

Chapter 5 Effective investment and ownership arrangements

Introduction

5.1 This chapter addresses the fourth item in the terms of reference:

Effective investment and ownership arrangements for the rail network.

5.2 Increasing investment in and the scope of ownership of rail is critical to the future of rail transport in Australia. Without substantial investment in rail infrastructure (both existing facilities and the development of new assets), rail's modal share of the nation's transport task is likely to continue to decline, and perhaps disappear in some regions.

5.3 Rail has a dominant role in moving bulk commodities, such as coal, iron ore and wheat to Australia's ports and production centres, and is important in moving intercity freight. Yet as discussed in chapter 2 despite some efficiency gains over the past decade, rail continues to struggle to maintain its share of freight tasks in key corridors. Increasing competition from road transport, facilitated in large part by significant investment in road infrastructure, and inconsistent approaches to funding by Commonwealth and State Governments, operational inefficiencies and insufficient customer focus have contributed to growing rail deficits. Similarly, competition from sea transport in bulk freight movements and air transport in passenger travel have had an impact on rail's share of the nation's transport task.

5.4 This chapter considers how greater investment in public rail assets—and the type of ownership arrangements—could help effect greater utilisation and more efficient use of rail. In particular, it addresses the level of rail investment to date (both public and private sectors), the major issues affecting investment in rail, particularly the disparity in treatment of rail and road transport. It also considers the need for future investment in rail, the potential sources of such investment, and the growing importance of private sector participation. Finally this chapter briefly considers ownership arrangements, and in particular, the benefits and costs associated with private and public ownership of rail infrastructure.

Rationale for investing in rail

5.5 There are a number of strong arguments for increasing investment in rail infrastructure. The most compelling is the need to maintain a diversified and economically efficient national transport system. Given Australia's large land mass, and the significance of rural commodity based products to its economy and export base, efficient long distance land freight is essential both to continued economic development and export growth (Sub 30, *Submissions* p. 332). Rail has a role to play in meeting this task. It is a highly efficient means of hauling freight long distance, including both bulk and non bulk commodities. Rail also provides an energy efficient, low pollution mode of transport—an alternative to the externality costs associated with long distance articulated trucks.

5.6 Another argument for increased investment in rail is that the current condition of the infrastructure penalises users. Substandard track and related infrastructure leads to longer transit times, reduced efficiency levels and service reliability, resulting in higher costs to operators and customers. The Australasian Rail Association (ARA) argued that the benefits of upgrading existing rail infrastructure would be faster transit times, reduced fuel consumption and increased rail productivity (Sub 31, *Submissions* p. 391). The benefits of immediate investment in rail infrastructure could also lead to greater investment, by rail operators and financiers, in the longer run.

5.7 Improvements to existing rail infrastructure, together with improved performance by rail operators, should lead to more efficient use of rail assets, generating economic benefits for service consumers and the wider community. Increased efficiency and lower freight rates could lead to an increased share of freight carried by rail, resulting in savings in road construction and maintenance costs, reduction in road accidents, better fuel efficiency and reduced noxious gas emissions.

5.8 Despite a better safety and environmental record than road transport, rail has continued to lose market share to road transport in major market segments, particularly in the north–south corridor (Brisbane–Sydney–Melbourne). This decline can be attributed in part to improvements in the efficiency, productivity and the flexibility of the road freight industry over the past twenty years (Kain 1995, p. ii). Furthermore the decline in rail's share of the nation's freight task can also be attributed in part to the large investment in road infrastructure in recent decades. This investment has enabled road transport to improve transit times, operating efficiency and cost competitiveness relative to rail. More critically, funding and investment in rail infrastructure have not paralleled that for road infrastructure. (For further discussion on private sector participation see chapter 3)

Urgency

5.9 The arguments for increased investment in rail infrastructure underscore a larger point, namely, the urgency of Australia's rail investment needs. Evidence to the inquiry overwhelmingly supported the view that, without substantial investment in the interstate rail network in the short term and more efficient utilisation of existing rail, major sections of the network will become unsustainable within ten years.

5.10 In this context, it is important to emphasise that the rationale for increased investment in rail is, in part, about averting the potentially enormous costs of reduced rail services between major cities on the eastern seaboard, increasing road construction and maintenance costs, and increasing negative externalities associated with large and growing volumes of road traffic. This prospect is closer to reality than at any time in the past.

5.11 The rationale for increased investment in rail infrastructure is also about enhancing the value of a national asset that retains significant productive potential. If this potential is to be realised by either the public or private sector, upgrading and in some cases replacement, is required. This cannot occur overnight. Without greater urgency in the approach of Commonwealth and State Governments to addressing the inadequacies of public use rail infrastructure, Australia's rail assets may not be able to be salvaged or sold.

Rail investment to date

Historical context

5.12 As discussed in chapter 2, rail in Australia began as private initiatives, although governments were quickly required to guarantee the dividends of private investors and provide additional capital to complete lines. Subsequently governments assumed ownership of rail lines to limit financial exposure and exercise more control over the development of rail assets.

5.13 Funding for rail in the 1950s and 1960s reflected the prevailing view that railways were essentially public services which operated on noncommercial grounds. Through most of this period rail managed to produce a working surplus, covering operating expenses and making some contribution to capital costs. This picture changed dramatically as annual deficits grew through the 1970s, rising to a peak of \$2.7 billion in 1983–84 (1993–94 dollars) (BTCE 1995b, p. 1).

5.14 Rail deficits held stable at around \$2 billion for the remainder of the 1980s, possibly as a result of structural reforms, which included a sizeable reduction in public sector employment in rail, service rationalisation and the privatisation or contracting out of many rail related activities such as rolling stock maintenance and regional passenger services (Kain 1995, p. 19). Despite these productivity and operational gains, rail continued to suffer from lack of political interest in either continuing investment in infrastructure or the development of an integrated land transport strategy.

5.15 In response to industry concerns over government commitment to rail, and the continuing heavy losses of the Australian National Railways Commission (AN) interstate freight services, the Commonwealth and State Governments agreed in 1991 to establish a jointly owned National Rail Corporation (NR) to manage interstate rail freight functions and associated assets. This initiative was followed in 1993 by a Commonwealth commitment of some \$443 million for investment in the standard gauge interstate rail network. For reasons discussed elsewhere, the three governments acting as NR shareholders are now negotiating to sell NR.

Public rail deficit

5.16 Public sector investment in rail has to be understood within the context of the long term deficits incurred by Commonwealth and State owned rail systems. These deficits have placed some constraints on the availability of funding for investment in rail infrastructure, particularly at the Commonwealth level. As a first priority, governments have looked to reduce these deficits, in order to relieve pressure on public coffers and allow for redirection of funds to other programs, such as health, education or other industries. Deficit reduction plans have focused on reducing rail operating costs, interest payments and in some cases, subsidies for community service obligations (CSOs).

5.17 As noted above, the rail deficit hovered around \$2 billion in real terms for much of the 1980s, rising to around \$2.5 billion in 1988–89 (BTCE 1995b, p. xi). Figures provided to the inquiry by the Bureau of Transport Economics (BTE) suggest that the deficit has assumed a downward trend through the 1990s, but nonetheless remains substantial (see figure 5.1). In 1996–97 the deficit was estimated at \$1.36 billion.

Figure 5.1 Rail deficit

Year	Deficit (\$million)
1980–81	691
1981–82	928
1982–83	1225
1983–84	1544
1984–85	1597
1985–86	1724
1986–87	1785
1987–88	1695
1988–89	2074
1989–90	1665
1990–91	1713
1991–92	1660
1992–93	1509
1993–94	1433
1994–95	1620
1995–96	1623
1996–97	1360

Source Sub 105.01, *Submissions* p. 1545.

5.18 According to the Bureau of Transport Economics (BTE), formerly the Bureau of Transport and Communications Economics (BTCE), most of this deficit can be attributed historically to two State rail systems: Victoria and NSW. For example, in 1993–94, NSW and Victoria together incurred a deficit of \$1.33 billion, slightly less than the national total of \$1.43 billion (BTCE 1995b, p. 10). BTCE further argued that urban passenger services account for the majority of the deficit (Exhibit 47, pp. 10–11). The continuing high deficits in public rail means that much of government expenditure for rail is diverted from necessary capital works to offsetting ongoing financial losses and retirement of debt.

Commonwealth investment

5.19 The Commonwealth involvement in rail historically has been shaped by the Constitution and the powers vested in the States to retain control of railways. As a result, the Commonwealth's involvement has largely been confined to:

- ownership and operation of interstate rail assets and certain railway systems ceded to it by the States of SA and Tasmania; and
- implementation of specific initiatives addressing interstate rail issues where jurisdictional limitations have led to inadequate investment and incompatibility in operating systems (such as the lack of uniform gauge on the interstate rail network).

5.20 Commonwealth funding for rail reflects this dual role of service provider on one level, and infrastructure support on the other. As such, Commonwealth funding can be broadly categorised as follows:

- funding annual operating losses of Commonwealth owned rail bodies,
- payments on historical debt carried by these bodies,
- payment of CSOs to Commonwealth owned rail bodies,
- investment in the maintenance of existing rail infrastructure, and
- investment in new infrastructure and upgrades to existing infrastructure.

5.21 Establishing an overall picture of actual public sector spending on rail infrastructure is made difficult by a tendency, reflected in evidence to the inquiry, to blur the distinction between investment in new fixed rail assets, expenditure on maintenance and rail funding in general. Much of the evidence focused on the historically low levels of funding provided by the Commonwealth for rail relative to road. However, this evidence underestimates the extent to which Commonwealth funding provided to the States under general purpose grants has been used for investment in fixed rail assets or for amelioration of losses generated by State rail entities (particularly urban rail systems). The evidence also revealed scant recognition of the impact of CSO payments on rail funding and deficit levels, particularly as these CSOs have not traditionally been counted as revenue by rail bodies.

5.22 The Department of Finance and Administration estimated that over the twenty year period from 1977–78 to 1996–97, the Commonwealth spent a total of \$3.86 billion (1996–97 prices) on Commonwealth rail entities and infrastructure (Sub 56, *Submissions* pp. 745–7). Figures provided to the inquiry by the BTCE suggest that more than half of this funding has been allocated to cover operating losses and historical debt carried by Commonwealth owned rail bodies. The BTCE estimated that, since 1980–81, only \$1.19 billion has been invested directly by the Commonwealth in new fixed rail assets (see figure 5.2). This investment includes major improvements, alterations and addition to existing, fixed assets [such as track, terminals, locomotives and rolling stock], but does not include other types of capital expenditure such as purchase of land or increases in stocks of fuel and spare parts (Sub 105, *Submissions* p. 1380). It does not include funding provided to the States under general purpose grants which may have been used for investment in fixed rail assets.

5.23 Commonwealth funding for rail, including investment in rail infrastructure, has been delivered through a range of mechanisms in annual appropriations (Commonwealth Budget). To date, these appropriations have provided for funding specific entities, such as AN and NR, and specific programs such as the *One Nation* program for rail infrastructure, and the Federation Fund (for example, the Alice Springs to Darwin rail link proposal).

Figure 5.2 Government investment in new fixed rail assets

(*\$million*)

Year	Commonwealth	State and local Government	Total
1980–81	40	496	536
1981–82	58	700	758
1982–83	52	863	915
1983–84	41	939	980
1984–85	23	801	824
1985–86	37	1011	1048
1986–87	35	955	990
1987–88	87	846	933
1988–89	78	692	771
1989–90	98	766	864
1990–91	74	817	891
1991–92	47	994	1040
1992–93	72	1216	1289
1993–94	72	1802	1873
1994–95	91	1693	1783
1995–96	133	1577	1711
1996–97 ^a	318	1283	1600
1997–98 ^b	151	1615 ^c	1766 ^c

a Preliminary estimates as at November 1997.

b Figures for 1997–98 are based on forward estimates.

c The estimate of government rail investment in 1997–98 does not include Victoria.

Note Data may not add to totals due to rounding.

Source Sub 105.01, *Submissions* p. 1539.

Australian National Railways Commission

5.24 The Australian National Railways Commission (AN) was established in 1975 and subsequently assumed control of Commonwealth owned rail operations and those of SA and Tasmania. The Commonwealth provided annual operating supplements and grants to AN through the annual appropriations.

5.25 In the five years to June 1997, the Commonwealth's supplements and grants to AN totalled nearly \$350 million (1996–97 prices). According to the 1997–98 Budget papers, Commonwealth expenditure on AN for 1997–98 is estimated at approximately \$33.4 million.

