken Hill. - Integration and development of these services as tourism/hospitality businesses, marketed to international tourists. - Commitment to A$14.3 million capital expenditure on business over next six years. - Head office to be maintained in Adelaide. - Commitment to a range of discount fares and aggressive marketing to increase patronage. ▸ **SA Rail - Genesee & Wyoming Inc (GWI)** - Consortium includes GWI and two Australian engineering groups, Clyde Engineering and Transfield. - Head Office to be retained in Adelaide. - Commitment to continue all existing apprenticeships and introduction of employee profit share. - Commitment of A$62 million capital expenditure on locomotives, rolling stock and track over next five years. - Port Augusta to become principal engineering hub in SA and existing operations expanded to include non-rail work. - Work with grain growers to maximize the efficiency of grain line operations but will maintain all existing operational lines for at least next five years and GWI will service all existing customers. - Will seek co-investment by customers to enhance profitability for customers.

The EBITDA for SA Freight varied between the two years prior to privatization (FY96 and FY97) between A$4.8 and A$7.7 million. Revenues were approximately A$55 million and A$60 million respectively. The EBITDA margin for these two years was 9 percent and 13 percent respectively. Based on a sale figure for SA Freight of A$57.4 million, this results in a EBITDA multiple of between 7.5 and 12.0 and a revenue multiple of around 1.0.

3.3.3 Post Sale

SA Freight

SA Freight was relabeled Australian Southern Railroad (ASR), a wholly owned subsidiary of GWA. The new management team made some immediate changes to reduce costs and increase the efficiency of operations. In December 1999, ASR entered into a five-year renewable service agreement with BHP Steel (now called OneSteel) to operate the rail network of BHP Whyalla steelworks, including the ore transported from mines.

Genessee & Wyoming was part of the group[26] that subsequently acquired Westrail Freight and consolidated the operations of ASR. Further discussion is provided in the next section dealing with Westrail Freight.

TasRail

The business (the Tasmanian freight business and a long term lease of the rail network) was sold to the Australian Transport Network (ATN) – a group related to the then owners of New Zealand railways, including Wisconsin Central - in 1997 for A$22 million. The price reflected the small size of the railway, a history of losses, and the run down state of much of the infrastructure and rolling stock.[27] In 1998 ATN bought Emu Bay Railway, a private railway that served mineral deposits on the West Coast of Tasmania. The only other operators now are of the heritage type.

Subsequently the Wisconsin/ATN group sold Tasrail to Pacific National, owned by large freight and logistics companies Patrick and Toll (see separate section). These firms are active in shipping services to Tasmania (Patrick) and in local container services (Toll). It was sold in February 2004 for an undisclosed sum, estimated to be of the order of $13 million – considerably less than it sold for in 1997.

Normally the distances in Tasmania, where the maximum rail journey is of the order of 200km, would not favor rail transport. However, the railway has served several traffic niches:

- Logs and woodchips;
- Cement, a short but relatively high volume run from the works to the port;
- Coal, from a mine to customer industries elsewhere in Tasmania;
- Newsprint, from a plant in the south to ports in the north, and hence to mainland Australia; and
- “Land bridge” container traffic shipped from the Australian mainland to the north of Tasmania and then railed to the main city, Hobart, in the south.

Recent data is not available but we understand that these items account for most of Tasrail’s traffic. Other traffic included the Emu Bay minerals and logs. Tasmania has extensive and growing timber production, but the increasingly dispersed locations do not favor rail transport. There have been discussions about how log traffic could be increased, for example by line extensions or improved loading facilities.

Total traffic prior to privatization was of the order of 2 million tonnes (400 million ntk) per annum. Traffic increased substantially under ATN due to improved customer focus by the railway (helping encourage growth in container traffic) and to external factors – the establishment of the newsprint plant, expansion at the cement works, and the relative decline of the southern port (Hobart). Under ATN the railway made the first profit in its 120-year history.

ATN reduced staffing levels (in part through driver-only operation and radio controlled shunting), improved communications and train control, upgraded parts of the track, brought in reconditioned

[26] Also included Wesfarmers, a major Australian industrials group.

[27] In some respects the price was remarkable given that there had been serious consideration given in the 1970s to closing the entire system.

locomotives from elsewhere, improved the company culture so it was more customer-oriented, and improved day-to-day operations so that service was more efficient and reliable. The industry view was that it had become particularly efficient for a railway of that type. Although data is not published, it may be concluded that these changes, combined with the increase in freight volumes, resulted in a large improvement in productive efficiency.

Investment in the Rail System

Under public ownership Tasrail was struggling to recover from almost terminal collapse in the 1970s. At the time of privatization most of the rolling stock and some of the infrastructure was in poor condition. ATN upgraded some of the infrastructure and most of the rolling stock, but we understand that substantial investment will be required in the coming years if the railway is to survive in the longer term. Although lightly used railways such as Tasmania's can continue for long periods with low levels of maintenance to infrastructure that, while not in top condition, is "fit for purpose", eventually refurbishment of parts of it, (for example, bridges) becomes essential. In Tasmania there is also a case for improving parts of the infrastructure, (for example, tight curves and unreliable signals) that constrain efficient operations. It is not clear whether the new owners will generate enough extra traffic to justify this level of investment, so questions may arise about targeted government subsidies and/or further line closures.

Conclusions

The initial impact of privatization in the late 90s was highly favorable – improved operations, improved customer service, "new" reconditioned locomotives, other refurbishment, increased traffic, and profits. Government officials at the time were impressed, and spoke of the transformation of a moribund railway.

There are now doubts about how sustainable this success will be in the long term because the railway is not generating enough surplus to cover long term renewals. However, its purchase by Australia's two largest multi-modal national freight forwarders (Toll and Patrick), already prominent in Tasmania, indicates that container traffic at least may continue to grow. There are also plans for a large new pulp mill which may increase the amount of log traffic on the railway.

Thus the ability of the railway to maintain its assets will improve, but there still may be pressure for subsidies from the government, which would like Tasmania to keep its rail service; such subsidies will presumably be targeted at facilities that would allow the railway to further increase its revenue.

3.3.4 GSR

Great Southern Railway (GSR) operates long distance passenger trains across Australia, with other operators providing track and hook-and-pull motive power. The business was privatized in 1997 for A$16 million and is now wholly owned and operated by Serco, a British multi-service company.

GSR currently operates three long-distance services across the country, offering the only passenger rail services between the east and west coasts of Australia. With the extension of the track from Alice Springs to Darwin in 2004, the GSR extended the Ghan to operate between Adelaide and Darwin. Post privatization, the Ghan had also been extended to Sydney by linking in with the Indian Pacific service ex Sydney. These services are low frequency, high fare, "icon" tourist trains for "once in a lifetime" trips. GSR's passengers are understood to be mainly mid to high income, middle aged to elderly, international and Australian tourists. Little data is published, including passenger numbers. However, it is known that passenger volumes since the privatization have increased steadily on all three services.

Serco's 2003/04 Annual Report states that GSR's yearly passenger numbers, revenue and profit reached another peak in 2003/04.

The increase in passenger numbers has been achieved with a reduction in staff, with surplus labor removed post-privatization. Significantly, the private operator was also successful in re-classifying and re-designing on board job roles into tourism industry positions rather than rail operations – achieving more flexibility and lower average cost.

Investment in the Rail System

Little hard information is available, but it is understood that there was substantial investment, relative to the small size of the operation, to refurbish and upgrade carriages after privatization.

Conclusions

From the limited information available, it appears that GSR has been successful in sustaining the interstate passenger business post-privatization without subsidies from government. The service is largely the same configuration as pre-privatization other than the extension to Darwin following construction of the new line and interconnections between the Ghan and the Indian Pacific.

3.3.5 Conclusions

The AN rail privatization process has been a successful one with each of the component businesses looking stronger today than at the time of privatization eight years ago. Separating the passenger services from freight services allowed a specialized and tourism focused rail operator to take on the marginal passenger services and successfully sustain them without subsidy. Privatising the SA freight and Tasrail services separately allowed the railways to be consolidated with different railway companies from other states,[28] creating greater critical mass, efficiencies and access to funding and expertise that would have been achievable had they stayed in public ownership as small stand-alone regional operators.

3.4 Westrail Freight

3.4.1 Background

Western Australia's public rail service had its origins in 1877 as the Department of Works and Railways. This became West Australian Government Railways (WAGR) in 1890 — a name that persisted for almost a century.

WAGR became Westrail in 1975 and continued to manage both passenger and freight rail services. Westrail continued to reform its operations throughout the 1980s and was probably the most efficient of the government owned railways in Australia, despite it retaining its status as a "Commission" under the direct control of the Minister for Transport. Part of the rationale for the sale however was to "lock in" and add to the gains that had already been made under government ownership, and part was changed political thinking (as elsewhere in Australia and New Zealand) that no longer saw business operations such as freight railways as core government activity.

Prior to the sale of the freight business, Westrail was restructured into two operating units, Westrail Freight and the urban passenger operator. The sale of the freight business also included the Westrail name which necessitated a name change of the public entity from Westrail to the Western Australian Government Railways Commission (WAGRC).

In 2000, Westrail was offered for sale as a vertically integrated intrastate rail freight operation. The sale and lease of Westrail Freight included:

- The sale of WestRail Freight's existing business including customer contacts;
- Sale of WestRail Freight's assets and liabilities including rolling stock, terminals, maintenance facilities and other associated assets;
- A Lease Agreement which provided the Purchaser with the right to use Corridor Land and Leased Railway Infrastructure on Corridor Land for railway purposes, for a term of 49 years; and
- The sale of all the shares of "StaffCo" – a special purpose company which employed Westrail Freight employees at completion of the sale.

[28] The Tasmanian railway is now owned by companies that have shipping and logistics links with Tasmania; the South Australian railway is now owned jointly with the railway in an adjacent state, Western Australia.

The freight network included in the sale comprises around 5,300 kilometers of track in Western Australia. A legislated open access regime was put in place at the time of the sale that reflected market reforms elsewhere across the country.

Subsequent to the sale of the freight business in July 2003, the WAGRC ceased to exist and the urban railway was absorbed into the Public Transport Authority (PTA). The PTA was formed with the goal of providing a passenger transport system that encompassed passenger rail, bus, ferry and school bus services.

3.4.2 Transaction Details

Table 3-4. Key transaction details for WestRail.

Aspect of Transaction	Details
Date	June 2000
Purchaser	▸ Australian Railroad Group (ARG).[29] ▸ ARG is a 50:50 Joint Venture between Wesfarmers and Genesse & Wyoming. WestNet Rail was established as a wholly owned subsidiary of the Australian Railroad Group to control and manage the freight railway track and associated infrastructure. ▸ WestNet Rail provides access to its tracks for the above-rail operations of ARG in Western Australia, and for other above-rail operators under access agreements negotiated with WestNet Rail.
Transaction Cost	A$585 million
Sale Commitments	▸ Complete the grain line upgrading program (started in government ownership). ▸ Upgrade certain regional lines, including the Esperance line.

WestRail Freight's EBITDA was in the order of A$110 million in three of the five years (1996-2000) preceding its sale. However, in the two years immediately before its sale, this dropped to around A$94million. This was a function of both decreasing revenues in 1999, and increased costs in 2000. It achieved EBITDA margins of around 35 percent-40 percent, however, this was declining in later years.

Over the period leading up to privatization (1997-2000), WestRail's key statistics were as follows:

- Revenue - around A$259 million and declining
- Revenue/NTK - 4.2 c/ntk and declining;
- Revenue/tonne -A $8.13/tonne and declining; and
- Tonnes - 31 million and increasing.

The data suggests that although WestRail's freight task was increasing (tonnes hauled had increased from approximately 28 million in 1997 to 31 million in 2000), their operating margins and revenues were generally decreasing. There is a corresponding increase in costs across the period of analysis. This may point to a number of operational factors including increased maintenance costs and decreasing efficiency.