5.26 In May 1998 the Commonwealth announced that most businesses and assets of AN had been sold with the exception of the interstate track under AN control. The AN interstate track was subsequently transferred to the newly formed Australian Rail Track Corporation (ARTC) in February 1998, with a provision that the Alice Springs to Tarcoola line be made available to the operator of an Alice Springs to Darwin line.

National Rail Corporation

5.27 National Rail Corporation (NR) was established in 1991 to provide national, interstate rail freight services. As the majority shareholder in NR, the Commonwealth agreed to contribute assets and equity funding plus pay transitional subsidies during an establishment period of five years. The other shareholders, NSW and Victoria, also agreed to these terms and conditions in return for relinquishing responsibility of their interstate rail freight functions to NR.

5.28 According to NR, the Commonwealth and State shareholders agreed to subscribe cash equity totalling \$406.5 million to establish the company, replace locomotives, wagons and information systems, and upgrade terminals. Of this initial outlay, the Commonwealth subscribed \$295.8 million, with NSW and Victoria contributing \$75.6 million and \$35.1 million respectively. The shareholders also agreed to transfer selected nominated assets (locomotives, wagons and terminals) to NR in exchange for further equity. Associated with the transfer, shareholders agreed to make wedge payments to NR to compensate the company for the cost of transferred functions over a set period (Sub 26, *Submissions* p. 266).

5.29 NR's three shareholders are now consulting on the decision to sell NR. At the time of writing, the Office of Asset Sales had completed a scoping study of NR's assets, but agreement has yet to be reached amongst shareholders on satisfactory asset transfer. Reflecting the Commonwealth's decision to proceed with sale of its shareholding, Commonwealth expenditure on NR in 1997–98 is expected to fall to \$16.1 million (Commonwealth of Australia, Budget Strategy and Outlook 1998–99, pp. 4-96). It should be noted that since the establishment of NR, the interstate rail deficit has substantially declined.

One Nation infrastructure program

5.30 Following the *One Nation* Economic Statement in February 1992, the Commonwealth appropriated funding for a major program of investment in Australia's national rail network. Significantly, the planning of *One Nation* program expenditure was done on a corridor by corridor basis rather than State by State. A total of \$443 million was spent on rail through the *One Nation* program from June 1992 to June 1995. NR assumed program responsibility for some \$356.6 million of the *One Nation* program funding directed to:

- upgrading tracks and bridges
- improving tracks and gradients
- constructing more and longer crossing and passing loops
- creating dedicated freight lines in heavily congested areas
- upgrading freight terminals, in particular at South Dynon in Victoria
- improving rail–port links
- removing the last height restrictions for double stack containers west of Adelaide (Sub 56, *Submissions* pp. 749–50).

5.31 Funding for the *One Nation* program was completed in June 1995, with the expectation that States would maintain the interstate track within their jurisdictions. To its credit, the *One Nation* program marked the completion of the standard gauge linkage between Brisbane–Sydney–Melbourne–Adelaide–Perth, first proposed in 1927.

Australian Rail Track Corporation

5.32 Following the Rail Summit in September 1997, the Commonwealth agreed to provide up to \$250 million over four years from 1998–99 for capital expenditure on the mainline track. The Commonwealth has made this funding available on the condition that satisfactory access arrangements and plans for investment and harmonisation of regulatory and operations requirements are in place (Australian Transport Council, *Communique*, 10 September 1997, p. 2). This money is to be managed by the ARTC, which formally commenced operations on 1 July 1998.

Federation Fund

5.33 The 1997–98 Commonwealth Budget provided \$1 billion for the establishment of a Federation Fund to finance major infrastructure and development projects of national significance. Rail projects are eligible for this funding. In September 1997 the Commonwealth undertook to contribute \$100 million of the Federation Fund toward the proposed Alice Springs to Darwin Railway, conditional on private sector funding (Sub 73, *Submissions* p. 1008).

State investment

5.34 Assessing and comparing the levels of State investment in rail infrastructure over a given period is particularly difficult. Data on State rail expenditure often does not identify expenditure on capital works or new assets.

5.35 Where data is available, significant differences in the financial accounting and reporting procedures of State rail authorities make it hard to compare and contrast figures. Consequently, any comparison exercise must be undertaken with caution.

Figure 5.3 State and local government investment in new fixed rail assets

(*\$million*)

Year	New South Wales	Victoria	Queensland	Western Australia	Total
1980–81	246	124	82	44	496
1981–82	325	154	182	38	700
1982–83	273	218	319	52	863
1983–84	392	240	292	15	939
1984–85	434	134	210	22	801
1985–86	528	101	360	22	1011
1986–87	419	100	404	31	955
1987–88	412	99	306	29	846
1988–89	354	83	188	67	692
1989–90	423	84	121	138	766
1990–91	503	75	169	69	817
1991–92	532	80	258	124	994
1992–93	699	48	272	197	1216
1993–94	1052	68	582	99	1802
1994–95	805	84	749	54	1693
1995–96	824	71	623	60	1577
1996–97 ^a	576	87	511	107	1283
1997–98 ^b	725	n.a.	738	152	1615

a Preliminary estimates as at November 1997.

b Figures for 1997–98 are based on forward estimates but does not include Victoria.

n.a. not available.

Note Data may not add to totals due to rounding.

Source Sub 105.01, *Submissions* p. 1541.

5.36 Data provided to the inquiry by the BTE serves as a useful overview of the magnitude of State investment in rail infrastructure in Australia. According to the BTE, State and local governments accounted for about 90 per cent of total public sector expenditure on new fixed rail assets in each of the years from 1980–81 to 1996–97 (Sub 105.01, *Submissions* p. 1539). Most of this investment was made by State governments, reflecting the dominant role of State governments in the rail industry (see figure 5.2).

5.37 Of State and local government investment in rail since 1980–81, four States appear to have accounted for all non Commonwealth expenditure: NSW, Victoria, Queensland and WA (see figure 5.3). Through most of this period, NSW had the highest level of investment in new fixed rail assets, followed by Queensland, Victoria and WA in that order. This reflects the importance of rail transport to key industries (mainly coal) in NSW and Queensland, but also the relative sizes of the networks in those States compared to other States. According to the BTE, forward budget estimates released by the Queensland Government indicated that Queensland would lead all States in investment in new fixed rail assets for the first time in 1997–98, with planned expenditure totalling \$738 million (slightly higher than the NSW figure of \$725 million) (Sub 105.01, *Submissions* p. 1540).

Private sector investment

5.38 Private sector investment in rail transport has been somewhat limited to date due to the extent of public ownership and operation of public use rail assets. There has, of course, been major private sector investment in private use operations such as the iron ore railways in the Pilbara area and the sugar cane railways in Queensland.

5.39 Recent restructuring and privatisation of publicly owned rail authorities have created the opportunity for the private sector to become more involved as an investor in public use rail assets (that is, assets not dedicated to specific private operations). Increased opportunity for private sector investment is being driven by a number of factors, including pressure placed on governments to reduce losses of publicly owned transport enterprises, more open access and competitive neutrality from implementation of the Competition Principle Agreement, and a general questioning of government's role as infrastructure owner and service provider.

5.40 In the 1990s private sector participation in rail transport occurred under different options (see chapter 3 for details). Investment in these can be broadly defined in the following way:

- private railways, such as those owned by BHP Iron Ore Pty Ltd and Hamersley Iron Pty Limited in the Pilbara area in WA, developed and operated for the sole benefit of the owner;
- public use rail assets, both through privatisation (for example, the purchase by Australia Southern Railways of the Commonwealth owned freight rail services formerly operated by AN) and new operators on public use rail infrastructure;
- development and operation of new rail assets on a build own operate transfer (BOOT) basis, such as the New Southern Railway and the Brisbane Airport Rail link; and
- development and operation of new rail assets on a build own operate (BOO) basis, such as the Skitube.

5.41 Obtaining an estimate of overall private sector investment in rail is made difficult by a number of factors. These include the scope of private sector participation, which ranges from owner–operator to lessee–operator of public use rail assets. A further factor is the extent to which rail related investment made by firms, including in non transport classified industries, are included in official statistics. For example, expenditure on construction of a railway siding by a company at its factory is likely to be regarded as investment in manufacturing activity (rather than rail) in official Australian Bureau of Statistics (ABS) data.

5.42 In evidence to the inquiry, the BTCE provided estimates of non government sector investment in new rail fixed assets, which are reproduced in figure 5.4. These figures are based on survey work carried out by the ABS which collects data on all firms known to be making large investments in transport plus a sample of the smaller firms. The ABS survey covers private sector investment in private rail operations plus any investment in assets for use in conjunction with publicly owned rail assets (for example, private rail terminals or rolling stock). It is not clear whether these figures include investment by the sugar industry in rail lines in Queensland or private iron ore rail operations in WA because of confidentiality provisions attached to ABS data.

Figure 5.4 Private sector new fixed capital expenditure for the transport and storage industry

(*\$million*)

Year	Rail	Other transport and storage industry	Total transport and storage industry
1987–88	105	1444	1549
1988–89	13	2244	2257
1989–90	2	1957	1959
1990–91	1	2106	2107
1991–92	0	1539	1539
1992–93	0	1321	1321
1993–94	0	1776	1776
1994–95	...	2786	2786
1995–96	...	3298	3298
1996–97	2	3302	3304

... Less than \$0.5 million.

Note Data may not add to totals due to rounding.

Source Sub 105.01, *Submissions* p. 1543.

5.43 As noted elsewhere, the figures show the value of new assets, including any major improvements, alterations or additions to existing assets. They do not show maintenance expenditure and do not include the purchase or transfer of second hand assets.

5.44 The BTCE figures cited in figure 5.4 show private sector investment in new fixed rail assets has been negligible, both in real terms and as a proportion of total investment in rail, since 1989–90. By contrast, private sector investment in the overall transport and storage sector has been quite significant, increasing from \$1.5 billion in 1987–88 to some \$3.3 billion in 1997–97 (Sub 105.01, *Submissions* p. 1543).

5.45 Together, these figures suggest that there has been very little upgrading of private rail over the last decade, and that there has been no significant investment in new assets for use on government systems (Sub 105.01, *Submissions* p. 1543). As noted earlier, it must be emphasised that these figures are based on official data provided to the ABS. They do not reflect the substantial investment made by mining interests, such as BHP Iron Ore and Hamersley Iron Pty Limited in their privately owned rail operations (both above and below rail) in the past decade, nor do they reflect investment in new fixed assets (such as rolling stock) by the Queensland sugar cane industry.

5.46 The relatively low figures also are consistent with the trend of increasing private rail operations on public use rail infrastructure. According to the BTE, it 'suggests that the private rail services are using assets that are leased or hired, and that they have yet to make any significant investments in rolling stock, terminals or other rail assets.' (Sub 105.01, *Submissions* p. 1543)

5.47 More importantly, the BTE figures reflect the fact that there has been little direct investment by the private sector in public use track and related infrastructure to date. This is of some concern to the committee as private operators on rail and user groups who, as customers, are direct beneficiaries of rail upgrading, are both potential significant sources of investment in rail infrastructure.

Major issues affecting investment

5.48 A number of issues need to be considered in addressing the adequacy and effectiveness of investment in rail transport in Australia. The most important issue is the extent to which there is a level playing field for land transport, in terms of the equality and consistency of treatment of road and rail, and the potential competitive disadvantages any tilt may have for rail. Evidence to the committee argued overwhelmingly that private sector investment in existing rail infrastructure would not occur until the issue of road and rail treatment was adequately addressed.

5.49 A further issue is the extent to which the rail environment provides certainty for potential operators and investors. This relates directly to government policy and practice, including financial and political commitment to ensuring rail continues to form an integral part of the interstate and intrastate transport system. It also relates to the 'enabling' environment that government creates for industry participants, in terms of incentives, assistance and initiatives in other areas (for instance, town planning and environmental regulations).

5.50 The poor standard and condition of much of the 'public use' rail infrastructure necessitates, and to some extent, discourages greater investment in public use rail assets. Decline in the quality of service, including transit time, reliability and frequency of service has contributed to a shift in modal share toward road transport. Lack of available funding to maintain infrastructure at adequate, if not international best practice standards, further contributes to poor utilisation and efficiency.

5.51 Another issue is the extent to which government treatment of transport modes, in terms of taxes and charges, and funding for provision of infrastructure, has an impact on the competitiveness of rail. The question of competitive neutrality between rail, road, sea and air services bears directly on the longer term viability of rail, and the extent to which future investment can be justified.

5.52 The adequacy and efficiency of the existing infrastructure, the costs of using that infrastructure, and indeed the support given to other transport modes, are all part of a more central issue affecting rail investment, that is, the extent to which investment in rail can generate returns on a commercial basis or can provide net economic benefits.

5.53 As private sector participation in the funding and provision of rail services increases, and publicly owned railways become subject to commercial pressures, the question of the viability of rail services becomes more critical in decisions on whether or not to invest. Private sector investment can only be expected to occur where reward exceeds risk. Similarly, public owned rail bodies that operate as government business enterprises (GBEs) are bound by commercial requirements to maximise return on their investments.

5.54 On the other hand, governments may choose to invest in rail infrastructure where there are net economic benefits, for example in ensuring that allocation and utilisation of resources associated with provision of a community service are improved. In reality, in the absence of adequate methods for costing positive and negative environmental and social externalities associated with rail investment, governments have found it difficult to calculate the net economic benefits which may justify further investment in rail infrastructure. Nevertheless, governments, unlike private companies, have a responsibility to the community so that social as well as economic net benefits are considered in evaluations of expenditure or investment options.

Rail and road

5.55 One of the important issues affecting investment in rail is the apparent absence of a level playing field for land transport competition, otherwise referred to as the lack of competitive neutrality between road and rail.

5.56 Competitive neutrality refers to the existence of non discriminatory or uniform regulatory and other requirements imposed on all participants in a particular market. Although the term 'competitive neutrality' was originally invoked in the context of public sector competition against private sector business, it has been argued that the principles of competitive neutrality should apply more generally to any two (or more) industries competing for a particular market.

5.57 Macquarie Bank Limited (Macquarie Bank) argued that there is a growing recognition by policy makers that 'price distortions arising from an asymmetrical treatment of competing sectors leads directly to resource misallocation and hence to diminished national output and suboptimal productivity.' (Sub 30, *Submissions* p. 339)

5.58 In the case of land transport, intermodal competition exists between road and rail in long distance land freight and interurban passenger transport. Achieving competitive neutrality means establishing a level playing field, in terms of the consistency of regulatory arrangements, taxation, and level of direct and indirect government support applied across industries. In the case of road and rail transport modes, Macquarie Bank suggested that the principle of competitive neutrality requires that:

- charges for road and rail should be free of explicit or implicit subsidies, or at the very least, should be entitled to equivalent levels of subsidy;
- charges for road and rail should include full recovery for all external costs such as air pollution and other environmental effects, noise, accidents and congestion; and
- road and rail projects should be evaluated and ranked on a consistent basis, and should receive funding on a basis that is consistent with that ranking from the most appropriate source (Sub 30, *Submissions* p. 339).

5.59 At present these principles would appear not to apply to government treatment of rail and road transport in Australia. Disparities in the level of investment in rail and road infrastructure constitute an obvious, initial inequity. Rail competitiveness is directly affected by continued upgrading and improvement to road infrastructure, resulting in continuing gains in road transit time, fuel efficiency and user convenience. Conversely, inadequate investment in rail infrastructure contributes to lower rail efficiency and higher costs for rail operators, further reducing the competitiveness of rail services.

5.60 Another significant disparity may exist in the way governments seek to recover the costs of providing rail and road public assets. A number of witnesses argued that road use is effectively subsidised through the absence of adequate cost recovery for provision of road infrastructure. For example, FreightCorp maintained that roads are viewed as a 'public good' and not deemed to be commercial assets, whereas rail authorities are commonly required to obtain a rate of return on rail infrastructure assets (Sub 43, *Submissions* p. 573). Similarly, Tranz Rail Limited argued that the cost of capital of road assets needs to be included in the costs that are recovered from road users in order to provide for more intermodal equity (Sub 22, *Submissions* p. 220).

5.61 There is also inconsistency in the approach of Commonwealth and State Governments to assessing the net benefits of rail and road development. ARA noted that the present approach applies broad social and economic criteria to road funding, but narrow commercial analysis to rail projects (Sub 31, *Submissions* p. 373). A broader approach to rail development would include assessment of transport cost externalities (noise and air pollution, accidents and congestion) and community service obligations, such as providing access to affordable transport. The need for more consistent application of evaluation criteria is considered further below.

Rail and road infrastructure investment

5.62 The most significant difference in the treatment of rail and road transport by Commonwealth and State governments has been the level of funding made available for investment in infrastructure in each mode. As noted above, the long term disparity has resulted in a vastly improved road system (benefiting road users in terms of improved transit times, fuel efficiency, reliability and safety) and a contrasting decline in the condition, and hence efficiency and effectiveness, of Australia's public use rail infrastructure.

5.63 In evidence to the inquiry, the Department of Finance and Administration estimated that over a twenty year period from 1977–78 to 1996–97, the Commonwealth spent some \$3.86 billion (1996–97 prices) on Commonwealth rail entities and infrastructure, compared to some \$31.5 billion in funding for road infrastructure (Sub 56, *Submissions* p. 745). Of course, these figures do not take into account Commonwealth funding made available to the States under general purpose grants, which the States are free to allocate to investment in State rail systems or elsewhere subject to each State's priorities.

5.64 Nonetheless, it is argued that total public sector investment in rail (Commonwealth, State and local) has been a fraction of total public sector outlays on road infrastructure over the past decade. According to BTE estimates, total investment in new fixed rail assets by the public sector (including Commonwealth, State and local governments) from 1987–88 to 1996–97 totalled approximately \$12.75 billion (Sub 105.01, *Submissions* p. 1538), compared to some \$55.39 billion on road related expenditure (BTCE 1998, p. 1).

5.65 The disparity in funding for road and rail infrastructure reflects fundamental differences in the way benefits and costs of road and rail projects are assessed, and the way in which distortions have arisen. In evidence to the inquiry, the ARA cited the example of proposed rail and road upgrades on the Melbourne–Adelaide corridor:

Two projects [concrete sleepers/track upgrades and Adelaide Hills access] on the Melbourne-Adelaide line could reduce rail transit times by three hours for a cost of \$130 million. Yet \$138 million is being spent on road improvements in the Adelaide Hills to reduce travel times by ten minutes. (Sub 31, *Submissions* p. 391)

5.66 The longer term effect of this disparity in road and rail funding has been to reduce the ability of rail to compete with road transport in all markets, including those where rail retains relative competitive advantage (such as long haul freight). In this context, Macquarie Bank argued that long term imbalances in road and rail infrastructure investment has had a 'compound' effect on the Australian rail industry.

The impact of this funding imbalance has been to create a self perpetuating 'vicious cycle' for Australian rail investment. Bearing in mind that modal preference is driven not only by price but also by service characteristics such as transit time, reliability, frequency of service and security. The duration and magnitude of the funding imbalance has resulted in a rail system that is poorly equipped to compete against a well maintained and frequently upgraded road system. (Sub 30, *Submissions* pp. 334–5)

5.67 Rail 2000 Inc. (Rail 2000) argued that as 'long as the national rail system is starved of investment there is little likelihood of it ever being able to realistically compete in the land transport market.' (Sub 47, *Submissions* p. 610)

Rail and road charges

5.68 The playing field between rail and road is also affected by the nature and level of charging regimes applied to each mode. As suggested earlier, it has been argued that road transport may have a competitive advantage over rail in that road users are not levied with an infrastructure charge in most cases (with the exception of toll roads), unlike rail operators who pay for access to rail infrastructure. However, it can also be argued that road operators pay for use of road infrastructure in other ways, such as vehicle registration.

5.69 In this context, it is important to note that the taxes and charging regimes applied to the various transport modes in Australia have a number of components, each of which must be taken into account when assessing the overall consistency or equity of tax and charging arrangements. These other components include fuel taxes, vehicle registration, sales tax, operational charges and taxes on externalities.

5.70 Material provided to the inquiry by the BTCE provides a useful overview of the main differences or disparities in transport charging regimes for rail and road (Exhibit 42, pp. 8–9). Figure 5.5 provides a highly aggregated picture of present taxes and charges applied to transport modes. A shaded area means only that some tax or charge exists for that category. It does not necessarily mean that the tax or charge is comprehensive, adequate or appropriate. What is immediately apparent from figure 5.5 is the absence of imposts on the use of road infrastructure, sales tax and vehicle licences for rail operators, and on externalities (noise/air pollution, and congestion) for both rail and road.

5.71 The evidence before the committee does not provide for a comprehensive, systematic and reliable analysis of all taxes and charges paid by road and rail transport. Consequently, the committee is not in a position to offer a definitive evaluation of tax and charging regimes applied to both forms of transport. In the final analysis, both industries may be better served if governments examined all taxes and charges applied to transport in Australia, the distorting effects of those charges on modal choice and the implications for resource allocation to and investment in land transport in general. Road and rail transport (as well as air and sea transport industries) would also benefit from a more consistent and coherent approach to the applying taxes and charges across the four modes.

Figure 5.5 Australian domestic taxes and charges on transport

Levied on	Road	Rail	Air	Sea
Use of infrastructure				
Fuel				
Vehicle		a		
Operations				
Externalities				

a Rail is exempt from sales taxes on locomotives and rolling stock.
 Source BTCE 1997, p. 8.

Infrastructure use

5.72 As detailed in chapter 4, rail operators pay access charges for use of rail infrastructure. This is generally based on a fixed charge depending on the type of train, as well as a variable charge based on the length and weight (usually gross tonne kilometres) of the train.

5.73 In comparison, road users do not bear charges for the use of road infrastructure outside of toll roads in two States. However, road users do contribute to the costs of road infrastructure through heavy vehicle registration charges, which are determined by the National Road Transport Commission (NRTC) and levied by State governments. These are included in figure 5.5 under 'vehicle' as they are essentially a proxy charge—that is they do not vary with actual usage of roads. There is a perception that road users also contribute indirectly to the cost of road infrastructure through fuel taxes (see box 5.1).

5.74 According to the BTCE, the present system of heavy vehicle registration charges essentially distributes total road expenditure among different heavy vehicle classes according to average mass and average distance travelled. These costs are then allocated to heavy vehicles through an annual registration fee (BTCE 1997, p. 11).

5.75 Basing charges on averages can create equity problems, for example, with respect to large variations in annual distances travelled by vehicles within a class. ARA pointed out that the class average methodology adopted by the NRTC assumes that all vehicles within a class can be attributed the same amount of road costs. However this is inappropriate because virtually no vehicles travel at the class average mass (Sub 31, *Submissions* p. 386). In particular, ARA argued that the use of average mass and distance for heavy vehicles, such as six axle articulated trucks, leads to major distortions in truck road access pricing.

Road user charges based on class mass averages discriminate against lighter, shorter distance vehicles both between vehicle classes and within a class of vehicles. Lighter vehicles travelling short distances subsidise heavier vehicles travelling longer distances, the latter in direct competition with rail. (Sub 31, *Submissions* p. 386)

5.76 The limitations of the NRTC heavy vehicle road charges, and in particular its distorting effects on allocation of road costs, were taken up by the Macquarie Bank. It noted that the current fee structure effectively ensures that short haul trucks subsidise long haul trucks.

- Heavy vehicles with the same capacity pay the same fixed registration fee, regardless of length of haul, which does not adequately take into account the fourth power rule of axle load and the externalities associated with greater use of long haul trucks (for example, bridge strengthening, easing of alignments, noise, safety and pollution).
- Fuel excise (the variable component of the heavy vehicle charge) also fails to adequately take into account the fourth power rule, as fuel consumption does not vary with mass as dramatically as pavement damage (Sub 30, *Submissions* p. 345).

5.77 In evidence to the inquiry, Rail 2000 emphasised that the two component, heavy vehicle charging system is not sufficiently flexible to match total allocated road costs with road user charges and is also unable to provide a consistent recovery of full road costs (Sub 47, *Submissions* p. 633).

5.78 It argued further that the under recovery of costs chiefly benefits long haul articulated trucks, rail's main freight competition, by anywhere up to 20 cents per kilometre for B-doubles and road trains.

Box 5.1 Fuel excise—disarming the perception

The Commonwealth levies excise on fuel as part of its total tax structure. The receipts from fuel excise go into general revenue to fund a wide range of Commonwealth outlays. The hypothecation arrangements of the 1980s have been progressively diluted and modified to the point where they have been discontinued.

It is not appropriate to argue, as witnesses did in this inquiry, that rail should be exempted from fuel excise as it should not have to subsidise the road industry. At the Commonwealth level fuel excise (by rail or road) does not directly fund roads. The fuel excise goes into consolidated revenue.