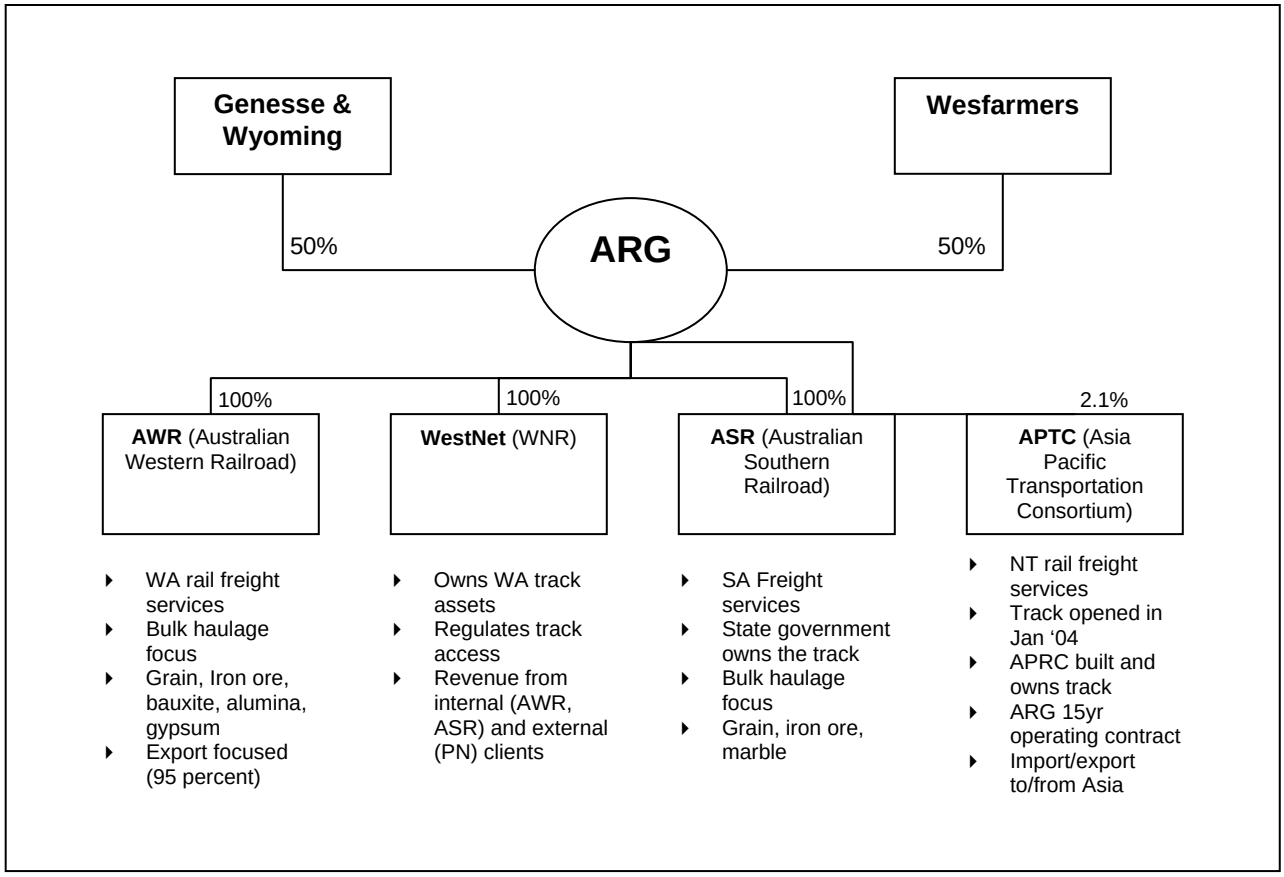
Referring to a sale price of approximately A$585 million, an EBITDA multiple of approximately 6.2 was achieved and a revenue multiple of around 2.2.

[29] Other bidders in this competitive trade sale included Rail America (which at the time owned the Victorian freight railway) and Barclay Mowlem, an engineering group. The main criterion, subject to the conditions in the table, was price.

3.4.3 Post Sale

The Westrail freight business was combined with the other Australian rail assets of Genesee and Wyoming, (i.e., the SA Freight business) to form the Australian Railroad Group (ARG). ARG now comprises four key assets as illustrated in Figure 3.7. ARG has approximately 1,000 employees. The outsourced track maintenance activities put in place pre-privatization have been continued, albeit with a consolidation of suppliers. It is not clear the extent to which costs have continued to reduce, as the railway was already reasonably efficient prior to privatization.

Figure 3-7. Australian Railroad Group Operating Structure.



Revenues for the 2003/04 year were above the previous year due mainly to higher grain volumes in Western Australia and South Australia, higher iron ore volumes and a new contract in New South Wales.

Pre-tax earnings were also above the previous year due to increased revenue, an improved incident and safety performance, partly offset by an increase in fuel prices and establishment costs for new contracts.

Wesfarmers does not publish individual financial results regarding the Australian RailRoad Group. It forms part of their 'Others' segment which includes Forest Products and Gresham Partners Group Limited. As such, any examination of segmental financial statistics would be difficult to attribute to ARG.

Deutsche Bank (2004) cites an expected 20 percent increase in revenues in FY04 due to a record harvest in 2004 following drought in 2002/03. It is unlikely that this will be exceeded in FY05 particularly due to below average grain harvests. In FY06, it is expected that growth will rebound to around 7 percent.

ARG has typically had pre-abnormal EBIT margins of 22-24 percent in a non-drought year, falling to around 20 percent in the drought year of FY03. Going forward, assuming non-drought conditions, some minor margin improvement is expected on the back of increased rail volumes (better asset utilization) and reduced accident costs reflecting the introduction of monitoring technology.

Table 3-5. Australian Railroad Group Operating Statistics.

ARG	2001	2002	2003	2004	2005	2006
EBITDA (A$ million)	105	112	112	131	137	148

Source. Deutsche Bank Estimate.

Table 3-6. Consolidated revenues of ARG 2002 - 2004 (US$ millions).

USD'000	2002	2003	2004
Operating Revenue	211	250	334
Operating Cost	161	194	266
Depreciation & Amortization	17	23	27
EBITDA (calculated)	67	79	95
EDITDA margin	32%	32%	29%

Source. Genesse & Wyoming Annual Reports 2004.

The data suggests that ARG's EBITDA margin is around 30 percent for the three years of analysis. This is well in excess of the margins being achieved by SA Freight but much lower than the margins being achieved by WestRail just prior to its sale.

Due to the inclusion of other revenues in the Australian Railroad Group's financial data (SA Freight, see section on Australian National), it is not possible to make a direct comparison between ARG and the performance of WestRail pre-sale. It is, however, possible to note that, since 2001, after the sale took place, ARG's EBITDA has been increasing steadily. This is in direct contrast to WestRail whose margins and operating statistics appeared to be in decline at the time of sale.

A rough comparison could be drawn between the commercial performance of Westrail Freight and SA Freight before their sales and after the sale as set out in Table 3-7. Revenues have grown significantly, albeit with a lower average margin, no doubt reflecting in part better grain harvests.

Table 3-7. Comparison of Pre- and Post-Sale EBITDA.

Measure	SA Freight+Westrail Freight	ARG (2004)	Percent Change
Revenues	~ A$330m	~ A$459m[1]	+38%
EBITDA	~ A$117m	$131m	+12%

[1] *Translated at US$0.67 to the A$.*
Source. ARG data from G&W US statistics.

3.4.4 Conclusions

The Westrail sale can be considered successful with the privatized entity ARG consolidating South Australian intrastate freight operations, winning the contract to act as rail operator on the new AustralAsia railway (Tarcoola to Darwin) and winning freight contracts in New South Wales. The group is profitable with a growing EBITDA line and one of the three major freight rail companies currently

operating in Australia. Declining margins probably reflect the competitive pressures of open access rather than any cost or service issues.

3.5 V/Line Freight

3.5.1 Background

V/Line Freight was the main freight railway in the state of Victoria. It linked grain, cement, minerals and container customers in Victoria and southern New South Wales with the ports, and operated a limited number of inter-state freight and hook-and-pull[30] services. Prior to sale, V/line Freight was an operating division of the Victorian Public Transport Corporation (PTC). The PTC also operated urban trains, light rail and country passenger service.

The main commodity carried was grain, whose quantity varies substantially from year to year because of the weather - though there is an upwards trend due to improving farming techniques. Thus the results for any one year are not necessarily a good guide to the health of the business. V/Line Freight's commodity mix at the time of sale (fiscal year ending June 1999) is shown in Table 3.8 below.

Table 3-8. V/Line Freight Commodity Mix (1998-99)

	Revenue A$ million	Tonnes (million)
Grain	56	3.2
Industrial products (petroleum, stone, cement, gypsum, logs)	12	1.1
Containers (mainly fruit, rice and paper)	33	1.6
Parcels	17	0.1
TOTAL	**118**	**6.0**

The Government decided to privatize the freight business because it was a separate operation (from passengers), the Government did not consider that it was a core function to own railways, it wanted to shed the financial risks, it considered a good private owner would operate the railway more efficiently, and it wanted the possibility of on-rail competition. The railway's management had frequently stated that it could do better if detached from the passenger services.

The Victorian rail network was initially separated from train operations and placed into a government authority (VicTrack). The original intention was to privatize V/Line Freight as an above rail operation only. However, after gaining feedback from the market that they would realize a higher price if they sold the track and train operations together, the Government decided to offer V/Line Freight for sale as a vertically integrated regional freight operator. The track (3,764 route km plus 454 kms of lines not in use) was leased for 45 years, with an implication of renewal after that.

Prior to the sale the Government put in place a subsidy arrangement for V/Line Freight's less-than-container-load (LCL) business (FastTrack). The subsidy payments were declining over a three year period before being eliminated (however, the Government has subsequently negotiated several extensions).

The Government also put in place access agreements for its passenger services, which generated a A$25 million year revenue flow from country passenger trains for the use of V/Line Freight's track.

[30] Hire of locomotives and crews with customer owned wagons

3.5.2 Details of Transaction

Table 3-9. Key Transaction Details for V/Line Freight.

Aspect of Transaction	Details
Date	1999
Purchaser	▸ RailAmerica, an American short-line operator.[31] ▸ Renamed Freight Victoria and subsequently Freight Australia.
Transaction Cost	A$163m
Sale Commitments	▸ There were few obligations other than to maintain tracks used for passenger trains to a defined quality index, to provide access to other operators, and a "use it or possibly lose it" provision on individual lines. ▸ There was no obligation to maintain non-passenger lines to any particular standard, in order to keep the government out of freight rail decisions, and to avoid constraining line rationalization or the downgrading of low-use lines.

At the time of sale, V/line Freight revenue was around A$118 million on a freight task of 6 million tonnes. The business employed around 750 staff and EBIT was around a A$5 million loss. The sale price reflected a revenue multiple of around 1.4.

3.5.3 Post Sale

We understand that the commodity mix has remained similar since the sale, but with a moderate relative increase in commodities that the privatized railway sought to expand, notably containers, logs and cement, and declines in uneconomic services (parcels and petroleum). It also increased its grain catchment area in southern New South Wales.

Total revenue almost doubled from 1999 to 2001 from A$118 million to A$207 million, and net tonne kilometers increased 59 percent from 1.6 billion to 2.6 billion. This was partly explained by an exceptional grain harvest (4.9 million tonnes carried, compared with about 3 million tonnes in an average year), new access revenue for passenger trains, and new interstate operations which were priced lower than competitors.

Profit before depreciation and tax (EBITDA) over that period rose from around – A$12 million in 1998 to over A$53 million in 2001, which was reported by the parent as profit of US$9 million. However, losses were made in the two following years when a drought severely reduced grain production,[32] with revenue reduced 42 percent in 2002 and a further 21 percent in 2003. Over the period, RailAmerica reported losses of US$1.7 million in 2002 and US$10 million in 2003.

Upon privatization the new owner cut staff by 30 percent - indeed part of its payment of A$163 million was compensation to the state for redundancy payments. Part of this reduction was offset by staff increases later. Operating costs per net tonne kilometer declined from 1999 to 2001 by 18 percent from 4.5 cents to 3.7 cents, NTK per employee increased 50 percent from 2,600 to 3,900, and revenue per employee increased from A$168,000 to A$301,000, though some of this was the effect of a bumper grain crop.

Investment in the Rail System

Freight Australia made significant investments in the existing rolling stock (A$36 million) and track and infrastructure (A$50 million) in its first three years. It:

- Converted 700 wagons to carry heavier weights and introduced new wagons;

[31] The other final bidders were Australian Transport Network, a group that included Wisconsin Central and Tranzrail and Genesee & Wyoming. The sale was managed by a specialist unit within the Department of Treasury and Finance. It was a competitive trade sale with prequalification and shortlisting. The main criterion was price.

[32] Severe droughts heavily reduced grain yields from 3.7 million to 1.9 million tonnes in Victoria.

- Upgraded rice wagons to improve capacity and safety;
- Re-powered and re-equipped existing locomotives;
- Re-opened a previously dormant route; and
- Introduced more container and logging wagons.

Freight Australia contributed US $40 million (approximately A$52 million) to capital infrastructure upgrades in 2003 and 2004.

A curious aspect of rail infrastructure in Victoria, a legacy from its colonial past, is that is has two gauges: 5ft 3in (broad gauge, from Ireland) and 4ft 8½in (standard gauge, from England). Different parts of the Freight Australia network have these different gauges, but generally there is one gauge radiating from any particular port and the railway copes well – some locomotives can have their bogies changed overnight, a major grain depot at an important intersection between the gauges can transfer grain between trains on the two lines, etc. The Government has initiated a program to convert some of the lines to standard gauge, though earlier studies suggested that this was uneconomic (significant cost, minor benefits). However notwithstanding the access regime, the broad gauge acts as a barrier to entry for much of the network because other railways do not have suitable rolling stock (apart from a small amount in neighboring South Australia).