Despite the Commonwealth discontinuing the hypothecation (earmarking) of a proportion of fuel excise for roads, there is a strong perception in the community that hypothecation is still applied. The perception of a link between fuel excise and road funding (strongly claimed by road lobby groups and by a number of rail groups) creates an expectation within the community that the Commonwealth has financial capacity to spend more than it does by virtue of the revenue it generates from fuel excise. At the Commonwealth level the amount of funding made available for roads or rail has no direct connection to the level of revenue generated from fuel excise.

This committee made these points in its last report entitled *Planning not Patching*. The committee emphasises that it is important that the facts regarding fuel excise are accurately represented, particularly the fact that fuel excise raised at the Commonwealth level is collected as general revenue and is not earmarked for expenditure on roads.

5.79 However, a number of witnesses conceded that a flat or 'across the board' increase in road charges is not a recommended remedy for the under recovery of costs associated with long distance trucks. This would also penalise those road users who are already paying more than their allocated share of road costs, such as short haul delivery vehicles (Sub 47, *Submissions* p. 614). The recommended solution is to refine the charging system to more closely align charges with the actual costs of different types of road transport operations. A number of witnesses advocated the introduction of a mass distance charging regime for road vehicles (Sub 30, 47, *Submissions* pp. 345, 633).

5.80 The committee considers that the Commonwealth must address the imbalances in the existing approach to road and rail infrastructure charges to facilitate a more level playing field for land transport. If rail is to retain and potentially increase its share of the freight transport task, that is, become more competitive with road transport, then greater attention needs to be focused on reducing the disparity in infrastructure costs borne by rail and heavy vehicles. This means more accurately aligning the price charged for the use of transport infrastructure with the actual cost of using the infrastructure.

5.81 Recommendation 12

The committee recommends that the Commonwealth develops a more consistent, equitable approach to transport infrastructure charges to ensure competitive neutrality between modes.

Vehicle and operation

5.82 Rail operators are not specifically charged for ownership or operation of locomotives and rolling stock. Driver licences are not required for train operation. Rather, rail organisations directly bear the cost of driver training and accreditation. Further, rail operators do not pay sales tax on any purchase of locomotives, rolling stock, parts and equipment. These concessions are important, given the capital costs of rail inputs, and the imputed costs of externally administered driver training requirements. NR estimated that the loss of sales tax exemption alone would increase its annual operating expenditure, including the impact of higher capital costs, by some \$25 million (Sub 26, *Submissions* p. 254).

5.83 In terms of road transport, a major charge on vehicles is registration fees. These serve several purposes, including providing a means of vehicle identification, conferral of ownership and ensuring minimum safety and operating standards. Heavy vehicle registration fees also contribute to the costs of road infrastructure provision, based on the NRTC's nominal road user charge (as noted above).

5.84 A further significant vehicle charge imposed on road transport is sales tax, which is applied to cars and trucks as well as auto parts and accessories. Sales taxes on vehicles are mainly used as revenue raising mechanisms. No estimates on the amount of sales taxes paid by vehicles were provided to the committee, however, ARA argued that factoring such a tax into calculations of road access fees was unlikely to significantly alter the disparity in road and rail infrastructure charges (*Transcripts*, p. 1230).

Externalities

5.85 In general, negative externalities occur where the activities of one individual impose costs on another, and where those costs cannot normally be compensated through the market mechanism. In the absence of specific property rights, externalities can be 'internalised' by imposing corrective taxes on those activities (the 'user pays' principle). The main types of externalities imposed by transport are congestion, noise, environmental pollution and accidents (see chapter 2 for further discussion).

5.86 At present, no taxes or charges are applied to externalities generated by either rail or road transport. While this confers equal treatment on both transport modes, and as such can be considered neutral, it may also potentially disadvantage rail transport. A number of witnesses, such as Rail 2000, noted that the contribution of rail to externalities such as noxious emissions, congestion and accidents is likely to be significantly smaller than that of road transport, creating an implicit competitive advantage for rail that is not captured under the current charging regime (Sub 47, *Submissions* pp. 616–17).

Evaluation criteria for rail and road investment

5.87 The lack of competitive neutrality between road, rail and sea transport is an important contributing factor to the lack of investment and investor interest in public rail. Another important factor, which reflects the broader disparities in government treatment of transport modes, has been the rather inconsistent approach of Commonwealth and State Governments in assessing the value of maintaining and developing public transport assets.

The present approach to transport funding by the Federal and State Governments applies broad social and economic criteria to road funding, but narrow commercial analysis to rail freight projects. Consequently, the significant benefits rail transport can provide in terms of reduced congestion, pollution, greenhouse emissions and accidents are too often overlooked. If equivalent evaluation criteria were applied to all rail and road projects, rail projects may be viable alternatives to road projects because of the economic and social benefits they would provide. (Sub 52, *Submissions* p. 693)

5.88 In assessing the efficiency of freight services provided by rail and long distance trucks, Commonwealth and State governments have tended to underestimate, or omit to value, relevant externalities, on the grounds that such factors are often impossible to quantify accurately. However, omission of such costs implies that they are of neutral or little value, which may distort total cost benefit analyses of road and rail development proposals, potentially to the detriment of rail.

5.89 In the context of land based transport, the main categories of external costs that need to be considered are:

- accidents and fatalities involved in rail freight relative to long distance trucks,
- pollution and energy consumption associated with a given freight task undertaken by rail compared to road, and
- costs of congestion and infrastructure maintenance associated with a given freight task when undertaken by rail relative to that generated by road.

5.90 In evidence to the inquiry, Rail 2000 argued that the inclusion of relevant externalities in the economic evaluation of projects competing for funding would be likely to reduce the benefit cost ratio of any road project and enhance the relative position of rail, particularly in regard to long distance articulated trucks (Sub 47, *Submissions* p. 637).

5.91 Rail 2000 suggested that if environmental externalities (principally exhaust emissions and greenhouse gas emissions) were factored into the total costs of rail and road transport, rail's cost competitiveness relative to road would improve. As an example, it illustrated that rail's relative advantage in terms of fuel efficiency could be exploited through application of a greenhouse gas or carbon tax.

Based on a hypothetical 'carbon tax' on diesel fuel, set at 14.8 cents per litre, a transport task of 100 net tonne kilometres (NTK) could be expected to cost a six axle articulated truck 0.51 cents per NTK, a double road train 0.30 cents per NTK and rail transport 0.15 cents per NTK. (Sub 47, *Submissions* p. 617)

5.92 Macquarie Bank noted that other externalities generated by rail are often some fraction of those attributable to articulated trucks (Sub 30, *Submissions* p. 340). In terms of accident costs, Macquarie Bank noted that while road freight accounts for only 55 per cent of the total land freight task, it has been estimated that it is responsible for 88 per cent of the total accident costs associated with land freight transport (Sub 30, *Submissions* p. 341).

5.93 It cited a Monash University study, which estimated that factoring in road safety costs to heavy vehicle road use charges would translate to 7.6 cents per kilometre surcharge for articulated trucks (Sub 30, *Submissions* pp. 341–2).

5.94 Given the real economic, social and environmental costs of traffic congestion, noise and air pollution and accidents, there is a strong case for Commonwealth and State Governments to develop broader evaluation criteria for transport funding that identify these costs, and where possible, seek to minimise them. The committee considers that the use of more comprehensive evaluation might, in some cases, lead to more integrated investment decision making (to the benefit of rail and road transport). To this end, the committee supports the view presented by ARA that:

Comprehensive evaluation criteria would see some rail projects considered as road projects because of their benefits to the road network in terms of reducing congestion, pollution, and road accidents by getting traffic (passengers or freight) off roads onto rail. In other words, the positive social benefits that are attributed to road projects are equally attributable to rail projects. (Sub 31, *Submissions* p. 390)

Other issues affecting investment

5.95 A number of other issues needs to be considered in addressing the adequacy and effectiveness of investment in rail transport in Australia. One issue is the extent to which the rail environment provides certainty for potential operators and investors. This relates directly to government policy and practice, including financial and political commitment to ensuring rail continues to form an integral part of the interstate and intrastate transport system. It also relates to the 'enabling' environment government creates for industry participants, in terms of incentives, assistance and initiatives in other areas (for instance, town planning and environmental regulations).

5.96 The poor standard and condition of much non urban, public rail infrastructure necessitates, and to some extent, discourages greater investment in public use rail assets. Deterioration in service levels, including transit time, reliability and frequency of service has meant a gradual shift in demand toward road transport. Lack of available funding to maintain infrastructure at adequate, if not international best practice standards, further contributes to poor utilisation and efficiency.

5.97 The adequacy and efficiency of the existing infrastructure, the costs of using that infrastructure, and indeed the support given to other transport modes, are all part of a more central issue affecting rail investment—that is, the extent to which investment in rail can generate returns on a commercial basis and be economically justified. As private sector involvement in the funding and provision of rail services increases, and publicly owned railways become subject to commercial pressures, the question of viability becomes more important.

Need for certainty

5.98 At a fundamental level, one of the most important issues affecting investment in rail has been the lack of certainty in the rail operating environment. This uncertainty has stemmed from a history of transport planning and policy that has lacked integration and a clear vision of rail's function in the national transport task. Uncertainty has also resulted from the lack of clarity in the role and responsibility of Commonwealth and State Governments in ensuring that rail remains a viable part of the national transport system. This is reflected in the fragmented and inconsistent regulatory and policy approach to rail, both within and between States, and the shifting approach of government toward infrastructure service provision.

5.99 The lack of certainty is reflected in the largely inconsistent, start–stop commitments to rail infrastructure investment by Commonwealth and State Governments over past decades. With the exception of the *One Nation* program, Commonwealth funding for investment in national rail infrastructure has been at best piecemeal, at worst nonexistent. State government approaches to infrastructure investment also lacked consistency. Investment in urban rail systems has not been matched by capital expenditure on intrastate networks, perhaps with the exception of Queensland and in a few areas in NSW and WA.

5.100 The uncertainty created by inconsistent approaches to rail infrastructure investment by governments has been compounded over time by disproportionate funding for road infrastructure. ARA noted that at the Commonwealth level, funding for road infrastructure has been of the order of \$32 billion since 1975, compared to some \$1.6 billion for interstate mainline rail infrastructure (Sub 31, *Submissions* p. 390).

5.101 As noted earlier, while the Commonwealth does provide State Governments with general purpose grants (which could be used in part for investment in State rail assets) the levels of State spending on rail infrastructure has only partially compensated the disparity in the level of public sector investment in road and rail infrastructure. As a result, rail has been increasingly forced to compete with road for freight and passenger traffic on infrastructure that is undercapitalised and relatively inefficient.

5.102 The questionable commitment of governments to ensuring rail competitiveness in Australia has, in turn, lead potential private sector operators and investors to adopt a 'wait and see' approach to long term investment in the rail industry. This applies not only to below rail infrastructure but, as noted earlier, to investment in above rail infrastructure such as locomotives, rolling stock and terminal facilities.

5.103 According to Macquarie Bank, there is no lack of private sector interest in financing development of rail infrastructure. However, there is concern that without the initial commitment by governments to improve infrastructure, and provide greater incentive for investment, private capital will not be attracted on the basis of achieving commercial rates of return (Sub 40, *Submissions* p. 522–3).

...long term consistency in investment in infrastructure by government will provide the impetus and confidence for private operators and service providers to enter the rail transport industry and invest in areas providing identifiable efficiency gains. (Sub 91, *Submissions* p. 1189)

5.104 In this light, the decision to establish the ARTC as a national track authority to control and manage access to the national rail system and coordinate investment in rail infrastructure associated with that system, is an important first step. It provides for more certainty in the rail environment, through greater consistency in the approach of government to access and regulation of the interstate rail network. It also provides the rail industry (and private sector interests) with a clear indication of the Commonwealth and State Governments' commitment to improve interstate rail infrastructure and through that enable more efficient, competitive interstate rail services. However, the retention of control and management of certain sections of the interstate network by NSW and WA may present difficulties for the ARTC in attempting to establish a national one stop shop approach to access on the interstate track.

Incentives for private investment

5.105 Related to the issue of certainty in the rail environment is the extent to which governments provide incentives for the private sector to invest in rail infrastructure. This could include direct and indirect subsidies, tax and other duty concessions or guaranteed revenue streams, or changes in the general regulatory environment which may enhance or inhibit investment in rail.

5.106 The committee received some evidence on the adequacy of existing investment incentive arrangements. Most evidence centred on the Commonwealth's Infrastructure Borrowings Tax Rebate scheme, and specific infrastructure development projects, such as the Sydney–Canberra high speed train proposal.