3.5.4 Conclusion

The Freight Australia business was highly susceptible to the Victorian grain harvest and the company tried to expand by bidding for the much larger railway that is now Pacific National, (i.e., the former NRC and NSW Freightcorp) in 2001. After just losing that bid and a bid for Westrail, it faced stronger competition and its future as a regional railway was questionable.

RailAmerica sold Freight Australia to Pacific National in 2004 for A$285m. Freight Australia is now part of Pacific National and is no longer a separately identifiable entity. The sale price represented an increase of around 70 percent on the privatization price of A$167 million, presumably reflecting an improved revenue base, a more optimistic long term outlook for grain, potential synergies with Pacific National's NSW grain business and possibly strategic/competitive considerations.

The privatization of the former V/Line Freight appears to have been successful in that it was followed by improvements in technical efficiency and by growth in business. The sales process itself was judged to have been well run, according to ex-post interviews with bidders. The most significant concerns have been over the condition of the rail infrastructure with the Government currently undertaking a safety audit of the country network. While arguably the private operator has run down the quality of the parts of network, the railway has just come off two extremely poor grain harvests.

3.6 FreightCorp and NRC

3.6.1 Background

In 1996, the State Rail Authority of NSW was reorganized into four separate businesses:

- State Rail Authority (CityRail and Countrylink – above rail passenger operations);
- FreightCorp – corporatized 'above rail' infra-state freight operator;
- Track Access Corporation – corporatized network manager; and
- Rail Infrastructure Services – maintenance and services provider.

FreightCorp was responsible for intrastate freight operations which comprised a mix of bulks (coal and grain) plus various inter-modal services. With the open access arrangements in place, FreightCorp was under threat from interstate freight operators with its coal margins particularly under pressure. Indeed, NRC subsequently won several NSW bulk freight contracts from FreightCorp in the period leading up to the sale in 2002.

Prior to the formal decision to privatize FreightCorp, the Commonwealth Government had announced its intention to sell its interest in NRC, which through the 1990s had not made significant profits, was using up its capital and was forecast to need further government funding within a few years. However it needed the co-operation of the other shareholders to put the sale into effect. The NSW Government took the view that its interests were best served by having FreightCorp and NRC offered together in a joint sale process – so as to minimize the potential impacts on NSW rail jobs by creating a powerful east coast railway company that would be less likely to succumb to competitors than would its component railways. And indeed the resulting railway has come to dominate national rail freight.

The sale of FreightCorp and NRC was the first privatization of solely 'above' rail operations. The network was retained in government ownership.

FreightCorp was sold with ongoing Public Service Obligation (PSO) subsidy contracts to ensure continuation of certain freight services, including support of the existing level of export grain haulage capacity.

In the run-up to the sale, FreightCorp's key statistics showed a business under pressure, although tonnage had been increasing (mainly coal):

- Revenue - A$596 million in 2001, down from A$685 million in 1997;
- EBITDA - approx A$130 million, down fromA$173 million;
- Net sales/NTK - 3.6 c/ntk, down from 4.8;
- EBITDA margin - 22 percent, down from 25 percent;
- EBIT margin - 14 percent, down from 16 percent; and
- Tonnes - 89 million, up from 73 million.

NRC however, had seen EBITDA increase dramatically prior to privatization from around A$7 million in 1998 to over A$65 million in 2001. It is interesting to note, however, that their revenue (c/ntk) remained relatively unchanged across this period, at around 2.6 c/ntk.

Other indicators over this period show the following:

- Net operational revenue of between A$464 million, up from A$414 million;
- EBITDA margin in 2001 of around 15 percent. The previous years are significantly lower;
- Average operating expenses were decreasing, and ranged between 2.9c/ntk and 2.5c/ntk;
- Reliability improvements, with km/fault increasing from 53,000km to over 125,000; and
- Improvements in safety, with lost time frequency rate (incidents per million person hours) decreasing, and ranging from approx 39 to 25.

3.6.2 Transaction Details

Table 3-10. Aspect of Transaction.

Aspect of Transaction	Details
Date	February 2002
Purchaser	▸ National Rail Consortium (later Pacific National) – 50:50 JV between Toll Holdings and Patrick Corporation. ▸ The governments were encouraged that between them, Toll and Patrick will bring significant large scale national transport and logistics experience to the combined FreightCorp/NRC operation, together with additional financial and managerial capability.
Transaction cost	▸ The A$1.172 billion total transaction value (including FreightCorp and National Rail), which comprises A$936 million for the purchase of the companies, A$118 million for the assumption of net debt and a A$118 million investment in NSW grain facilities.
Sale Commitments	▸ Implementation of NSW grain industry strategy, including investment of circa A$118 million

Assuming a combined EBITDA for NRC and FreightCorp (FY2001) of approximately A$198 million, and a sale price of A$936 million for the companies, suggests an EBITDA multiple of approximately 4.7. Combined revenue was a little over a billion, reflecting a price multiple of around 1.1 times revenue.

3.6.3 Post Sale

Following the completion of the sale in February 2002, the National Rail Consortium changed its name to Pacific National Pty Ltd (PN), reflecting its east coast base and scope of its national network. In March 2004, PN also acquired Australian Transport Network, the freight rail provider in Tasmania and operator of some grain services in NSW and Victoria, and Freight Australia, the Victorian based freight railway. PN now operates three divisions: Coal (28 percent of revenue), Intermodal (45 percent) and Rural and Bulk (27 percent).

According to Deutsche Bank,[33] Toll and Patrick management have driven margin improvement in the PN business. Pre-privatization margin levels were well below 10 percent and are now around 13 percent.

Pacific National has endeavored to drive margin improvements by modernizing work practices, renegotiating all employment agreements and improving the business mix. Post sale performance also reflects the favorable macro conditions in the mining and steel sectors in the past few years which have driven up the utilization of rolling stock. Going forward, Deutsche Bank expects a continually improving margin of a peak to 15 percent on the back of continued increased volumes, and the potential to win coal business in Queensland.

Pacific National earnings since acquisition have reportedly exceeded expectations due to achieving earlier than anticipated volume improvement from Toll and Patrick Corporation and from the timing of grain shipments. Cost savings have also been realized ahead of original plans. More recently, however, infrastructure deficiencies and terminal capacity have constrained growth.

The following extracts were derived from PN's Annual Reports:

August 2004

- Toll Holdings Limited and Patrick Corporation Limited stated that Pacific National had recorded a profit after tax of A$83.5 million (including loss on significant items of A$114,000) for the year to 30 June, 2004.
- This result is 47.8 percent higher than the previous year of A$56.5 million, and was based on revenues of A$1.083 billion or 3.4 percent improvement on last year.

[33] Deutsche Bank, Australian Transport, Crane Spotting, 2004.

- Solid growth in the Coal and Intermodal operations drove revenues higher, however this was partly offset by lower grain and regional container shipments. The inclusion of the Australian Transport Network (ATN) operations from March 2004 also positively contributed to the revenue growth.
- Earnings before interest and tax (before significant items) was A$144.8 million compared to A$113 million in the previous year, and benefited from increased volumes, continuing cost reduction and integration savings.

September 2003

- Toll Holdings Limited and Patrick Corporation Limited stated that Pacific National had recorded a profit after tax of A$56.5 million for the year to 30 June, 2003.
- This result, which represents the first full financial year for the company, was based on revenues of A$1.059 billion and earnings before interest and tax of A$113 million.
- Revenues continued ahead of forecast in each major segment of its operations with the exception of grain. Grain shipments were impacted by severe drought conditions, however the business has restructured its cost base and is well positioned to benefit from a return to non-drought volume levels.
- Improvements in safety standards as well as maintenance processes are important initiatives which are positively impacting on the performance of the business.
- Although upgrading of track infrastructure and the process of rationalization of track access management regimes are frustratingly slow, the company is becoming more confident that these issues will be addressed over the next few months.

Comparing the revenues earned by Pacific National with the combined NRC and FreightCorp's revenues prior to the sale shows little overall growth as presented in Table 3-11.

Table 3-11. Comparison of Pre- and Post-sale Revenues, 2001 - 2004.

Measure	FreightCorp + NRC	Pacific National
Revenue	Approx A$1.06 billion (2001)	A$1.08 billion (2004)[1]

[1] *Does not include Freight Australia revenues.*

Given the relatively recent nature of the sale, it is difficult to derive any trends from the data and it will be interesting to monitor financial performance of the entity over subsequent years. PN publishes little data, but says it has made good progress both in efficiency and in new business (for example, by using modified containers it has captured some of the transport of new cars on routes where they previously all gone by truck). However it adds that recent growth has been constrained by infrastructure inadequacies, and it is concerned about the way charges are calculated for the use of road compared with rail. An indication of future expectations was provided recently by the Australian Rail Track Corporation[34] when outlining plans to substantially upgrade its infrastructure, especially what it had just inherited in NSW. It foresees total traffic (by gross tonne kilometers) on its network, most of which is Pacific National's, growing 27 percent between 2005 and 2010 and 66 percent between 2005 and 2015.

3.6.4 Conclusion

It is still early days for the privatized entity but already Pacific National is emerging as the most powerful rail freight operator in Australia. Its two parent companies are vertically integrated into, and dominant in, the retail end of the general freight market giving PN a secure channel to the end customers.

Prima facie, having parents that are multi-modal logistics companies should mean that they are able to optimize modal choices and direct discretionary freight towards the mode with the higher fixed costs,

[34] Slide presentation to infrastructure contractors, 1 June 2005, on www.artc.com.au.

(i.e., rail). Pacific National's intermodal business is very strong, and the ARTC forecasts imply that the longer term impact will be a substantial increase in rail's modal share on the East Coast, and little change on the East-West route where rail already has over 80 percent. The forecast East Coast improvements will be the result of improved infrastructure and improved rail operator management.

PN has expanded its operations into Tasmania and Victoria[35] (through acquisition) and organically into Queensland, entering the North Coast general freight market. Significantly, PN was able to immediately capture over 50 percent of the market off the incumbent QR, as QR's largest customer was Toll North, a subsidiary of PN's parent Toll Holdings. As a major logistics company Toll is able to transfer some of its traffic from a mode where most of the costs are variable (trucks) to one where most of the costs are fixed or semi-fixed (rail), thus rapidly increasing its profits as volumes grow.

3.7 Comparative Analysis of Australian Rail Freight Railways

In examining the performance of privatized freight railways in Australia, it is important to note the performance of Queensland Rail (QR) over the period. QR is the only freight railway in Australia to maintain government ownership (although it is corporatized). To date, the Queensland Government has rejected pushes to privatize freight rail and QR remains wholly government owned.

While it is difficult to trace the individual outcomes of each transaction, it is possible to track the performance of the sector as a whole which was predominately privatized over the decade from 1993 to 2003.

3.7.1 Queensland Rail

Queensland Rail (QR) provides rail based freight and logistics, passenger and track access services throughout Queensland, plus limited intermodal and coal haulage services in NSW. It is the largest rail freight operator in Australia in terms of volume (tonnes hauled) and revenue.

QR was corporatized in 1995 and is a $2 billion a year business providing the following 4 services:

- Freight and logistics services;
- Commuter and long-distance passenger services;
- Track access for our narrow, standard and dual gauge network; and
- Rail-specific expert services.

QR currently holds all coal haulage contracts in Queensland despite the market being open for competition effectively since 2001 (when QR's Access Undertaking was approved). This primarily reflects its extensive infrastructure and rolling stock resources and its proven track record for reliable service which, in the current boom conditions for coal, is one of the most important considerations for coal owners. It is expected that over time QR will be unable to retain the 100 percent market share it currently enjoys, with PN and ARG becoming increasingly competitive in the tendering process. The contestability of the market has, however, severely eroded QR's margins.

The financial health of the QR coal and freight business took a turn for the worse in 2003, correlating to the impact of the drought on the business and competitive tension from PN and ARG in coal. This can be observed in Table 3-12. The coal contract wins in NSW and retention of the Queensland coal contract, and less severe drought conditions would support strong volume growth in 2005. Coal freight rates and margins are unlikely to recover to the levels experienced in 2002.

[35] And one of PN's owners, Toll, has acquired the railways in New Zealand.

Table 3-12. Analysis of QR's Operating Statistics.

Du Pont Analysis	2002	2003	2004	2005P	2006P	2007P
EBIT margin	23.8%	20.8%	20.4%	20.3%	20.6%	20.7%
Return on Assets	6.7%	5.8%	5.8%	6.0%	6.1%	6.2%
Return on Equity	7.3%	5.6%	4.5%	5.4%	5.7%	0.6%

Source. Deutsche Bank, 2004.

Table 3-13. Analysis of QR's Financial Information (A$ millions).

FY	1999	2000	2001	2002	2003	2004
Operating Revenue	1,902	2,347	2,527	2,188	2,227	2,305
Operating Expenses	1,734	2,166	2,032	1,680	1,775	1,845
Depreciation & Amortization	277	302	296	372	347	353
EBITDA	445	484	791	880	799	813
EBITDA margin	23%	21%	31%	40%	36%	35%
Freight moved (million tonnes)	120.5	131.5	145.6	153.5	156.4	161.8
Bulk Coal hauled (million tonnes)	104.5	114.5	127.8	135	138.2	143.2

Source. QR Annual Reports.