Infrastructure Borrowings Tax Rebate

5.107 The 1997–98 Commonwealth Budget saw the introduction of the Infrastructure Borrowings Tax Rebate (IBTR), a scheme designed to support private sector provision of public infrastructure. The IBTR replaced the Infrastructure Borrowings tax concession. The new scheme is administered jointly by the Department of Transport and Regional Development and the Australian Tax Office.

5.108 The rebate scheme permits resident infrastructure financiers to apply for a tax rebate on interest received from projects in return for projects forgoing the tax deductibility on that interest. The rate of rebate is set at either the financier's marginal tax rate or 36 per cent (whichever is lowest), and is available for a period of five years. The IBTR is a selection scheme and not an entitlement scheme. The selection of projects to receive the benefits of the scheme is based on the limited funds available (capped at \$75 million per annum from 1997–98), the eligibility requirements and the relative merits of the project (Commonwealth Department of Transport and Regional Development 1998, p. 1).

5.109 According to the Department of Finance and Administration, categories of public infrastructure under the IBTR include:

- road and rail projects and their related facilities; and
- projects that had applications pending or extensions granted under the Infrastructure Borrowings scheme as of 14 February 1997 (the date of announcement of the suspension of the Infrastructure Borrowings scheme) (Sub 56, *Submissions* p. 750).

5.110 In evidence to the inquiry, the Macquarie Bank argued that while the IBTR provides recognition of the special characteristics and requirements for public infrastructure investment, it suffers from a number of weaknesses.

- The availability of the rebate is limited. The \$75 million cap implies total project value of about \$2.0 billion, far short of the \$22 billion worth of projects which were pending when the Investment Borrowings concession scheme was replaced.
- The five year time limit on eligibility is arbitrary and penalises major infrastructure projects which may have a construction period of three to four years alone.
- Lack of clarity in the evaluation process, particularly the second stage, which requires proposed projects to demonstrate commercial viability and feasibility contingent on provision of the rebate (Sub 30, *Submissions* p. 361).

5.111 Macquarie Bank, amongst other witnesses, argued that, given the urgency of the need for substantial investment in rail infrastructure, the limited public resources available for rail investment, and the long term nature of cost recovery for infrastructure investment, the IBTR could be more generous.

5.112 The committee considers that, if the Commonwealth is serious about attracting greater private sector investment in public use rail infrastructure in Australia, it may need to expand its existing investment incentive program. This could mean allocating more funding to the IBTR scheme, extending the five year time limit on eligibility, or establishing a new rail industry specific program which provides tax concessions for new operators.

Condition of existing infrastructure

5.113 The condition of existing rail infrastructure, particularly certain sections of the interstate rail track, remains a significant impediment to new investment. Obviously, substandard infrastructure limits the productivity and raises costs. In turn, these reduce service quality and competitiveness, and limits the return on additional capital investment.

5.114 As outlined in chapter 2, the committee received considerable evidence from rail operators, industry groups and private sector interests on the serious inadequacy of existing infrastructure in many areas of the interstate and intrastate rail networks. NR, for instance, argued that poor track quality is a growing problem across the interstate rail network. It emphasised that poor track quality directly impacts on transit times, service reliability and maintenance costs and potential for derailment (Sub 26, *Submissions* p. 246).

5.115 Macquarie Bank reported that a detailed assessment of the adequacy of Australia's interstate rail infrastructure, undertaken by the BTCE in 1995, indicated that six of Australia's nine main rail corridors ranked at 60 per cent of world best standards or below.

5.116 Macquarie Bank also highlighted a number of other inadequacies noted in the BTCE study:

- Rail weights along most of the lengths of all corridors are below international benchmark standards, reducing carriage and hence payload capacity.
- The greater part of most rail corridors have timber sleepers which result in greater speed restrictions and higher maintenance costs.
- All corridors east of Adelaide are deficient in clearances, which restricts loading height.
- Gradient deficiencies exist on all eastern state corridors—steep grades necessitate greater locomotive power, restrict trailing loads and add to fuel consumption.
- Outdated train control and signalling systems exist on several corridors.
- Curve radii are unsatisfactory on segments of the Sydney–Brisbane and Brisbane–Cairns corridor—tight curves restrict speed and increase resistance and wear and tear on track and rolling stock (Sub 30, *Submissions* p. 333).

5.117 In evidence to the inquiry, Rail 2000 noted that some 500 kilometres of the interstate rail network is currently subject to speed limits, owing to poor track condition. Interstate rail operators are subject to temporary speed restrictions in every state, with Victorian rail track the worst with 22 per cent of its network now under speed limits (Sub 47, *Submissions* p. 611).

5.118 Rail 2000 also insisted that much of the interstate rail route from Brisbane to Adelaide through Sydney and Melbourne is substandard and built on steam age alignments. The Adelaide Hills section of this corridor, though of decent track standard, suffers from alignment and grade problems that restricts average speed between Adelaide and Taillem Bend to below forty kilometres per hour (Sub 47, *Submissions* p. 611).

5.119 The resulting combination of lengthy transit times (relative to road transport) and restrictions on train length and wagon payload, which both relate directly to the standard of track infrastructure, are disincentives to greater utilisation and further investment. As inefficiency leads to more underutilisation, the ability to generate returns on investment in track infrastructure (for example, through access charges) becomes more limited.

5.120 Private investors are unlikely to invest in infrastructure improvements unless it can be shown that governments are committed to redressing long term under investment in rail by providing the capital necessary to bring the infrastructure up to standard (be it fit for purpose or international best practice) and provide for ongoing, adequate maintenance.

Future investment in rail

5.121 Planning for the needs of future investment in rail must proceed on the basis that investment is economically, socially and environmentally justifiable, and that it will deliver net benefit to the Australian people. This means consideration of the benefits rail can provide, the costs entailed, and the relative strengths and weaknesses of other forms of transport in performing a particular transport task.

5.122 Given anticipated growth in the national transport task flowing from population growth and growth in the domestic economy, in international trade and developments in logistics, it is important that the potential of rail transport to contribute to meeting that task not be lost.

5.123 Whether substantial investment in rail infrastructure can arrest or even reverse rail's declining share of the freight and passenger transport task depends on a range of factors. This includes the extent to which the Commonwealth and State Governments develop and implement an integrated, diverse transport strategy which provides for a role for rail.

A fundamental issue in terms of funding is for the infrastructure provider or the government to clearly define the role of the rail industry and the transport task that it has as its target. This should then help define the total road-rail transport strategy and infrastructure needs (*Transcripts*, p. 1073)

Integrated approach

5.124 The need for an integrated approach to transport planning and policy development has long been recognised. The Commonwealth proposal under the Whitlam Government in the early 1970s to assume control of the State railways was, in part, premised on the need to develop a more centralised, hence national, approach to transport service provision.

5.125 In its 1994 report *Building for the Job*, the National Transport Planning Taskforce (NTPT) stated that road, rail, port and airport infrastructure investments and their funding arrangements should be considered within a framework that allows intermodal, network and corridor considerations to be evaluated transparently (NTPT 1994, p. viii). The taskforce found that virtually all groups it consulted saw the need for a national, strategic and multimodal approach in transport planning and policy making.

5.126 This committee's 1997 inquiry into Federal road funding received considerable evidence supporting the development of a national strategic transport plan (HORSCCTMR 1997, p 14). The committee concluded that a strategic approach to planning and managing Australia's transport network is essential if the nation is to maximise transport efficiency and effectiveness. It noted further that 'infrastructure planning cannot be narrow and limited through operating in isolation without consideration of competition between and within all forms of transport, and without coordination of decisions at all levels of government' (HORSCCTMR 1997, p. 18).

5.127 Further, strong support for an integrated strategic approach to transport and transport investment has emerged from evidence to the current inquiry into rail. A number of witnesses noted that the long standing imbalance in funding for road and rail has, in part, stemmed from the absence of an integrated, strategic approach by governments to transport funding and investment.

5.128 The Commonwealth itself implicitly acknowledged the need to address national transport issues within a more holistic framework. In its submission to the inquiry, the Department of Transport and Regional Development reported that the Commonwealth would be placing greater emphasis on increasing competitive neutrality, strategic planning of transport infrastructure and closer integration of transport modes (Sub 73, *Submissions* p. 1020)

5.129 The Department of Finance and Administration supported the view that decisions on the level of infrastructure investment should be made in the context of a combined road and rail framework on a corridor basis for the purposes of an effective integrated land transport system in Australia (Sub 56, *Submissions* p. 756).

5.130 Transport industry support for more integrated approaches to transport planning was also evident. Based on the evidence received and discussed in chapter 2, the committee has recommended that the Commonwealth assume a leadership role in the development of a national, strategic transport plan encompassing all transport modes. (See Recommendation 1).

5.131 The committee maintains that the development of an effective, integrated approach to national transport planning and funding would be enhanced by the establishment of a National Land Transport Commission. Such a body would assist in the implementation of a national, strategic transport plan as it affects road and rail transport, and provide advice to the Commonwealth on funding for land transport projects.

5.132 Recommendation 13

The committee recommends that the Commonwealth establish a National Land Transport Commission to provide:

- **advice to the Government on a national transport plan; and**
- **recommendations to the Government on the allocation of funds for rail and road projects on the strict basis of highest benefit cost ratios, which address all relevant externalities, such as accidents, congestion, pollution, greenhouse gas emissions and noise.**

Further, the Commonwealth give higher priority to land transport infrastructure investment within total budget outlays than is currently the case.

Assessing rail investment needs

5.133 In the course of gathering evidence, the committee focused considerable attention on questions of rail infrastructure needs. In particular, the committee sought views on the adequacy and deficiency of existing infrastructure, areas of particular need and the opportunities for improvement and further development. The committee received considerable evidence on the sections of the interstate rail network that are in substandard condition, in terms of operating efficiency, capacity and safety.

5.134 Most views on the adequacy and investment needs of rail infrastructure have been based on the analysis provided by the BTCE in a 1995 working paper which was prepared for the National Transport Planning Taskforce (NTPT) as part of a broader assessment of transport infrastructure in Australia. This paper provides a comprehensive assessment of the adequacy and deficiency of the interstate rail network and related terminal infrastructure. The paper assessed only fixed infrastructure, that is, the substructure on which rail operations are carried out. Other elements of rail, such as locomotives, rolling stock and maintenance equipment, were not included in the assessment. Similarly, the paper focused only on the intercapital rail lines (excluding branch lines), a select number of capital–regional centre lines and rail terminals in capital cities (BTCE 1995a, p. 19).

5.135 The BTCE working paper found significant deficiencies in track infrastructure were located mainly along corridors east of Adelaide. According to the paper, 'performance deficiency indicators show the Melbourne–Adelaide, Sydney–Brisbane and Brisbane–Cairns corridors as having the most deficient infrastructure by 2014–15.' (BTCE 1995a, p. 63) Significantly, the paper estimated that all corridors assessed had sufficient capacity to handle expected demand over the projected twenty year period.

5.136 On the basis of their assessment, BTCE estimated Australia's rail infrastructure investment needs at about \$3.4 billion (1993–94 prices) over the twenty year period. The BTCE identified the Sydney–Melbourne corridor (\$1.0 billion) and the Sydney–Brisbane corridor (\$1.0 billion) as warranting some 30 per cent of this total (BTCE 1995a, p. 63). The Melbourne–Adelaide (\$0.5 billion), Brisbane–Cairns (\$0.4 billion) and Adelaide–Perth (\$0.3 billion) corridors were estimated to require substantially less investment. In addition to linehaul investment, BTCE estimated some \$145 million in terminal investment to be warranted over the twenty year period (BTCE 1995a, p. 57).

5.137 The BTCE noted that estimated, warranted investment in rail infrastructure was on a similar scale as funding for the *One Nation* program, requiring on average \$150 million annual expenditure over a planning period of twenty years. Assuming such investment took place, BTCE estimated that the maintenance costs (including renewal) associated with fixed rail infrastructure on the mainline network would amount to around \$3.5 billion over the twenty year study period. In comparison, BTCE estimated that without any investment in existing infrastructure, maintenance costs would be some \$1 billion higher over the same period (BTCE 1995a, p. 62).

5.138 Since the BTCE working paper was released, the complexion of rail infrastructure deficiencies and investment needs has not changed significantly. Despite considerable investment by the Commonwealth in rail infrastructure under the *One Nation* program, which was completed in 1995, the current condition of the interstate rail network remain substandard and in urgent need of attention.