The results indicate that QR has financially been performing strongly over the six years of analysis. It is interesting to note that although margins have appeared to peak in 2002, the freight moved and bulk coal hauled have continued to increase.

Over the next five years QR has planned investment for another A$2 billion, with A$800 million of this dedicated to track infrastructure.

3.7.2 Industry Performance

The industry has undergone some significant changes in the period between 1988/89 and 2002/03. The majority of this period would be prior to the commencement of privatizations in Australia, (i.e., 1997), however the data presented in Table 3-14 does give some indication in the changes:

- Tonnages grew significantly but average revenue/ntk fell by almost than 60 percent (reflecting to some degree change in traffic mix, i.e., more coal);
- The government's contributions – largely supporting passenger services – were fairly constant; and
- Employment in the industry more than halved.

Table 3-14. Key Measures on Australia's Railways (excluding private railways).

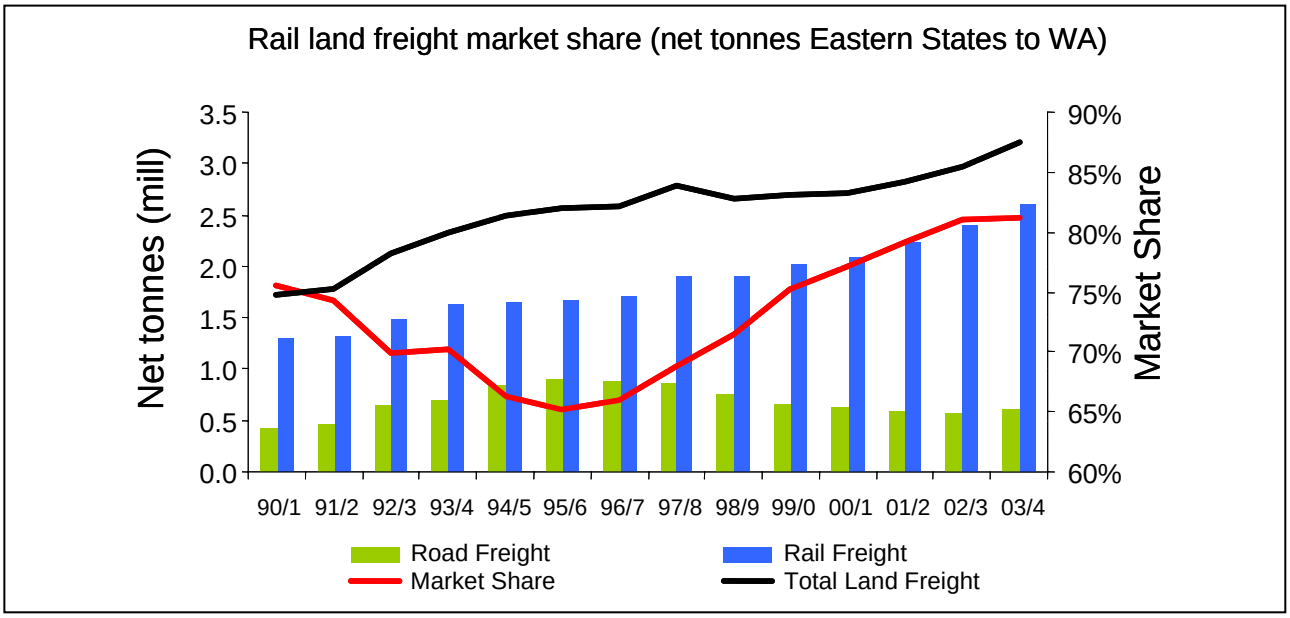
Measure	1988-89	1993-94	2002-3
Gross Revenue (A$ million)	3,267	Na	4,043
Freight services revenue (A$ million)	2,338	Na	2,956
Passenger services revenue (A$ million)	929	Na	1,129
Net Tonne Km (billion)	50.9	95.2	158.07
Tonnes carried by rail (million)	179.3	212.2	544.8
Revenue per tonne km (c/ntk)	4.6	Na	1.9
Employment	85,916	Na	41,751
Passenger Journeys (billion)	418.2	Na	594
Investment (A$millions)	901[1]	Na	2,176
Government contributions	2,091[2]		2,383[3]

1. *Total capital expenditure by government railways.*
2. *Operating deficits of government-owned railways.*
3. *CSOs and other government contributions.*

Source. Australian Rail Industry Report, 2003, Rail Freight 1995 BIE; Industry Commission Rail Transport Volume II, Report No 13.

Since privatization there have also been changes in the market share of rail compared to road. The graph in Figure 3.8 shows the rail market share of freight from the Eastern States to WA. It is interesting to note that this has recently increased to over 80 percent from a low of around 65 percent in the mid-nineties. It is, however, important to recognize that this level is not generally achieved in other corridors which are more road competitive. It is also important to note that market reforms (such as open access) have probably had the greatest impact rather than privatization per se.

Figure 3-8. Rail Market Share (Eastern States to WA).

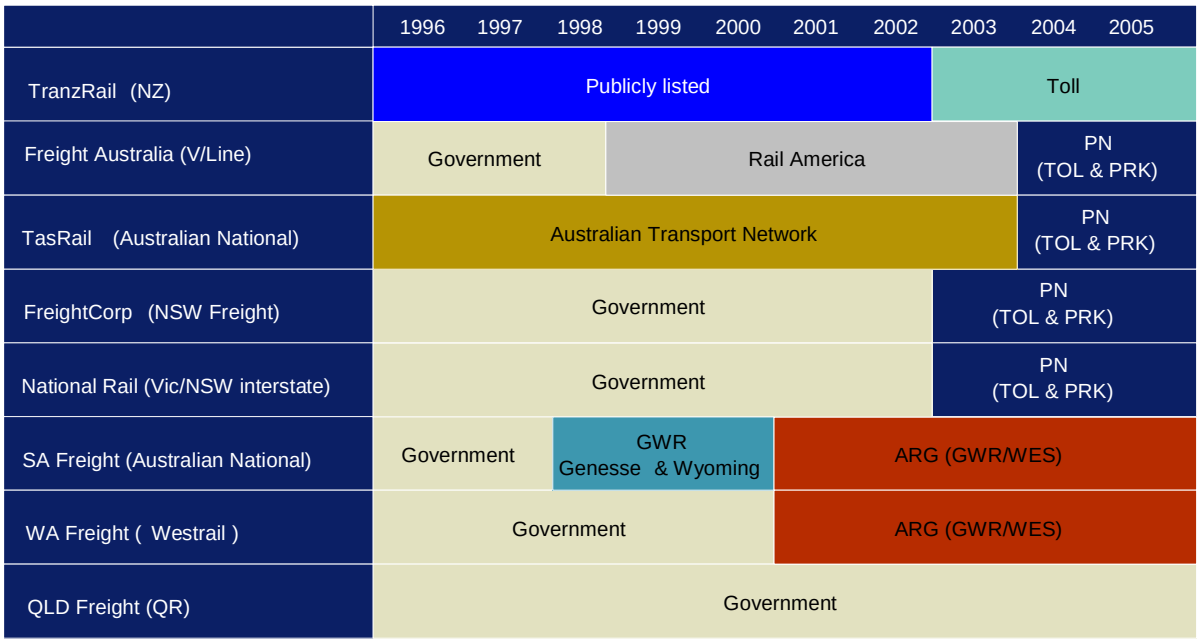


Source : ARTC; Booz Allen analysis.

3.7.3 Overall Assessment

The privatization of the majority of the state-based rail freight systems and the NZ Railways have led to a consolidation of the industry from eight separate systems to only three (taking Toll's interest in NZ together with their interests in Australia). The consolidation is illustrated in Figure 3-9.

Figure 3-9. Key Ownership and Structural Changes by State.



Source. Deutsche Bank.

Indications are that privatization has led to further improvements in productive efficiency and productivity in the industry. This is now making it possible to divert some freight from road transport. However the improvements have not so far been enough to remove the need for subsidies for the more marginal operations.

It is important to consider the separate effects of the liberalization of the market and the introduction of open access. Replacing government-owned monopolies with private sector monopolies is unlikely to deliver efficient outcomes but in this case, liberalizations of the market and privatization have gone hand in hand delivering significant economic benefits to the community. Monopoly concerns are mitigated by the reduced barriers to entry due to access regimes.

It is difficult to compare the performance of the remaining government owned railway (QR) with the privatized railways over the period. QR benefited from continual and significant growth in their coal business albeit at a cost of much lower margins. One of the significant benefits of privatization has been the entry of multi-modal transport companies such as Toll, to the railway system bringing logistics expertise and greater supply chain integration potential to rail. With the winding back of government subsidies for rail freight, privatization has likely led to some improvements in allocative efficiency.

4 PUBLIC PRIVATE PARTNERSHIPS

4.1 Introduction

This section covers the transactions in Australia that might be broadly termed public private partnerships (PPPs). Most have involved rail passenger services and all have involved either some form of 'build' or some other procurement (for example, rolling stock):

- Melbourne rail passenger franchising (1999);
- AustralAsia Railway BOOT project (2004);
- Sydney Light Rail BOOT project (1996);
- Sydney Airport Rail Link (2000); and
- Brisbane Airport Rail Link (2001).

The transactions involving substantial infrastructure spending are very long term concessions, up to 50 years in the case of the AustralAsia railway. The term of the Melbourne rail passenger franchising, which did not require any significant infrastructure spend but did require the procurement of new vehicles, was initially 15 years but reduced to 5 years after the contract arrangements were restructured in 2004. The other factor that sets the Melbourne franchising apart was the on-going financial commitment to subsidies from the government (declining over the concession period). All of the other transactions were designed to operate without on-going financial assistance from government.

Each transaction is covered in turn below.

There is little if any PPP type experience in rail transport in New Zealand, although several options were being considered for the rail passenger services of Tranz Rail when they were up for sale several years ago.[36]

4.2 Melbourne Rail Passenger Franchising

4.2.1 Background

In 1999 the passenger rail services in Melbourne, Australia, which had been operated by a public sector entity, were tendered out to private concessionaires. In 2004 substantial modifications were made to the concession arrangements following the withdrawal of the largest operator. This paper discusses and draws lessons from both these concessioning experiences.[37]

The decision to privatize freight and passenger rail services in Victoria was based on the view of the previous Public Transport Corporation's Board and management, and the Government, that it would be difficult to extract further efficiency improvements under government operation. Staff had been halved in the mid 1990s and reliability and punctuality had improved. The Government was aware of what had been achieved (despite bad press) by railway privatization in the UK, and in Victoria it had already privatized the electricity and gas sectors and cut back parts of the remaining public sector. The final decision was influenced by a prominent tram strike. The Government saw privatization as a means of reducing its exposure to financial and other risks.

The Model

The model chosen, after studying international experience and literature, was that of a concession (known in Victoria as franchising) with the following features:

- Vertical integration, in which train operators had a lease over the relevant track and other infrastructure. This avoided problems then becoming evident with vertical separation in the UK, where operators (Train Operating Companies) felt they had insufficient control over their total costs (including infrastructure) and insufficient influence over maintenance and investment decisions. It also had perceived safety advantages (see below);
- Yardstick or peer competition. The metropolitan rail network was divided in two, influenced by the "competition by comparison" observed between the Long Island Railroad and Metro North, and the break-up of British Rail;

[36] The new owners of Tranz Rail, Toll NZ, have subsequently withdrawn the rail passenger businesses from sale.

[37] The paper covers railway services only, not the parallel concessioning of Melbourne's extensive tram system. Neither does it cover the private bus concessions. However problems with revenue sharing between trains, trams and buses are discussed.

- Purchase or lease of existing rolling stock, and an obligation to provide new rolling stock. The successful bidder was required to buy the rolling stock, sell it to an independent party and lease it back on terms that provided for a smooth handover to a successor concessionaire;
- A concession period of 15 years, relatively long because of the substantial rolling stock investment involved, and associated risks;
- A regime designed to ensure adequate maintenance of infrastructure, especially towards the end of the concession period, based on a condition index;
- A regime designed to reward good operational performance (reliability, punctuality etc) and penalize poor performance;
- All risks were assigned to the private operator other than sovereign (policy) risk, latent defects in infrastructure, and narrowly defined force majeure events;
- Existing fares were retained, including concession fares, adjusted only for changes in the consumer price index;
- Current levels of service were to be the minimum, including frequencies, first and last services, and maximum average loadings – though with a limited degree of flexibility at the detailed level;
- Requirements for particular items of infrastructure upgrading, for example, a line extension, train control upgrade; and
- Allocation of revenue between operators based on passenger surveys.

Private sector bids were sought for two concessions, based primarily on the net present value of subsidy requirement, subject to a number of management, financing and quality criteria.

The Government also applied this model to privatization of Melbourne's large tram system and its country passenger train operation (not covered in this paper). It also sold the state's freight railway (covered in Section 3.5).