Developing priorities

5.139 The estimates in the 1995 BTCE working paper on rail infrastructure investments requirements provide a useful context within which to consider investment funding levels and priorities. While estimates of broad order magnitude, these BTCE figures indicate the dimensions and direction of rail investment required. The BTCE estimates contrast sharply with current levels of Commonwealth and State Government funding for rail infrastructure, particularly the interstate network.

5.140 In general, witnesses to the inquiry recognised that funding available for investment in rail infrastructure, at least sourced from the public sector, is likely to remain limited, falling well short of the \$3.4 billion identified by the BTCE working paper. Such limitations further underscore the need to develop a national strategic, integrated approach to rail infrastructure investment which clearly establishes priorities for projects in terms of net national economic and social benefits.

5.141 In its submission to the inquiry, ARA argued that what is urgently required is a more strategic focus for interstate rail investment, similar to investment in the national highway system (Sub 31, *Submissions* p. 389). Such focus would presumably involve a tiered approach to rail infrastructure, addressing rail investment needs in terms of national, state and regional network objectives.

5.142 NR reported that an independent appraisal of investment opportunities demonstrated that the greatest net returns are gained from integrated corridor investments which combine a number of improvements.

For example, along the Melbourne–Adelaide corridor, this would include not only the completion of concrete sleepering, but also ballast cleaning, extension of crossing loops to accommodate longer trains, clearance adjustments to a number of tunnels and bridges, some local regrading and completion of infrastructure for electronic assisted train orders. This whole program would cost \$92 million and would yield a discounted financial net present value of \$155 million (7 per cent real discount rate)...and an internal rate of return of 29.6 per cent. (Sub 26, *Submissions* p. 259)

5.143 A range of evidence to the inquiry suggested the need to prioritise rail infrastructure investment in terms of its potential to improve the overall efficiency of the national rail network, and through that the efficiency of the national transport system.

5.144 The committee supports calls for an integrated, strategic approach to rail investment, which focuses on maximising national benefits. It argues that the most effective way to address Australia's rail infrastructure investment needs from a national perspective is to adopt a tiered approach, which would:

- firstly, identify and fund infrastructure investment to remove the critical deficiencies on a declared national track on an urgent basis, and
- secondly, develop a longer term program for investment in improvements to rail infrastructure which are of national benefit, but which may not be limited to the national track.

5.145 To assist the Commonwealth development of a tiered approach to rail infrastructure investment, the committee proposes adoption of a structure, similar in part to that of the national road system, which distinguishes between:

- a declared interstate network (referred to as the national track), and
- tracks of national importance (TONIs).

5.146 As noted above, the committee is strongly of the view that the declared national track, and in particular the areas of critical need identified below, should be the first priority for Commonwealth investment in rail infrastructure. It argues further that responsibility for the national track, including investment in and maintenance of infrastructure, should rest principally with the Commonwealth, but should not exclude private sector investment.

5.147 As a second priority, the committee argues that the Commonwealth, in partnership with the States/Territories, should focus on strategic investment to tracks which fall outside the declared national track but which produce national benefits such as promoting regional and national development. The committee refers to these second priority investments as tracks of national importance (TONIs).

National track

5.148 The committee received considerable evidence on the need to define and declare a national track which would effectively mirror road transport's national highway system. This view was supported by Commonwealth and mainland State Transport Ministers at the 1997 Rail Summit, where there was agreement that there should be a national interstate track and that this should be used to assist in developing detailed reform proposals for future interstate rail development. The interstate track tentatively proposed for inclusion in the national track by participating governments was 'the track joining the mainland State capital cities and their ports, with connecting lines to Whyalla, Port Kembla, Newcastle, Alice Springs and Westernport' (Australian Transport Council, *Communique* 10 September 1997, p. 2).

5.149 Views on the extent of a proposed national track system varied, but there was general agreement among witnesses that it should at least include the existing standard gauge interstate rail network between Perth and Brisbane via both Melbourne and Broken Hill. NR argued that the system envisaged by Ministers at the Rail Summit may be overly narrow in scope.

5.150 It suggested that the national track system should be broadly defined to:

- include all tracks joining major population centres and major hubs and nodes in the national transport system, including ports and intermodal terminals;
- allow for addition, where appropriate, of tracks of national importance (TONIs), that is track providing access to significant economic facilities; and
- encompass all of the infrastructure (ancillary and auxiliary) to mainline track which are associated with train operations, such as crossing loops and sidings, shunting yards, signalling systems, safety devices and stationary communication facilities (Sub 26, *Submissions* p. 240).

5.151 Decisions on the elements of the interstate rail network to be included in the national track will obviously have implications for its control, management and funding. The 1997 Rail Summit clearly envisaged that a new body (subsequently established as the ARTC), would assume control of access to and management of a national track, although critical sections of the proposed network remain under the control of State Governments. ARA indicated support for single entity management of a national track, suggesting that 'responsibility for managing investment decisions should reside with the body established to coordinate access for interstate services.' (Sub 31, *Submissions* p. 389)

5.152 The issue of funding of a proposed national track system was highlighted by a number of witnesses, including ARA, NR and the Rail Access Corporation (RAC). ARA argued that funding should be part of a Commonwealth integrated national land transport strategy in the same way that roads are funded, not by loans taken out by State infrastructure owners (Sub 31, *Submissions* p. 388). NR clearly conceived a role for private finance in the provision of infrastructure on the national rail network. It argued that with more tax incentives, and given projected internal rates of return on mainline investments, the private sector could be attracted to whole corridor investment packages (Sub 26, *Submissions* p. 260).

5.153 Assuming that the national track can be clearly defined and placed under the management of a single entity, the question then becomes: how to identify, prioritise and fund necessary track infrastructure investment. The committee sought views from a range of witnesses on the investment needs of the existing interstate track network.

5.154 Evidence highlighted three key areas where investment could make a significant difference, namely performance standards of the track, the efficiency of the network, and safeworking procedures. In particular, witnesses identified a number of infrastructure deficiencies in sections of the interstate network as high priorities for investment. These can be grouped by linehaul corridor as follows.

- *Melbourne–Sydney corridor* infrastructure needs include additional and longer crossing loops, completion of concrete resleepering, removal of clearance constraints, some regrading (for example, between Goulburn and Chullora).
- *Sydney–Brisbane corridor* infrastructure needs include improvements to track curves and gradient (for example between Chullora and Newcastle), re-railing (from 53 kilograms to 60 kilograms) to allow for heavier trains, completion of concrete resleepering and removal of crossing loops and clearance restrictions.
- *Melbourne–Adelaide corridor* major needs include completion of concrete resleepering, ballast cleaning and drainage, and extension of crossing loops between the Victorian and SA border, and the removal of track curves and gradients through the Adelaide Hills and expansion of the Bunbury Street tunnel in Melbourne.

5.155 In its submission, NR noted that it has developed a program of investment for the most urgent short term requirements of the proposed national track, and one for longer term corridor improvements (Sub 26, *Submissions* p. 259). Both of these proposals address infrastructure deficiencies identified by the BTCE paper, but are significantly more limited in scope than the BTCE proposed program.

5.156 NR's proposed immediate investments program totalled \$112 million and is focused on improving track and operating standards on sections of the interstate track between Adelaide and Albury. In particular it provided for:

- increased operating speed on the Adelaide–Melbourne corridor (Geelong–Maroona), from 65 kilometres per hour (kph) to 80 kph;
- operation of longer trains on the Melbourne–Albury route, from 900m to 1500m; and
- increased axle loads and speeds on sections of the Victorian interstate track, which would harmonise with other States (Sub 26, *Submissions* p. 281).

5.157 The longer term corridor based investment program proposed by NR was a refinement of an earlier proposal referred to by one witness as 'Son of *One Nation*' (Sub 47, *Submissions* p. 612). It addressed a more comprehensive range of infrastructure needs, including network, track standard and safety issues, along key corridors of the national rail system. Main features of the proposed program included improvements to:

- Acacia Ridge–Telarah (South Queensland), including level crossings, curve easements, resleepering and drainage (\$164 million);
- Joppa Junction–Albury (NSW), including resleepering, drainage, ballast cleaning and regrading, clearing loops and clearance adjustments (\$221 million);
- Albury–Melbourne (Victoria), including resleepering and drainage (\$109 million); and
- Melbourne–Adelaide, including resleepering, drainage, ballast regrading, crossing loops and clearance (\$92 million) (Sub 26, *Submissions* pp. 282–3).

5.158 Along with other minor improvement programs, NR estimated that proposed longer term investments would cost some \$620 million in total, and would generate an average 18 per cent internal rate of return, taking into account all benefits and costs (including externalities) (Sub 26, *Submissions* p. 259).

5.159 The Department of Transport and Regional Development indicated that the ARTC had developed a short list of candidate projects for evaluation under the Commonwealth's \$250 million capital investment program announced in the 1997–98 Budget (Sub 73.02, *Submissions* p. 1630). According to the ARTC, this list included some \$497.5 million worth of priority projects and an additional \$537 million worth of projects which may be beyond the scope of the initial capital program (Exhibit 46, pp. 2–4).

5.160 The committee considers that the longer term investment program proposed by NR provides a useful starting point for establishing national track investment priorities. It notes further that this program is broadly consistent with the ARTC's short list of candidate capital work projects under consideration, and as such, reflects a general consensus on the areas of the interstate track in greatest need. On the basis of the evidence presented to the inquiry, the committee suggests that Commonwealth investment, through the ARTC, in the interstate national track should address, but not be limited to, the areas cited in box 5.2.

5.161 It is evident that, while the Commonwealth's financial commitment to the ARTC for investment in the interstate rail network is undoubtedly a positive start, the level of funding made available (\$250 million over four years) is inadequate to meet these urgent needs. If it can be argued, as the committee has, that a viable interstate rail network is essential to an efficient and effective national transport system, and that the Commonwealth has a responsibility to ensure that a network of adequate standard is in place, then it follows that the Commonwealth must provide further funding for rail infrastructure.

Box 5.2 Identified urgent priorities for investment in the national track.	
The committee cautions that this list of example infrastructure projects is not definitive nor is it intended to imply a priority order.	
Sydney	removal of bottlenecks at key junctions, through selected bypasses, construction of bidirectional freight tracks, grade separation and removal of speed restrictions on freight traffic.
Albury–Melbourne	rerailing, resleepering, drainage, easing of track grades, double stacking clearances, and implementation of electronic assisted train order system.
Newcastle–Acacia Ridge	curve and grade easement, resleepering, drainage and level crossings,
Adelaide–Melbourne	resleepering, drainage, culverts, ballast regrading, additional crossing loops and double stacking clearances. (On the basis of a detail site inspection, the committee notes that the track between Ararat and Gheringhap in Victoria requires considerable attention).
Acacia Ridge–Telarah	curve easements, rerailing, concrete resleepering and drainage.
Adelaide Hills	tunnels altered to enable double stacking clearances, some easing of track alignment and grades.
Kalgoorlie–Kewdale	upgrading track and culverts, crossing loops, level crossings.

5.162 The committee concludes that to achieve a national track system which can provide for efficient and effective interstate rail services, funding for rail infrastructure of the magnitude identified by the 1995 BTCE working paper is required. This will require a more substantial commitment on the part of the Commonwealth towards funding for infrastructure investment, and the development, in the longer term, of a strategy to facilitate private sector investment in the national track system.

Tracks of national importance

5.163 As noted earlier, a second tier of rail infrastructure, in terms of national rail investment priorities, would be tracks of national importance (TONIs). This initiative would parallel partnership investment by the Commonwealth, States and Territory Governments for roads under the roads of national importance (RONIs) scheme, and would form part of an agreed, strategic and planned approach to transport in Australia.

5.164 For rail, these tracks would be separate from the national track (that is, intrastate tracks) and would be the responsibility of State Governments. The Commonwealth would provide funding for track investment in TONIs in partnership with the States or other appropriate parties, according to guidelines developed between the Commonwealth, States and Territories. These guidelines would require that such tracks are of national economic significance in that they:

- provide access to major centres of economic activity (for example, manufacturing, agricultural, mining or tourism) by removing bottlenecks or other impediments to efficient rail performance;
- improve links to the national track or major transport facilities (for example, sea ports, road terminals and airports);
- improve rail efficiency, including the use of new transport technologies;
- allow people, goods and services to move more freely within and between major urban and regional centres, in accordance with the planning objectives of those centres; and
- provide a substantial net economic benefit.