The Government objectives behind concessioning were a progressive improvement in the quality of services, increased patronage, minimizing of long-term cost the taxpayer, the transfer of risks to the private sector and the maintenance of high standards of safety.

4.2.2 Experience to Date

There was considerable bidder interest, largely from the UK and France. The sale process, managed by a unit in the Victorian Treasury, was a familiar one of prequalification, short list and preferred tenderer, with substantial transaction costs on both sides because of the complexities and the amount of due diligence required. The winning bidders in 1999 were the UK-owned National Express Group and the French-owned Connex, a subsidiary of Vivendi (now Veolia) Group. They made "negative bids" for the subsidy levels they wanted (diminishing over time) for the services they were required to operate. The Government estimated that the net present value of the savings over franchise period (for trains plus trams) would be A$1.8 billion, part of which was A$1.1 million worth of new rolling stock that the government operator, had it continued, would probably have had to do without.

Early Problems

The new operators proceeded to improve service quality, add some additional off-peak services and order new trains to replace the oldest in the existing fleet. Although they increased patronage, they soon found that their financial performance was falling well below their expectations and with the government subsidies declining, they were facing financial crisis. Some of the main reasons appeared to be:

- Bidders' over optimistic revenue projections which did not take account of Melbourne's low population density, good road system and high motor vehicle use (unless they were being tactical with a view to renegotiating with government down the line – but if so, the most aggressive bidder later paid heavily for it);
- A change soon after privatization to a new government that had opposed it, and were ideologically uncomfortable with it. According to operator personnel at the time, this made negotiations on outstanding contractual issues difficult. This was exacerbated by initial indecisiveness in the Government;
- Failure of the new operators to negotiate sufficient productivity improvements with staff despite substantial inefficiency in rosters, training etc., possibly because of the change in political climate and/or because the union's power was strengthen by the performance regime;
- Flaws in some of the arrangements, especially for inter-operator and intermodal revenue sharing (Melbourne has multimodal time based tickets) and for monitoring the condition of infrastructure. The resulting disputes, aggravated by problems with the ticketing system itself, were a serious distraction of management and officials' time.

There were also inefficiencies due to having two concessions with some shared infrastructure in the centre of Melbourne, for example, inability to draw from each others' fleets at times of vehicle shortage, difficulty in arranging to use each others platforms, disputes about the maintenance of common electrical overhead and signaling, and distraction of management time dealing with interfaces and disputes. The split into two has often been criticized, and the re-integration has been difficult,[38] but had there only been one concession the sole operator would have been the most aggressive bidder and the one that failed, National Express. Having two helped the bidding process, avoiding a large order with a single supplier and yardstick competition has been effective (though more with trams than trains).

By 2000/01 it was becoming clear that the operators were in financial difficulty, and they entered into negotiations with the Government, one result of which was one-off additional government payments. At the end of 2002, National Express, the larger of the two metropolitan train (and tram) concessionaires withdrew, taking a write-off of the order of A$300 million including forfeit of their performance bond. Its concession was then managed by an administrator, with day-to-day help from government officials and Connex.

The Modified Model

After considering the alternatives of resuming government ownership or of running a new bidding round, the Government negotiated with Connex to take over the whole system, from April 2004, but with substantially modified conditions.

The main change related to risk: the Government took back some of the revenue risks it thought it had previously shed, by agreeing to top revenue up if it fell below a threshold, and requiring a sharing of profit above an upper threshold. The view was that operators, constrained by a set fare structure, could not control some of the determinants of revenue such as general economic conditions and road congestion. It also removed the revenue allocation risk that operators had faced by setting fixed percentages – a more important issue for them than overall revenue risk. Some other risk allocations were also modified. It can be argued that these and other changes help reduce the overall risk to government, as it was not in the community interest for the new operator to fail.

The concession period was reduced to 4½ years, with the possibility of an 18 months extension, to reflect the operator's lower revenue risk and the absence of construction risks - by then many of the new trains had been commissioned (without major problems). The end date of November 2008 was chosen to coincide with the introduction of a new ticketing system.

Other changes were made to overcome earlier flaws, such as:

[38] The refurbished trains cannot be coupled together, and the new trains are of two different types.

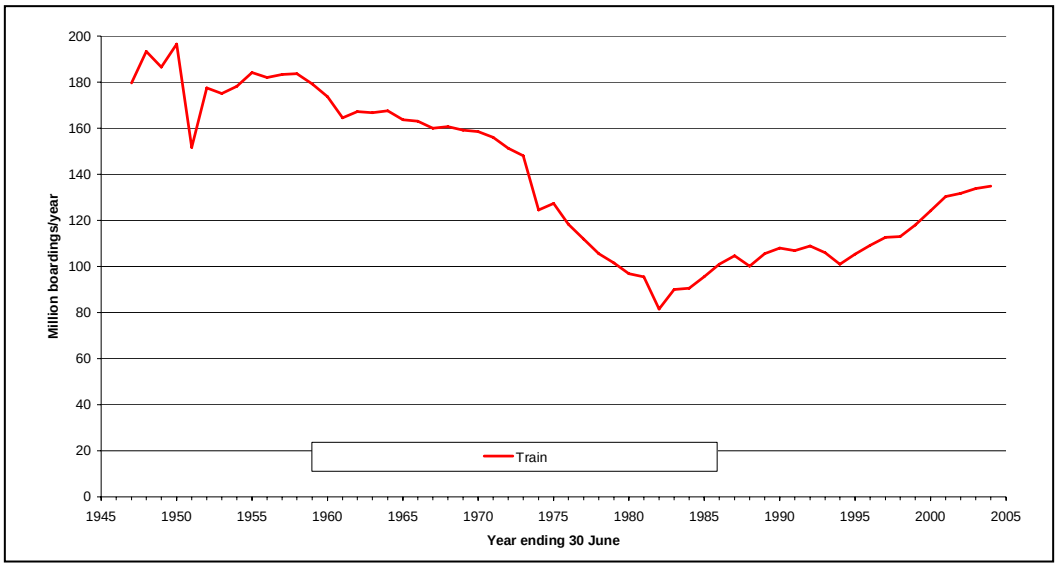
- Intermodal revenue based on predetermined percentages rather than the previous passenger surveys which had too large a margin of error, combined with a new governance structure for the multimodal revenue clearing house;
- Infrastructure maintenance obligations based on asset management plans proposed (within government guidelines) by the concessionaire and reviewed by the Government, rather than the previous outputs based regime which, given the long life of most railway assets, proved susceptible to wide differences in engineering judgment;
- A new asset improvement regime to encourage the operator to invest in upgrades, (for example, track flyovers) that have a payback period longer than the franchise period; and
- The 2004 changes to the 1999 framework show a lower weighting for financial savings (which in fact were not achieved) and a higher weighting for criteria such as service quality, asset management, innovation, financial sustainability, and managerial capability.

Patronage Trends

Melbourne has an extensive metropolitan train system with 17 lines, 371 route kilometers, 942 carriages and 135 million passenger boardings per annum (2004).[39] However, public transport, trains, trams and buses) account for only around 9 percent of motorized[40] urban trips. This reflects Melbourne's low population density, good system of generally wide roads and relatively low petrol prices.

Figure 4.1 below shows a long-term decline in patronage of public transport which has reversed in recent years.[41] The first turn-around point followed substantial investment in new rolling stock, multi modal ticketing and a major underground rail loop under the central city in the early 1980s, and the second turn-around was in the mid 90s which coincided with reform within the Public Transport Corporation and with the bottoming out of an economic recession (economic growth has been positive ever since).

Figure 4-1. Train Use in Melbourne.



Data Source. DoI Victoria.

We are not aware of any formal analyses of the reasons for the increase in the patronage growth rate (now around 3 percent per year) but expect that such an analysis would show a mix of internal reasons, (for example, improved service quality compared with the early 90s, improved marketing) and external

[39] Most data in this section is from the Department of Infrastructure, Victoria.

[40] As opposed to walking and bicycle trips.

[41] A change in a statistical definition (change in seasonal multipliers, rather than in actual trips) appears to explain the drop in 1974. Multi-modal tickets were introduced in 1982 and there was some imprecision in numbers through the 1980's – and again with "scratch tickets" about 1990.

reasons, (for example, continuing growth of the local economy, population and employment, a revitalized CBD, growth in the tertiary student population, and gradually increasing road congestion). Privatization in 1999 did not change the trend; this is discussed further below.

The growth rate, while significantly better than the past, is well below the approximately 4 percent per annum assumed by the successful bidders in 1999 and some would say is below potential, also discussed further below.

4.2.3 Assessment

Productive Efficiency

Productive efficiency improved substantially in the last years of public sector operation due to large staff reductions, with no reduction in service – the staff of 18,000 was halved in the mid-90s. This removed some of the padding inherited from the past. It was achieved by the "stick" of a Ministerial threat to close the system for months if necessary, and the "carrot" of redundancy payments. New management and infrastructure upgrades (especially the reconstruction of the main city rail yard in a more efficient layout) also led to better reliability and punctuality during the 1990s.

It appears that further productive efficiency improvements have been achieved since privatization, offset somewhat by the transaction costs of bidding and the costs of managing the concession contracts. Connex was able to negotiate a modest improvement in work practices soon after taking over in 1999. Passenger numbers have increased more than service levels (approximately 15 percent and 10 percent respectively) and the marginal cost of that service increase would have been less than 10 percent because many of the costs (rolling stock and infrastructure) are of semi-fixed nature.

These improvements are arguably higher than would have been achieved under continuing public sector ownership -- it would have been more difficult to negotiate productivity improvements (unless there was a repeat of the political circumstances that led to the mid-90s shakeout), and there was a risk of political interference. Again, however the improvement appears to be less than it could have been.

Allocative Efficiency Including Service Quality

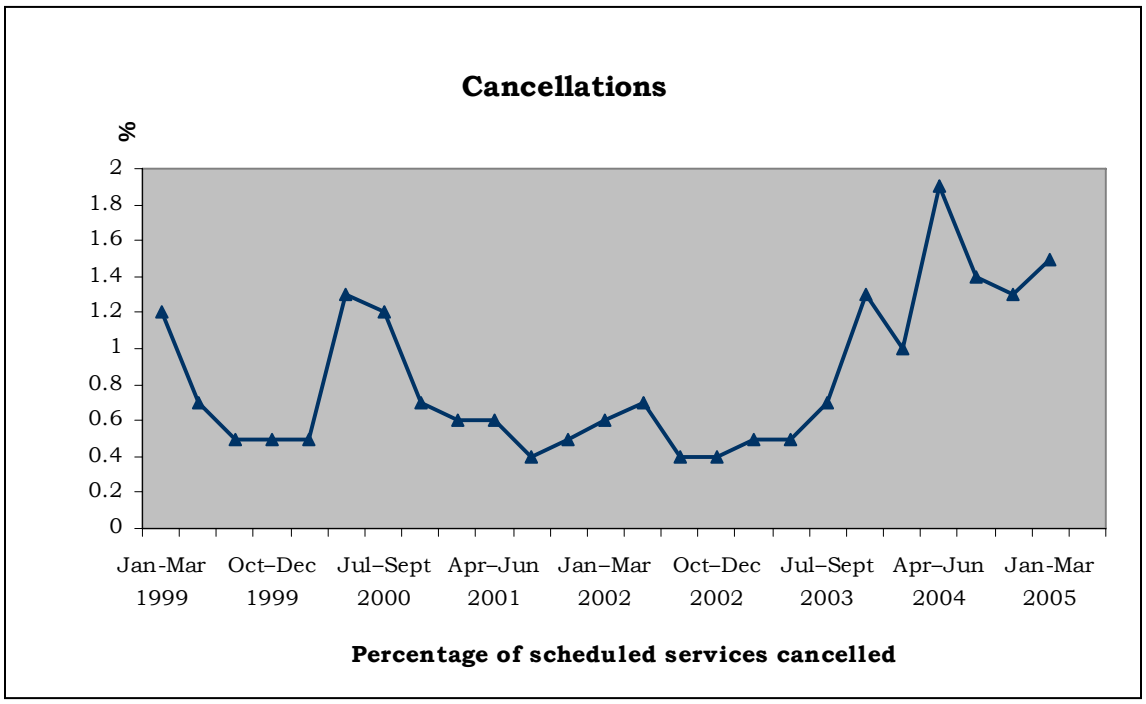
Allocative efficiency, in the normal sense of prices reflecting costs and of factors moving in response to prices, will not have changed much because of the decision to retain the previous fare levels and their structures, adjusted only for general inflation (consumer price index).

Service quality improvements would arguably have improved allocative efficiency by attracting passengers who would otherwise have used cars whose true costs (after allowing for externalities such as congestion and pollution) are higher. However, the service quality story is mixed.

The charts below shows the percentage of services cancelled, the percentage that ran within five minutes of schedule, and the level of passenger satisfaction. Improvements have been encouraged by a performance monitoring regime which fines operators if they do not achieve target levels.