5.165 The committee argues that it is imperative that proposed TONI projects demonstrate a substantial net economic benefit and that priority for funding should be on the basis of highest benefit cost ratios. Further, the committee maintains that it is essential that funding for TONIs projects not be used to support cost shifting practices between levels of government. This last point is particularly important, as the TONIs concept must be understood as a partnership initiative between the Commonwealth and States (and private sector where appropriate) and not as a substitute for State investment in intrastate rail infrastructure.

5.166 In this context, the committee emphasises that for the Commonwealth to maximise the national benefit of investment in rail infrastructure, funding for investment in TONIs should not be at the expense of investment in a declared national track. It considers that TONIs projects should be seen as the second tier of the Commonwealth's rail investment priorities, and should not be funded until the first priority, improvements to critical areas of the national track, have been addressed.

5.167 Recommendation 14

The committee recommends that the Commonwealth:

- **undertake responsibility for investment in the declared national track;**
- **allocate, in addition to the \$250 million committed to the Australian Rail Track Corporation in 1997–98, a further \$750 million over three years for investment in the national track to be expended according to priorities developed by the Commonwealth and States/Territories; and**
- **allocate, on an agreed basis, an additional \$2 billion over ten years from 2001 for investment in rail infrastructure of national strategic importance, to be directed primarily to the national track, and with provision for designated tracks of national importance (TONIs).**

5.168 Recommendation 15

The committee recommends that the Commonwealth, in consultation with the States/Territories and relevant parties, develop a rolling maintenance program, to be funded by the Commonwealth, for the declared national track to agreed national standards.

Sourcing investment

5.169 As government's role in the provision of rail infrastructure has shifted, and private participation in rail has grown, approaches to ownership of and investment in public use rail assets have become more diversified.

5.170 Public sector funding, through grants and public borrowings, is no longer recognised as the only source of capital for investment in rail infrastructure. Increasingly, governments are looking to rail infrastructure to 'self fund' investment, through access charges plus other user contributions (for example, from beneficiaries, operators, and investors). There is also growing pressure, mainly from within industry, to use other methods apart from annual appropriations, such as fuel excise revenue or even value capture, to fund rail investment.

5.171 Governments at the Commonwealth and State levels are also focusing more on harnessing the expertise, skills and resources of the private sector to drive investment in rail. Private sector funding of rail infrastructure can be undertaken in a number of ways, including:

- project financing
- equity financing
- debt borrowing
- other debt securities.

5.172 To date, most investment in public use rail infrastructure has been funded using debt borrowings. The Department of Industry, Science and Technology noted that 'traditionally, banks have played a major role in the provision of finance for infrastructure projects' (Sub 53, *Submissions* p. 709). In addition to involvement through debt and equity financing, private sector investment in rail infrastructure has also been made possible through the development of more innovative project management arrangements, including:

- build, own and operate (BOO) schemes
- build, own, operate and transfer (BOOT) schemes
- build, transfer and operate (BTO) schemes.

5.173 The relative attractiveness of these arrangements, both to the private sector and the public sector in the case of public use infrastructure, is likely to vary considerably. While there is evidence to suggest that private sector interest in investment in new rail assets under BOOT and BOO schemes is strong, private sector investment (through equity) in existing rail infrastructure has been negligible to date. With the exception of the sugar cane rail lines in Queensland, most private sector investment in public use rail infrastructure has been largely limited to private use rail operations. However, with increased privatisation of public use rail, (for example, the proposed sale of NR and V/Line Freight in Victoria), there are expanding opportunities for private sector investment in both above and below rail infrastructure.

Track access charges

5.174 In theory, track access charges are intended to cover marginal costs and some contribution to the fixed costs of providing the infrastructure. In reality, track access charges levied on most rail track operators do not provide for sufficient investment in infrastructure. In evidence to the inquiry, RAC argued that rail access charges cannot be increased to cover infrastructure costs because of the competitive pricing of road transport and the cost pressures faced by firms in end markets (Sub 52, *Submissions* p. 687). QR supported this assessment, concluding that the major dilemma for track operators is that an 'infrastructure charge sufficient to ensure maintenance and replacement of interstate rail assets is too high to be acceptable in the market place, given the lack of competitive neutrality between rail and long haul road freight' (Sub 40, *Submissions* p. 518)

5.175 Rail 2000 argued that track access charges are already several times the equivalent of those paid by road transport (Sub 47, *Submissions* p. 611) NR estimated that the level of charges for road infrastructure access is approximately one fifth of that for rail transport (Sub 26, *Submissions* p. 255).

5.176 Given the need to remain competitive with road transport, there is limited scope for rail access rates to be increased to provide for expenditure on rail infrastructure improvements. Increased traffic would allow rail infrastructure owners to set access prices that provide for capital investment (as occurs on NSW coal rail lines in the Hunter Valley), unfortunately utilisation rates in many parts of Australia's interstate and intrastate networks are unlikely to improve until substantial improvement has been made to track and operating conditions.

5.177 While supporting a 'user pays' system, a number of witnesses argued that track access charging should not be used as a capital funding mechanism. BHP Transport Pty Ltd (BHP Transport) noted that users should not be paying more than best practice costs. It argues that allowing excessive capital, maintenance and operating charges to be passed on to rail users will impair the competitiveness of rail and reduce incentives to improve performance (Sub 33, *Submissions* p. 421). Queensland Mining Council (QMC) argued further that commercial traffic should not be loaded up with capital costs and overheads that really belong elsewhere, nor should access charges be permitted to embody, and thereby perpetuate inefficiency (Sub 81, *Submissions* p. 1119).

5.178 Support for this view was provided by the Industry Commission, which stated that it is unreasonable for railways to seek the same returns as that of an efficient (least cost) organisation while maintaining inefficient practices (Industry Commission 1991, p. 271). They maintain that to the extent that least cost practices are not in place, access pricing and rates of return should be discounted accordingly.

5.179 Ultimately, whether track access charges alone can generate the revenue necessary to fund investment in rail infrastructure, the 'self funding' approach, is dependent on the demand for and subsequent utilisation of particular infrastructure, the degree of substitution between that infrastructure service and a 'like' service, and the condition of the existing infrastructure.

Value capture

5.180 A further potential source of investment in rail infrastructure may be provided by indirect beneficiaries of rail services, namely owners of land proximate to railway stations, local business and local government. These agents extract economic benefit, through increased land values, increased revenue and land rates, from the rail services traditionally provided by governments. By levying a rate, for example on property sales, infrastructure owners can capture some of the value of that infrastructure to beneficiaries.

5.181 A number of value capture mechanisms are already in existence. The Industry Commission reported that in the United States, the development of shopping facilities and buildings around suburban railway stations in Washington DC generated between \$US32–42 million for an outlay of \$US5 million outlay (Industry Commission 1994, p.137). The Commission also suggested that the capital works for the Melbourne underground rail loop was partly financed by a special rate levied on properties (Industry Commission 1994, p. 136).

5.182 Property owners and developers are obviously the main indirect beneficiaries of public transport services. The most appropriate form of contribution from these groups would be a rate on the value of their property (ideally proportional to the increased value of the asset attributable to proximity to public utilities), which could be either a one-off or a rate levied annually. How such value capture would be structured and administered, for example by State or local governments, are questions that require more attention.

5.183 The committee received little evidence on the benefits and costs of value capture approaches to rail infrastructure investment. In evidence to the committee, the Municipal Association of Victoria argued that there is certainly scope for integrating value capture into rail infrastructure development planning in Australia.

...the notion of collecting development levies for new development is quite well established in Victoria. Under the planning system we have what is called a development contribution plan. To date I guess it is fair to say that that has been used for the upgrading of arterial roads...I think that principle is well established and could be applied. (*Transcripts*, p. 867)

Using taxes and charges as revenue

5.184 Another potential source of public sector funding for rail infrastructure investment is provided by revenue generated through taxes and charges, for example the imposition of a fuel excise. This example is perhaps most salient, as from time to time, the rail industry has argued that revenue raised from fuel excise levied on rail operators should be allocated for funding of capital expenditure on rail infrastructure.

5.185 Adoption of charges on 'external' costs associated with transport use, such as a tax on noxious emissions, could also provide a source of revenue for investment in rail infrastructure. However, as Rail 2000 notes, one of the main reasons these sorts of charges are not already in place is the perceived difficulty in assigning values to 'external' costs and allocating them among transport users appropriately (Sub 47, *Submissions* p. 616).

Private debt/equity

5.186 Private sector financing of public use rail infrastructure is an attractive option, but one that, to date, has largely been limited to debt finance by public rail bodies. Commonwealth and State Governments have traditionally raised finance for investment in transport infrastructure through the capital market. For example, Macquarie Bank Limited noted that it has arranged debt finance for a number of public sector rail entities, including leveraged leases for NR and Queensland Rail. (Sub 30, *Submissions* p. 366)

5.187 There are also opportunities for private sector to secure equity in both above and below rail infrastructure. For example, Macquarie Bank Limited indicated that in addition to its role as financial adviser to Great Southern Railways (GSR), it acted as a consortium member, and equity and debt provider in the successful bid of the consortium for the passenger rail assets of AN (Sub 30, *Submissions* p. 366).

5.188 The committee sees potential for greater use of private sector equity finance of public use infrastructure, either through partnership with government or as infrastructure operators. However it acknowledges that until the range of factors that affect rail viability, such as disparity in the treatment of road and rail, are addressed by government, the private sector may be reluctant to provide equity capital.

Build own operate (and transfer) schemes

5.189 Other infrastructure project management arrangements, such as build, own, operate (BOO) and build, own, operate and transfer (BOOT) schemes offer potential for further private sector investment in rail infrastructure.

5.190 BOO and BOOT schemes are concessions in which private operators agree to build a public facility at their own expense in return for the right to operate the facility and charge users a (usually regulated) fee (EPAC 1995, p. 23). In the case of BOOT schemes, ownership and operation of the infrastructure facility is transferred to the government after a specified period.

5.191 The distinction between BOO(T) arrangements and full private provision of infrastructure (such as the privately owned iron ore railways in WA or the privatisation of Tasmania's rail operations) can be somewhat blurred. The main distinction is that under private provision, governments do not select and plan the project.

5.192 The potential benefits of BOO(T) schemes are well documented, and include more efficient allocation of resources, shorter time frames for project completion, greater innovation in design, construction and service delivery, and more efficient allocation of risks associated with resource investment. Transfield Pty Ltd argued that the efficiency gains commonly associated with development of rail assets by the private sector, such as under BOO(T) arrangements, are attributable to commercial disciplines.

Commercial disciplines provide an incentive to select and improve all operational aspects to minimise operating costs and whole of life maintenance costs so as to improve investment return while satisfying the customer. (Sub 97, *Submissions* p. 1245)

5.193 In evidence to the inquiry, Thyssen Transrapid Australia Pty Limited argued that:

It would seem that BOOT schemes are a useful mechanism to enable the objectives of private sector and public sector investment in rail to be compatible. It will of course be necessary in each case to agree on the appropriate concession period for the private sector to operate the system before transferring it to government. (Sub 66, *Submissions* p. 883)

5.194 The potential disadvantages of BOO(T) schemes are that they may involve hidden costs to the community, either in the form of use of public resources or diminished control over provision of related infrastructure services, borrowing costs and transaction costs.

5.195 In Australia, a number of rail infrastructure facilities are already provided on a BOO or BOOT basis. The Skitube (alpine rack railway) in NSW's Kosciusko National Park, was developed as a joint venture by Transfield Pty Ltd and Kumagai Gumi of Japan under a BOO arrangement.

5.196 A prominent example of a BOOT scheme is the New Southern Railway, a heavy rail link between Sydney airport (domestic and international) and the city, currently being developed by Transfield Pty Ltd and Bouygues of France in cooperation with the NSW Department of Transport and State Rail Authority. The new development, estimated at \$800 million, is expected to provide seamless integration between the NSW rail network and Sydney airport, and accelerate the commercial and residential revitalisation of Sydney's City South region (Sub 97, *Submissions* p. 1248).

5.197 In evidence to the inquiry, Transfield Pty Ltd explained that under the contractual arrangements of the New Southern Railway, the NSW Government is constructing the tunnel and track component of the link, which it will own and fund. Transfield Pty Ltd (and Bouygues) involvement consists of construction, ownership and maintenance of four stations, ownership of which will revert to the NSW Government at the end of the concession period (*Transcripts*, p. 1207).

Effective ownership arrangements

5.198 Central to questions of investment in and access to rail infrastructure is the issue of rail ownership. Increasing investment in rail infrastructure is crucially linked to ownership (both above and below rail), and in particular, control of infrastructure.