The cancellation record shows an improvement in the early years of private operation and a decline in the last two years. Explanatory factors include the reduction in training of new drivers by the failing National Express operation; (Connex is still catching up) and major works at a city station. We expect that the cancellation record will be substantially better within a year, probably better than under public sector operation because of the new and refurbished trains.

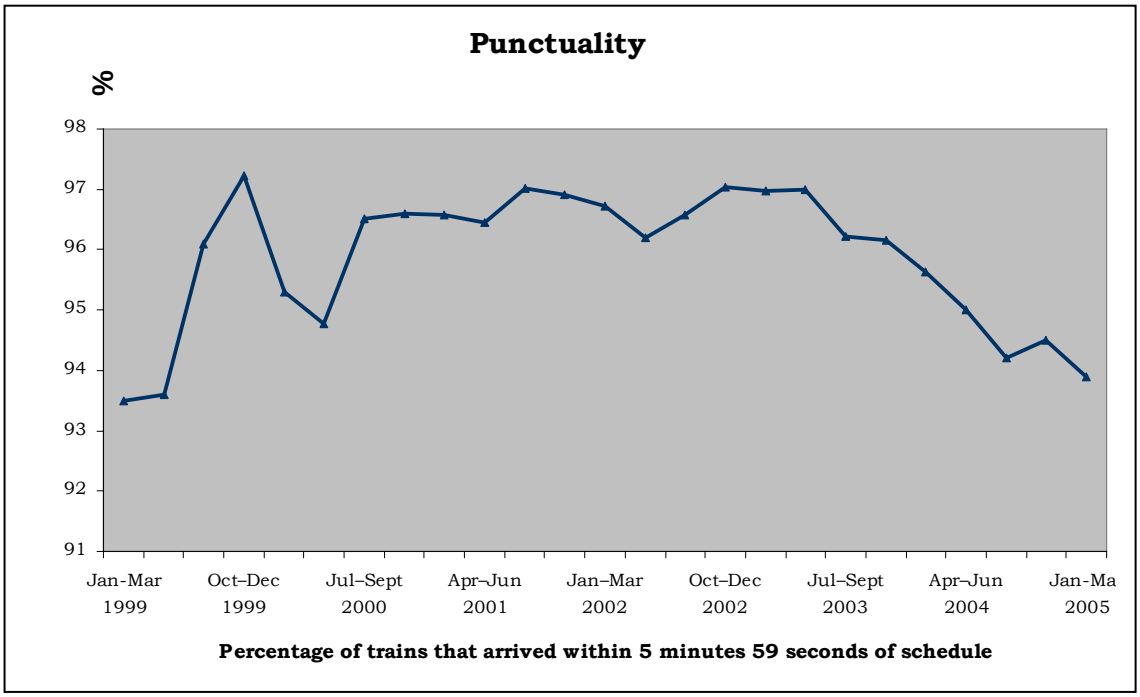
Figure 4-2. Cancellations of Trains = Percent of Services Scheduled.



Data source. ACIL Tasman analysis of Department of Infrastructure data.

Punctuality shows a substantial improvement in the early years of private operation, also followed by a decline in the last two years to much the same level as pre-privatization – around 94 percent arriving at their destination within 5 minutes 59 seconds of the time in the timetable.

Figure 4-3. On Time Performance.



Data source. ACIL Tasman analysis of Department of Infrastructure data.

The Government conducts a monthly survey to gauge passenger satisfaction. Separate indices cover service delivery, information service, passenger comfort, stations, value for money, staff service, ticketing, and personal safety. The overall index (below) shows a modest improvement over the first few years of private operation and a decline in the last year. We do not place great weight on these results because, besides quality changes, they also reflect changing expectations.

Figure 4-4. Passenger Satisfaction.

Data source. Track Record, Department of Infrastructure, Victoria.
Note. Based on monthly telephone surveys. More detailed data, on www.doi.vic.gov.au, covers service delivery, information service, passenger comfort, stations, value for money, staff service, ticketing and personal safety.

Investment in the Rail System, Including Renewal of Assets

At the time of the initial concessioning in 1999, around one third of the train fleet was approaching 30 years of age and the remainder was due for a midlife refurbishment. Governments would have had difficulty financing replacement, so rolling stock investment was a central part of the concession contracts, and one which has been successfully achieved. The mid-life trains have all had substantial refurbishment and most of the old trains have been replaced with new ones, with the remainder taking place in the next few months. The Government, through concessioning, was able to make use of private sector financing (although there was a hump in subsidy during the period the rolling stock was being delivered) and to benefit from competitive tension to indirectly achieve good prices from manufacturers. It avoided the temptation to over-specify the new rolling stock or to demand local design and manufacture, which enabled standard units to be supplied resulting in significant savings. There were relatively minor introductory problems with the new equipment.

Infrastructure proved more problematic. The concessionaires lease their track, electrical overhead, signaling and other infrastructure and arrange for its maintenance. The Government needed to ensure that the infrastructure was adequately maintained, with older parts refurbished or replaced, and that concessionaires would be prevented from allowing the infrastructure to run down at the end of their concession period. To avoid being intrusive the Government established a monitoring regime based on a condition index. However, this proved unworkable due to the wide room for differing judgments and has now been replaced by the regime under which the Government sets an asset management framework and concessionaires then submit asset management plans to the government for approval. Thus after a false start it appears there is now a regime in place that assures adequate maintenance and renewal of assets.

Concessionaires were also required, as part of their contracts, to make various modest upgradings, (for example, to certain stations) and route extensions. The Government has mooted further modest improvements which it will presumably finance.

Accessibility of the Rail System

Accessibility for passengers has remained much the same as before though there have been modest improvements in the form of increased frequency on some routes outside peak periods. Access to certain stations for disabled passengers has also been improved.

There is theoretical accessibility for other operators, though none is likely because they would not receive subsidies and some of the lines are already at capacity in the peaks.

Affordability

Affordability has not changed much because the fares, including concession fares, have not changed in real terms apart from a one off increase in 2004 that broadly kept up with real incomes. The concessionaires were required not to charge any more than the previous fares, adjusted for inflation, including concession terms for low-income groups. However, the service is affordable for most people because fares are low, for example, A$96 for a month's unlimited travel (or half that for concession fares) by any mode (train, tram and bus) in a large central zone with a radius of 10 – 15km. Subsidies cover 64 percent of operating costs.

Affordability for the taxpayers was a prime reason for the original private concessioning, but the A$1.8 million savings (NPV) estimated at the time will not be achieved because of the subsequent financial distress of the initial concessionaires and the government's response to it. The initial response was to make additional payments to the concessionaires and the subsequent response, after the withdrawal of National Express, was to negotiate a new concession with Connex involving higher subsidies and less transfer of risk.

The publicly available information does not allow ready calculation of the newly agreed subsidy levels compared with what would have been required had public sector operation continued; this will have to await a report from the Auditor General's Office. However, it may be surmised that there has been a reduction in taxpayer burden compared with the counterfactual of public sector operation because:

- Connex negotiated modest productivity improvements with its workforce which in current circumstances would have been difficult for the public sector operator to achieve;
- Part of the preparation for the new arrangements following the withdrawal of National Express was calculation of a "public sector comparator" using a methodology derived from the Victorian Government's regime for public-private partnerships. The detailed analysis has not been released, so one is left to assume that it showed an advantage to the taxpayer from the new arrangements with Connex compared with the public sector counterfactual. An Auditor General's Office report may later shed light on this.

The experience with the concession to operate Victoria's country trains, V/Line Passenger, has been less interesting. The country services radiate out from Melbourne, are subsidized, and are protected from bus competition. The concession was essentially an operational contract as there were few investment obligations and as others' infrastructure (mainly the track etc leased by the freight railway) was used in exchange for access fees. Despite a performance regime of bonuses and fines, reliability and punctuality remained indifferent.

The exercise was soon overshadowed by National Express's problems and by the decision by the new government, elected in late 1999 a few months after the concession was awarded, to undertake a major upgrading of the infrastructure to accommodate much faster trains. The upgrading project caused contractual complexities and physical disruptions during construction work. More recently the rebuilding of V/Line Passenger's terminus station in Melbourne has disrupted services.

From 1999, just before concessioning, to the first quarter of 2005

- the percentage of trains cancelled increased from 0.2 percent to 0.9 percent
- the percentage arriving on time declined from 94 percent to 84 percent
- customer satisfaction declined from 80 percent to 75 percent.

The passenger services and now back in government hands but will be retendered once the fast train project has been completed.

4.2.4 Conclusions

The broad conclusions that may be drawn are that the private concessioning of Melbourne's urban train services, compared with the alternative of continued public sector operation, has not made much difference so far apart from the introduction of new trains. However now that the system has been "re-concessioned," has got beyond the stage of financial distress and endless disputes that sapped management and official energy, and is overcoming past legacies such as driver numbers that are inadequate given present work practices, we expect that the results (reliability, punctuality and possibly passenger satisfaction) will start to become better. If that proves to be the case, the reform (both phases together) could be judged a qualified success.

A full appraisal of Victoria's concessioning experience should also consider Melbourne's extensive tram system, to which the same model was applied. The tram experience, not covered in this report, has arguably been more successful.

There are important lessons to be learned from the difficulties encountered and from the need for a new arrangement part way through the original concession period.

The main successes have been:

- A continuation of the increased patronage growth rate;
- The improvement in reliability and punctuality in the initial years;
- The successful introduction of new rolling stock that would have been unlikely under public sector operation for many more years, and of refurbished rolling stock, with procurement cost savings due to buying standard designs;
- Minimal industrial disputes (there had been major strikes under public operation, though mainly by tram staff);
- A continuation of good safety standards;
- An apparent modest reduction in costs to the taxpayer; and
- Delivery of infrastructure projects on-time and in budget.

The first wave of lessons learned were in preparing for the initial round in 1999, drawing from an examination of the previous UK passenger rail concessioning experience. This led to the Victorian decisions to have vertical integration through infrastructure leases (rather than a separate RailTrack), to have the concessionaires make their own rolling stock leasing arrangements (rather than impose three lessor companies), and to make careful arrangements for an integrated passenger information service. All of these decisions have proven to be sound.

Lessons learned from Victoria's post-1999 concession experience, which were applied in the 2004 re-concessioning, included:

- Apply less weight to financial savings and more to operating, management, financial soundness and other criteria;
- The need for decisive and supportive decision making by the government counterparty to the concession contract, with a degree of give-and-take;
- The difficulty of intermodal revenue allocation based on passenger surveys (although this is done quite successfully in London);
- The difficulty of performance-based infrastructure condition monitoring methodology in a concessioning context;

- The case for careful assessment of risks and of who is best placed to manage them. Concessionaires can bear most cost related risks, but do not have control over some of the external revenue risks; and
- The difficulty that long concession periods pose for assessing likely revenue.

There are also lessons to be learned on the private sector bidder side – especially to do careful analysis that takes account of local conditions, and not to succumb to "feeding frenzy" or "optimism bias" - that is, not to make an emotional switch in the last week or two of the bidding race from thinking carefully what the business is worth to thinking emotionally about what it will cost to get it. "Winner's curse" afflicted those who over-bid, and then afflicted the government because it had to become involved once financial distress set in, due to its interest in the trains continuing to operate.

There are also lessons on how to better handle the bidding process, for example, more weight on criteria other than promised financial savings (though there was a considerable amount), to supply background demand forecasts to bidders (possibly more than one set from different analysts), and to do considerable sensitivity analysis on what appear to be over-optimistic bids ("if it looks too good to be true, then it probably is") and the implications for the operator's ability to survive. This is a difficult area because governments and their advisors are not necessarily better at forecasting demand than are operators with commercial and marketing experience and their own money at stake.

A related question is to what extent the government should be willing later to negotiate with an incumbent who runs into financial difficulties – in the Melbourne case it was willing up to a point, but not to the extent that National Express wanted.

Although an apparent qualified success, the experience has fallen short of its potential (though some of the issues go beyond concessioning):

- There is still substantial technical inefficiency in the form of slack staff rosters, other inefficient work practices and excessive time for driver training. One view is that it is difficult to go much further under existing industrial relations rules and government policies;
- No attempt has been made to implement a better fare structure that gives incentives for passengers to switch from peak to shoulder or off-peak services, though one has mooted for 2008, or to link higher fares to (so far non existent) express services;
- The mix of services has not changed much and has not kept up with changing demographics, for example, some lines have much heavier loads than others. There are few real express trains; most services are stopper trains with very slow average speeds - a disincentive to those thinking of switching from using their cars, especially in such a sprawling city. It can take over an hour to reach the end of some of the lines. This is a complex issue given infrastructure constraints, though as this paper was being written the Government announced plans for major expenditure to remove one of the main bottlenecks.
- Government infrastructure investment has been concentrated on the relatively low patronage country routes rather than on relieving bottlenecks in the metropolitan system. These bottlenecks in turn impact on the country services themselves and reduce the scope for urban express services.
- Private sector marketing attempts have been less impressive than mooted at the time of bidding in 1999.
- Interchange arrangements with buses -- important given Melbourne's urban spread -- are primitive, in part because bus subsidies are structured in a way that gives bus operators little incentive to chase passengers (again this is a complex issue).
- The Government's role is more intrusive than envisaged by those initially designing the change – a small example is that the Government has determined that Connex must employ at least 290 staff in "customer facing roles". There is room for debate on this issue; the Government's view is that "Public transport [requires]… continuing, detailed oversight from the Government."

Our broad conclusion is that Melbourne's private concessioning of passenger rail services will probably end up being a qualified success once the second round of change has had time to bed in, but that there

is further scope for improvement and for increasing patronage. Not surprisingly, implementation details are critical to the success of the chosen model and in the Victorian case, some hard lessons were learned in the early years. Nevertheless, the model has shown to deliver benefits which will no doubt increase over time with experience.

4.3 Australasia Railway BOOT Project

4.3.1 Background

The AustralAsia Railway project is a Build, Own, Operate and Transfer (BOOT) scheme, with lease arrangements covering 50 years' operation before the railway is handed back to the Northern Territory and South Australian Governments. Construction was completed in early 2004. The project comprises:

- The construction of a new 1420 km stretch of standard gauge line between Alice Springs and Darwin;
- The leasing, at a nominal rental, and maintenance of the existing 830km Tarcoola to Alice Springs standard gauge line which opened in 1980;
- Integration with the Port of Darwin, including a railway embankment and intermodal container terminal and the new Business Park developments providing a direct road/rail transport facility for domestic freight; and
- Operation of the new transcontinental line for 50 years after completion of construction.

FreightLink, the operating arm of Asia Pacific Transport, runs five return freight services a week from Adelaide to Darwin, providing a competitive service to existing long haul road freight services. There is one passenger service a week ("The Ghan") from Adelaide to Darwin, with scheduled stopovers at Tennant Creek and Katherine.

The Governments' objective was to facilitate private sector participation in the project by providing an up front capital payment, to attract the balance of capital on commercial terms, with the private sector responsible for the construction and operation risks. No ongoing subsidies were to be provided.

In 1995, the Northern Territory Government signed a Memorandum of Understanding with South Australia, the partnership providing the basis for the joint South Australia/Northern Territory approach to making the AustralAsia Railway a reality. The AustralAsia Railway Corporation, was established in 1997 by the South Australian and Northern Territory Governments to facilitate the delivery of the project. The Corporation coordinated the tender process and negotiations, while the Territory Government was responsible for negotiating with Indigenous Land Councils and pastoralists regarding acquisition of the corridor, environmental and heritage issues, and fencing of the corridor where required.

In 1999, the Asia Pacific Transport Consortium was selected as the preferred tenderer and negotiations began on contractual detail. In October 1999, government funding was finalized, with the Territory providing A$165 million, the South Australian Government A$150 million and the Commonwealth $165 million from its Federation Fund (a total of A$480 million in up-front capital payments). In January 2001, another A$79 million in stand by funding was provided by the three governments on commercial terms. The private sector contribution was around A$750 million. In May 2003, there was a reallocation of debt/equity within the consortium members, which did not affect the quantum, but changed the timing of some government contributions.

The Asia Pacific Transport Consortium comprises a number of maintenance and construction companies a logistics provider and a rail operator (ARG).

4.3.2 Experience to Date

In August 2004, FreightLink announced that the first six months of operations on the Adelaide to Darwin railway delivered freight volumes in line with expectations. Most road freight on that route had transferred to rail. Following a full review after 12 months of operations, it emerged that projections would be lower than originally anticipated. Stated reasons included capacity constraints apparent on the

interstate rail network limiting the ability to get freight into Adelaide for transshipment to Darwin. Others have pointed to the line's failure to attract "land bridge" traffic between Southeast Australia and Asia, as direct shipping services are cheaper and more frequent.

FreightLink has recently introduced a number of new pricing initiatives for the general freight market (tariffs were initially raised by 15 to 20 percent in October but final increase was much less after customer complaints) and has committed to work with customers to ensure services remain competitive on the corridor and the company continues to build freight volumes. A number of mineral prospects have emerged (newly discovered deposits close to the line) although freight contracts have yet to be agreed.

Generally while freight volumes are roughly in line with expectations, yields have been lower than projected placing significant financial pressure on the consortium and its financiers.

A recent article in the Financial Review (15 March 2005) suggests that two of the shareholders of the Alice Springs – Darwin railway consortium are considering exit plans as "Leighton Holdings writes off a A$7.4 million investment and a British investor confirms the rail line has failed to meet its first year revenue target". According to the Chief Executive of FreightLink, freight tonnage had exceeded expectations, but the freight mix had not, resulting in the revenue not being in line with plan.

4.4 Sydney Light Rail BOOT Project

4.4.1 Background

Sydney Light Rail is a light rail system through the city CBD and inner suburbs. The project was developed as a BOOT project and is currently owned by Metro Transport Sydney who also owns a monorail that serves an inner Sydney tourist area (Darling Harbor).[42] Metro Transport Sydney is a privately owned Australian company, with three main shareholders, Utilities Trust of Australia and Australian Infrastructure Fund managed by Hastings and Colonial First State Investments.

The first stage of the Light Rail between Sydney Central Station (heavy rail) and Wentworth Park opened in August 1997. This stage of the project cost A$65 million, with A$21.5 million coming from a government grant (the Commonwealth Government's Building Better Cities Project). The line was later extended to Lilyfield in Sydney's inner west in August 2000, with a total cost of A$20 million, A$16 million of which came from the NSW State Government.

When the system opened in 1997, TNT Transit systems, the owners of the Sydney monorail loop, were managing the operational side of the SLR system. However the French public transport company CGEA Transport, which is a subsidiary of Vivendi, bought TNT Transit systems in August 1998. CGEA have created two new brandings Metro Light Rail and Metro Monorail and have some sort of common marketing and image.

Connex is contracted to Metro Transport Sydney to operate the city's light rail and monorail systems.

4.4.2 Experience to Date

Reports suggest that the Sydney Light Rail is a "success" carrying close to 4 million passengers per year. Other reports (Hensher, 1999[43]) suggest that given the geography of the light rail route, the majority of its passengers are drawn from sustainable modes such as walking and other public transport. In fact, they state "A common comment in Sydney is that few people seem to be using the light rail system." Generally, there is very little information available on how the Light Rail is performing financially, or indeed, on the passenger projections on which its development was based.

We are not aware of any calls on government for ongoing financial support for the system although it has been said that the light rail needs to extend into the city proper to remain viable in the long term. Such

[42] The monorail is a relatively small circuit around the Darling Harbour precinct of Sydney which was constructed as part of Australia's bicentennial celebrations in 1988.

[43] A bus-based transitway or light rail? Continuing the saga on choice versus blind commitment, Hensher, D., 1999, Road & Transport Research.

extensions are complex, involving multiple stakeholders and there is a degree of frustration that the potential and sustainability of the light rail is being undermined by the inability to extend.

4.5 Sydney Airport Rail Link

4.5.1 Background

Airport Link connects a number of suburbs to central Sydney via the airport; it is not a dedicated airport-only route. The trains are operated by Sydney's CityRail, and the stations (at the two terminals and two points between the airport and the city) are operated, (for example, ticket sales, information, maintenance) by a private Airport Link company on a 30 year concession.

As a private station operator Airport Link charges a "Station Access Fee" for passengers to use the stations. This GatePass is integrated into most tickets. The fare from the airport to the city is A$11, about double the (rather low) normal fare for that distance. The trip to Sydney's Central station takes 13 minutes.

The original proposal for the link was put by property developers to the New South Wales state government. The Government announced it as a public private partnership under which the consortium would develop the link at no net cost to the Government, and the government-owned CityRail would operate the trains with shared revenue. However it had not secured firm agreement on that basis, and in fact the Government had to pay approximately A$600 million to build the link while the consortium paid approximately A$200 million to build four underground stations.

The tunnels, tracks, signaling and overhead wiring are owned by the state government entity Railcorp[44]; Railcorp leases the two non-airport stations to Airport Link. The two airport stations have a longer ownership chain involving the Australian Government, the airport company, Railcorp and Airport Link.

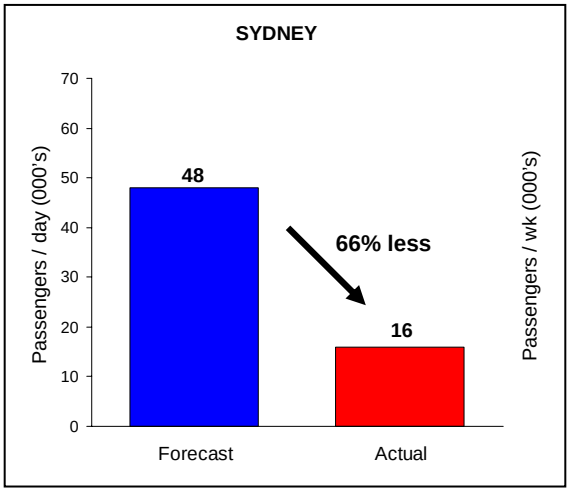
4.5.2 Experience to Date

Airport Link commenced operation in May 2000, in time for Sydney Olympic Games in September 2000. Traffic was well short of expectations (see Figure 4.5), and Airport Link was placed in receivership in November 2000. With hindsight the traffic modeling was naïve, and there were several negative factors:

- The opening in the same year of an excellent toll road (the Eastern Distributor), with a one-way toll, largely parallel to the railway, which has resulted in CBD - Sydney Airport driving times falling by 60 percent;
- The failure of one of the two main domestic airlines (Ansett);
- Poor location of the station entry at the airport, poor signage, lack of information about the next arrival train combined with substantial off-peak gaps between trains;
- Late running and service cancellations have been an issue, particularly in the initial months of operation;
- Passenger complaints about crowded peak trains (most passengers are urban commuters) which had little room for luggage,
- A good competing bus service, and taxis which cost little more if two passengers share. There has also been a significant increase in the number of minibus services providing a convenient means of accessing both the inner city and outlying areas.

[44] Formed by the merger of the State Rail Authority (CityRail and Countrylink) and the Rail Infrastructure Corporation.

Figure 4-5. Passenger Figures for Sydney Airport Link.



Source. The Australian, August 2001.

Patronage has picked up substantially more recently (though no numbers are available) because some of the problems have been overcome, (for example, train information), a boom in air travel including the rise of low-cost airlines, and a successful switch in marketing focus onto single leisure travelers who are more price sensitive than business travelers and more inclined to use rail services. Marketing efforts are now being directed at the inbound market (particularly Melbourne and Brisbane).

Allocative efficiency appears to be poor – substantial resources were devoted to a facility for which there was insufficient demand. Although with hindsight it was a poor investment, its value now, with capital costs being treated as sunk, is improving.

The service has improved accessibility to the airport in peak periods when roads are sometimes congested, and for passengers connecting to other parts of the rail system. Otherwise accessibility is similar to that offered by buses. The fare, given the short distance from the city, is marginally economic for two people traveling together and uneconomic for groups of 3 or more.

Although apparently a viable business in its restructured state, one can infer from available information (despite the lack of firm numbers) that the link to the airport has not provided a reasonable return on the investment. The lessons appear to be that rail connections may not succeed when the alternatives are attractive, that details, (for example, passenger information) need to be carefully considered, and that governments should not announce PPP projects before negotiating the detail.

4.6 Brisbane Airport Rail Link

4.6.1 Background

Airtrain is in effect an extension of the Brisbane rail network between the central business district and Brisbane Airport, Queensland. It began service in May 2001. It links the domestic and international terminals of the airport with the existing metropolitan network. It provides direct rail access to Brisbane's CBD and to the Gold Coast, being integrated into the existing suburban rail system to achieve seamless transfer of passengers. The primary objective was to provide high quality public transport access for air passengers, airport workers and people meeting or seeing off air travelers.

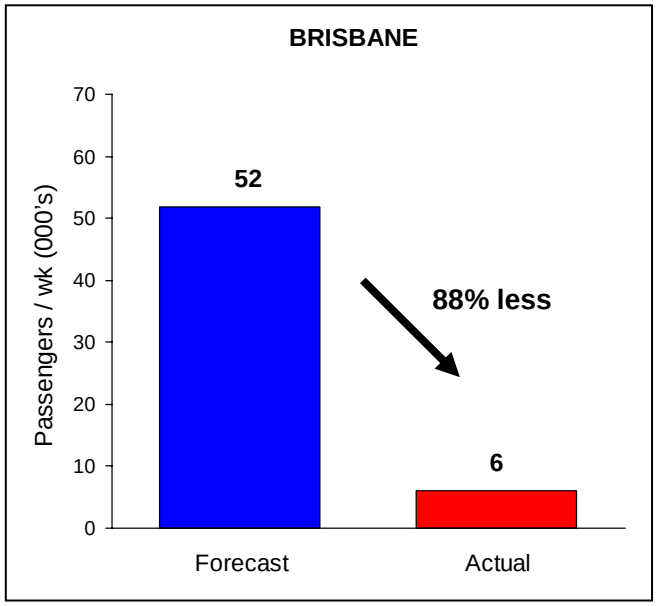
The 8.5km Brisbane Airport Rail Link was built by the private consortium Airtrain Citylink, in a private-public partnership with the Queensland Government. The consortium built the extension at no cost to the state or the vertically-integrated and state-owned railway Queensland Rail (QR), which operates the service. Revenues and operating costs are shared through a formula. The concession period is 35 years.

Construction of the $A223 million track was funded in debt and equity markets and does not receive government subsidies. Nor is there any government safety-net to bail out Airtrain if it is not financially successful.

4.6.2 Experience to Date

Airtrain incurred negative operating margins during its first four years of service. It lost A$205 million in the first four years, including A$125 million in write-offs, and was financially restructured in April 2005.[45] Woefully low passenger numbers (see Figure 4-6), especially during off-peak periods, largely explained the losses. Re-allocating supply to better meet peak demand and reducing services during periods of low demand improved utilization, reduced costs and cut operating losses. Patronage to those stations where an interchange is required is much lower; however, it appears to be working well on those lines where transfers are not required (Ipswich and Gold Coast). Airtrain has specifically been targeting the marketing effort to those lines.

Figure 4-6. Passengers for Brisbane Airport Link.



Source. The Australian, August 2001.

In April 2005, ABN Amro purchased 50 percent of the equity of Airtrain, citing 'great return over the life of the project.' The reasons for institutional optimism stem from strong recent passenger growth and Airtrain's first monthly profit in May 2005. According to Airtrain, passenger numbers have risen by 28 percent in 2005, following a rise of 40 percent in 2004. One of the drivers of growth is the expansion of low-cost airlines such as Virgin Blue and Jetstar, which were not significant in Airtrain's early years.

Airtrain expects nominal costs to grow in line with inflation, while forecasting revenue to grow at least double the rate of inflation because of Brisbane's population growth, large domestic and international passenger growth at Brisbane Airport (17.4 per cent over the 12 months to 31 March 2005 and double digit growth is expected in the future) and the increasing number of employees at Brisbane airport. At present is has 7 percent of the market for trips to the airport, and hopes to increase this to 9 percent within two years.

Important to future growth will be the development of an appropriate value proposition to customers, (for example, core service attributes) and directing efforts at those markets where Airtrain is competitive, (for example, CBD customers that have good access to CBD stations, rail catchment with direct services to the airport and Sydney and Melbourne inbound markets).

[45] The Australian Financial Review, 9 May 2005.

The frequency to Brisbane is every 15 minutes in peak periods and every 30 minutes otherwise. The fare to Brisbane is A$10 and to the Gold Coast is A$20. The alternative is buses with a 30 minute frequency and a fare of A$9, or A$35 to the Gold Coast.

The service has improved accessibility for some passengers because of its connection to the suburban rail network, but the improvement over the bus service is modest.

There is also an additional station development underway which will serve the other end of the airport area adjacent to a range of property developments, including an outlet mall.

Little firm information is available on Airtrain, (for example, actual passenger numbers or financial results) so any conclusions are tentative. Although it is doing better now, it is not clear whether the results justified the initial investment once allowance is made for the cost of capital. Neither is there publicly available information on the financial impact on QR. The project was a technically smooth public private partnership, well integrated with other train services, but has to compete with a good road system in a car-oriented city.

One of the initiatives that is working well is the rail–limo service to the Gold Coast. Initially the train was met by a shuttle bus which was unsuccessful, but the limo is able to provide a train to door service.

It is difficult to isolate those factors contributing to the over-estimation of Brisbane 'Airtrain' capture rate in the demand forecasts. However, it would seem that the design of the demand modeling played an important role in overstating the potential of the rail to capture traffic in its two key markets, (i.e., Brisbane CBD and the Gold Coast).

There are a number of factors contributing to the lower than expected performance of the Brisbane Rail Lines:

- Operational issues – for example, Brisbane 'Airtrain' services do not start early enough to permit potential Gold Coast customers to catch the first international flights departing Brisbane;
- Inadequate and poorly targeted marketing and information have also been significant: - for example, Customers destined for the Gold Coast have missed services as a result of being confused by train destination indicators and by the door opening system.

5 SUMMARY OF KEY FINDINGS

This section consolidates some of the outcomes from rail privatization experience in New Zealand and Australia.

5.1 Freight and Passenger Privatizations

- Privatization of rail freight operators goes hand in hand with market liberalization
  - Liberalization of the transport market in Australia and New Zealand meant that rail had to continue to innovate and improve efficiency to stay viable. Privatization was seen as an opportunity to lock in the gains of government reforms and to bring critical expertise to bear in competing in a deregulated transport environment.
  - Liberalization through vertical separation or though rail access regimes is important for inhibiting rent seeking for traffic where rail has a cost advantage over road, for example, coal, ores, long distance grain
  - In Australia, there has been no evidence of price gouging following privatization due to the extremely competitive market and open access. In NZ, where there is a single private monopoly rail operator, price gouging has also not been in evidence, due to the competitive nature of almost all of the rail transport markets served by rail.

- Industry consolidation is probably an inevitable consequence
  - Rail economics are such that there are significant scale and scope benefits from consolidation, and the consolidation of eight regional modal monopolies into three major carriers in Australia and New Zealand (or four if Toll NZ is separated from Toll's Australian rail interests) was somewhat inevitable. It has created monopoly concerns, partly offset by access regimes and road competition.
- Productive and allocative efficiency inevitably improve
  - There is clear evidence of continuing reforms and efficiency improvements under private ownership, which many believe would not have been possible under government ownership. Although detailed comparative data is not available, the industry view is that the three private rail companies (Pacific National, ARG and Toll NZ) have reformed and improved at a faster rate than QR, the remaining publicly owned railway.
  - There is also some evidence of re-pricing and shedding of uneconomic traffics.
- Creates opportunity for innovation and integration
  - Rail privatizations in Australia and New Zealand have allowed broader transport interests (for example, logistics and shipping companies) to take an ownership stake in the rail sector, driving integration across the supply chain. We now talk of competing supply chains rather than competing transport operators or modes.
- Privatization will not necessarily make low density services economic
  - It may improve the performance of light density lines, but beyond a certain point subsidies may still be necessary if rail services are to be retained.
- Government needs to retain step in rights to the network given its strategic significance to the economy
  - Where governments have a strategic interest in the preservation of the rail network, it is important that they retain some step in rights upon privatization otherwise they may pay a heavy price to re-acquire them subsequently.
- Beware the investment doom loop
  - As in most transport applications, rail achieves lowest cost by moving specialized products with specialized equipment. But specialized rail assets are very long lived and 'stranding risk' can be a material disincentive to investment. In relatively small rail markets, the railway may be reluctant to invest in specialized equipment without long term contracts and the customer(s) may be unwilling to invest in long term contracts if there is only one monopoly rail operator to deal with. Whereas governments might have underwritten such investments in the past, a private sector operator will take a much more commercial approach.
- Sale process can be straightforward
  - Railway privatizations (as opposed to concessions) can be relatively straightforward provided the assets are clearly defined, and there are not too many obligations imposed on the new owners. The standard competitive trade sale approach, with prequalification and shortlists, worked well in New Zealand and Australia.

5.2 Passenger Concessioning

- Passenger rail concessioning is more complex than freight rail privatization because there are multiple aspects to address (for example, subsidy levels, performance, risk allocation, end-of period issues) and because governments typically remain closely interested in day to day operational effectiveness.
- There should be more emphasis on the operational and financial robustness of bids and less on the best financial outcome :

  - Governments cannot contract out of its obligation to ensure continuation of urban rail passenger services. If a private operator fails, the government is politically or legally obliged to intervene. Having the operator on the hook contractually to deliver an unrealistically optimistic business plan is no real comfort;
  - If the operators get into 'survival' mode, or are distracted by continuing disputes, management effort and focus is taken away from improving service performance towards managing for survival – which often will mean managing the funder of last resort – i.e., government;
- If the private sector is to deliver efficiencies, it must be given the capacity to effect reforms. For instance:
  - Care must be take to ensure that the train performance regime does not empower labor unions in a way that frustrates change;
  - The service mix must be able to adapt to changing travel preferences and demographics.
- Risk allocation must be realistic
  - Risks should be allocated to those best placed to bear and manage them, rather than maximizing the transfer away from the public sector. For instance, allocating all revenue risks to private operators, when their ability to meaningfully control some of the drivers of revenue is constrained, may not "stick".
- Passenger rail concessioning can be worthwhile but there are some critical design issues (for example, revenue allocation, asset condition monitoring, risk allocation, regulation) that must be carefully addressed if the process is to be successful.

5.3 Overall Assessment

Overall the rail privatization experience in Australia and New Zealand has been positive, taken in concert with other market and structural reforms. In Australia there is no doubt the largely privatized rail freight industry is stronger today than at any time over the last few decades and is competing aggressively for a greater role in the transport and logistics market.

In the early years post privatization in Australia, most emphasis has been on rationalization of existing services, improving asset utilization, running down excessive inventories and improving profitability. While some segments of the market have been growing and challenging for available capacity, this has typically resulted in internal optimization and rationalization rather than new capital. Locomotive capacity particularly has been scarce. Some market segments are experiencing capacity issues but from the operator's perspective, those segments have not been earning the cost of capital and so have not justified new investment.

In New Zealand, privatization produced efficiency and marketing improvements. We have probably seen both exaggerated highs (overstated profits) and lows (the impact of poor asset management) in performance and expectations. The current model is not ideal but is likely to result in improved volumes and profits.

On the infrastructure side, the experience in Victoria and New Zealand suggests that low-density networks are difficult to commercially sustain whether in public or private ownership. The publicly owned ARTC, which manages many of the higher density interstate rail corridors in Australia, has been cash positive but earns significantly less that the replacement cost of its assets, and over the longer term will require some public funding to sustain and enhance its network. The Australian Government has already committed to significant grants to uplift the quality and performance of the interstate rail network, including improving access into the congested Sydney network. However as volumes increase the commercial performance of the ARTC, which has spare capacity and largely fixed costs, will improve.

In New Zealand, the Government has recently committed to spending NZ$200 million to upgrade and renew the national rail network, a little over a decade on from the initial privatization. As part of the recent deal with government, the above rail operator will invest at least NZ$100m in new rolling stock. While the Government has regained control (and financial responsibility for) the rail network, it remains

to be seen whether future investment can be fully recovered in commercial access charges. As that seems unlikely, the Government will face the challenge of ensuring the benefits of any public investment in the rail network are captured by rail consumers and the community generally and not merely appropriated by the monopoly rail operator.

The budgetary impact of the rail privatizations has overall been positive, both in terms of reduced operating subsidies (whether directly funded or as an opportunity cost through reduced dividends) and reduced calls to fund capital investment. Governments have not removed, and will not be able to remove, themselves entirely from financial responsibility for supporting the rail network, given the lighter average densities prevalent in Australia and New Zealand, but their funding obligations can be more measured and targeted that has been the case historically.

By comparison with outright privatizations, experience with public private partnerships in the rail sector in Australia has, in most cases, not met expectations. In most cases that has been more to do with the seemingly unjustified optimism of their supporters (and willingness of governments to accept that optimism) rather than any inherent flaws in the PPP concept as such. Nevertheless an apparent inability of government review procedures to counter optimism-bias is an important issue to be faced. It is not clear that the projects would have fared any better as public sector projects and from a budgetary perspective, the governments will have been better off, having avoided at least part of the up-front capital investment; once rail infrastructure investment is sunk the community will typically continue to benefit from the investment irrespective of the financial re-engineering that might be required behind the scenes to try and keep the project going. On the other hand, there is an opportunity cost if PPP structures are used to channel public money into uneconomic projects which might not otherwise have been built. Arguably repeated disappointments with PPP rail projects (such as the two airport links described) would push up the cost of capital for future PPP rail investments but ultimately it comes down to the specifics of the particular project and the private sector's understanding of, and ability to effectively price, the risks; and equally importantly, the public sector's willingness and ability to more rigorously to evaluate such proposals.

GLOSSARY

AN	Australian National
APTC	Asia Pacific Transportation Consortium
ARA	Australasian Railway Association
ARG	Australian Railroad Group
ARTC	Australian Rail Track Corporation
ASR	Australian Southern Railway
ATN	Australian Transport Network
AWR	Australian Western Railroad
BOOT	Build, own, operate and transfer
BTRE	Bureau of Transport and Resource Economics
CBD	Central Business District
CSO	Customer Service Obligation
GSR	Great Southern Railway
GWI	Genesee & Wyoming Inc
NR	National Rail Corporation
NSW	New South Wales
NTK	Net tonne kilometers
PN	Pacific National
PPPs	Public Private Partnerships
PSO	Public Service Obligation
PTC	Public Transport Corporation
QR	Queensland Rail
ROA	Railways of Australia
SA	South Australia
TK	Tonne kilometers
WAGR	West Australian Government Railways
WAGRC	Western Australian Railways Commission
WNR	WestNet

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