5.199 Where ownership of public use rail infrastructure and services remains in the public domain entirely, the link between ownership and investment is simple—investment in those assets will continue to be provided by public funding, borrowings or debt. To date, this arrangement has not provided for adequate or effective investment, particularly with regard to interstate rail assets. With few exceptions public use rail infrastructure has suffered from inadequate and often poorly directed investment.

5.200 Where governments are looking to attract private sector investment in public use rail infrastructure, there may be need to adopt new approaches to ownership which balance commercial risk and return and the need to meet community service obligations. To some extent this is already occurring. The New Southern Railway in NSW is one example of a partnership approach to infrastructure development, where both public and private sectors have a stake in the infrastructure itself.

5.201 The extent to which rail operators can obtain access to rail infrastructure is also affected by the ownership arrangements in place. While there are those who would argue that ownership of vertically integrated rail operations (that is, ownership of below and above rail components) does not have any effect on the ability of new rail firms to enter the market, there are those who argue that vertical integration inevitably provides for monopoly ownership, and a brake to competition. Related to this is the question of the concentration or dispersion of rail ownership, and whether it is more efficient to have a number of smaller operators providing services or fewer, larger integrated enterprises.

5.202 A further issue is the question of private or public ownership, and as an extension, domestic or foreign ownership. For the most part, whether rail ownership is private or public, Australian or foreign, is secondary to the question of improving rail's efficiency and effectiveness. However, in some cases the extent of ownership may enhance or impede the ability to increase utilisation of existing rail infrastructure, particularly where ownership extends to control of above and below rail operations. For example, third party access to privately developed, owned and operated infrastructure may be possible in theory, but difficult to achieve in practice.

5.203 The committee received relatively little evidence directly addressing rail ownership arrangements. To some extent this reflected the acceptance that rail infrastructure should not necessarily be the exclusive domain of the public sector. In this context, increasing private sector participation (for example through privatisation or start up operations) in the rail industry has been viewed as, if not inevitable, then at least necessary. The relative lack of evidence also reflected the fact that, for most witnesses, the most important priority is addressing rail's efficiency and effectiveness, and through that long term viability.

Separation of above and below rail operations

5.204 The extent of ownership and hence control of rail infrastructure has obvious implications for investment and competition. Chapter 4 briefly discusses the issue of vertical integration versus disaggregation from an access perspective, and also touches on the broader issues of the links between rail structure, efficiency and viability. The latter deserves some further consideration, particularly as the issue of rail's long term viability is essential to this inquiry.

5.205 Some witnesses argued that, while economies of scale can imply the need for vertical integration, improved efficiency can also be gained through the potential increased competition flowing from structural separation of rail infrastructure from operations. The Victorian Government pointed out that rail systems around the world have been disaggregating as a way to capture efficiencies, for example through greater competition and service specialisation (Sub 71, *Submissions* p. 982).

5.206 This model has largely been adopted by the Victorian Government, although it has recently announced that its V/Line Freight operations will be sold as a semi-vertically integrated body (combining freight assets and a broad gauge track lease).

5.207 RAC argued that, in the NSW context, reform of the former State Rail Authority to separate infrastructure from the above rail activities of the operators, was seen as essential to 'opening up' the NSW rail system to potential competition and to securing benefits of increased contestability in the provision of inputs (Sub 52, *Submissions* p. 685). These benefits, it maintains, should include greater efficiency, reduced costs and improved service quality.

5.208 Other witnesses argued that the effectiveness of rail operations, in terms of their structure (and by extension scope of ownership), cannot be assessed simply within the context of improved rail to rail competition, rather it has to be assessed with regard to intermodal competition with road transport. On this point, QR quoted the managing director of Tranz Rail Limited:

The danger in Australia is that rail privatisation will be fixated on rail as a separate mode of transport, unrelated to other modes. The insistence on separation of the network and operators is a symptom of this fixation...you can run the risk of having a disintegrated rail system, a system skewed towards competition between rail operators rather than between rail and other transport modes. (Sub 40, *Submissions* p. 499)

5.209 Mr Charles Hoppe pointed out that separation of above and below rail operations was not necessary for competitive access, and would likely lead to reduced service quality, less effective investment in plant, and additional transaction costs, all of which would negatively impact on rail viability (Sub 110, *Submissions* p. 1488).

5.210 More importantly, Mr Charles Hoppe questioned whether increased competition would necessarily be a net benefit for a small, low traffic density market such as Australia. maintained that, given the nature of railway economics, the long term viability of network rail operators (in a low traffic density environment) hinges on their ability to purchase incremental traffic or volume to offset high fixed and service threshold costs (Sub 110, *Submissions* p. 1492).

5.211 He argued that the introduction of special service, niche operators has the potential to erode prices and volume of business available to the full service, network operator, leading to 'cherry picking' and long term loss of business for the network operator.

To ensure long term viable rail competition to trucks in many of the truck competitive markets, it is probably more effective to establish a single strong rail network carrier (with rail niche carriers having access, as necessary, to keep the network rail carrier honest), than to attempt head to head rail/rail competition by network carriers—the resulting 'price wars' would no doubt lead to disinvestment (and disengagement from the market). (Sub 110, *Submissions* p. 1493)

5.212 The committee recognises that the issue of ownership of vertically integrated operations versus structurally separate entities may have an important bearing on access and competition in rail. However, on the basis of the evidence provided, as well as actual experience in Australia to date, it is difficult to draw definitive conclusions on the trade off between the potential increased competition provided by structural separation and the economies of scale, scope and traffic density provided by vertical integration.

Public versus private

5.213 Ownership of public use rail infrastructure historically has rested with the public sector. However, reforms to the rail industry have created opportunity for greater private sector participation, and ownership of public use rail assets.

5.214 Supporters of privatisation have argued that it is a necessary means of ensuring that rail transport services continue to be provided to the general community. However, there has been some debate in the rail industry, closely related to that on structural separation, over whether the private sector should be allowed to own the permanent way, that is the track infrastructure on which rail services are provided.

5.215 The question of whether ownership of rail infrastructure, as a public good, should be retained by the public sector is ultimately one of ideological judgement. Certainly, where there is a community service obligation attached to a particular infrastructure service, there is a need to ensure that those obligations are met as efficiently and effectively as possible. Whether that CSO is fulfilled by a private or public service provider is, at least theoretically, largely immaterial. Similarly, where there are other net benefits to be gained from development of rail infrastructure (regardless of a CSO requirement), the issue of private or public ownership is also, arguably, secondary.

5.216 Evidence to the inquiry did not identify public versus private ownership of rail infrastructure as a significant issue. While most witnesses argued that private sector involvement in rail was critical, there was also wide acceptance that, in the short term at least, government would continue to have an ownership and regulatory role in the provision of rail infrastructure.

5.217 However, in the longer term, the extent to which the private sector becomes involved in rail may be dependent on the condition of the rail infrastructure and the degree of control they can assume over rail infrastructure. A number of witnesses, most notably Mr Charles Hoppe and Tranz Rail, argued that in the longer run, lack of control of rail infrastructure could be an impediment to the viability of private network rail operators. Put another way, the extent to which a potential operator has control over infrastructure (in terms of obtaining train paths, reinvestment and maintenance), and thereby the extent to which it can capture the full benefits of those facilities, may ultimately have a bearing on private sector decisions to become involved in the industry long term.

Partnership arrangements

5.218 Increasingly, approaches to investment in and provision of public use rail infrastructure are blurring the distinctions between public and private sector ownership. Schemes such as BOO and BOOT which involve private sector construction, ownership and operation (and transfer) of infrastructure, are increasingly being viewed as effective means of developing public use rail infrastructure. Significantly these approaches generally provide for a high degree of control of above and below rail operations.

5.219 Other arrangements, which involve partnership between public and private sector interests are also being developed. These could include ownership of construction and ownership of particular assets as a part of a public use facility (such as the New Southern Railway in Sydney), the franchising of public rail services to private rail operators (for example, V/Line passenger services in Victoria) and the leasing of private rolling stock to public rail bodies.

5.220 Evidence to the inquiry suggested that, in the longer run, the most effective ownership arrangements will be those that provide for increased investment, greater allocative and productive efficiency, and through that higher quality, more competitive transport services. The committee recognises that the fundamental issue is not whether rail infrastructure is privately or publicly owned, but whether it can be utilised to meet these objectives.

Conclusion

5.221 Evidence to the inquiry emphasised that increased investment in rail infrastructure, together with continued improvements in performance by rail operators, would lead to more effective and efficient use of the nation's rail assets, generating economic benefits for rail users and the wider community.

5.222 Similarly, evidence overwhelmingly supported the view that without urgent and substantial investment in public rail infrastructure, major sections of the interstate network will become unsustainable within ten years. In this context, the committee notes that the rationale for increased spending on rail infrastructure is in part about averting the potentially enormous costs of diminished or defunct rail services between major cities on the eastern seaboard, including increased road construction and maintenance, and the negative externalities associated with large and growing volumes of road traffic.

5.223 The evidence also clearly indicated that existing investment arrangements are inadequate. Public spending for rail has largely been used to meet the ongoing deficits of public rail bodies, particularly urban rail systems. Where the Commonwealth and State Governments have committed funds for rail infrastructure, this investment has been largely start stop, ad hoc or poorly coordinated with investment in other forms of transport. Private sector investment in public use rail infrastructure has been negligible to date, in part reflecting rail's heritage as a public sector industry. It also reflects the substantial reluctance, on the part of the private sector, to invest until Commonwealth and State Governments strengthen their commitment to ensuring a viable rail industry.

5.224 The Commonwealth decision in 1997–98 to commit \$250 million over four years to investment in the interstate rail network, along with the establishment of the ARTC to control and manage access to that network, offers hope that the Commonwealth and States are committed to the interstate rail system. However, there is no question that governments could be doing more to foster effective and efficient use of public rail infrastructure, particularly through investment in those facilities.

5.225 As a first step towards more effective investment in rail, there needs to be stronger recognition, by the Commonwealth and the State Governments, of their responsibility to provide public use rail infrastructure of a standard that encourages greater utilisation and productivity. For the Commonwealth, this means assuming responsibility for a designated national track, in terms of adequate infrastructure and maintenance, plus a regulatory framework that provides for uniform access and operating requirements. One of the most fundamental issues affecting investment in rail has been the lack of certainty in the rail operating environment.

5.226 As a second step, effective investment in rail infrastructure requires the development of a national, strategic and integrated approach to transport planning. Such an approach would be intermodal, and would assess transport funding on the basis of its ability to best meet the nation's transport needs. For rail, this implies targeting those rail projects that offer greatest net benefit, in terms of increasing utilisation and the efficiency of use, the reduction of economic, social and environmental externality costs associated with transport use, and contribution toward continued economic development.

5.227 As a third step, effective investment in rail will require the setting of appropriate priorities to meet the nation's rail investment needs. The committee argues that the Commonwealth should be adopting a tiered approach to rail investment and maintenance, which distinguishes between urgent priorities, namely addressing deficiencies in a declared national track, and longer term priorities, which would meet additional national track deficiencies, and also embrace tracks of national importance (TONIs).

5.228 To adequately meet these priorities, rail will require a large financial commitment, much larger than the \$250 million currently allocated by the Commonwealth to the ARTC.

5.229 As a fourth step, effective investment in rail requires better utilisation of the resources of the private sector, in terms of capital, technical expertise and management skills. Privately owned rail operations, such as the Pilbara iron ore railways, demonstrate the advantages of private sector involvement when operating at international best practice. To harness the benefits of private sector involvement, in particular investment, governments will have to ensure their actions do not create conditions that will inhibit private sector participation.

5.230 In addition to programs such as the Infrastructure Borrowings Tax Rebate scheme, the Commonwealth will need to address more broadly the impediments to increased investment in rail. Most importantly, this means addressing the disparities in the treatment of rail and road transport in terms of infrastructure investment, taxes and charges, and regulatory requirements. Rail viability is directly affected by continued upgrading and improvement to road infrastructure which provide for continuing gains in road transit times, fuel efficiency and user convenience. It is also potentially affected by differences in the infrastructure costs borne by rail operators and long distance road vehicles, rail's chief competition. One obvious solution would be for the Commonwealth to develop a national transport perspective, which leads to a more consistent, equitable approach to transport taxes and charges.

5.231 The Commonwealth can provide greater incentive for private sector investment by addressing the deficiencies of existing infrastructure, and through that, the viability of rail services in Australia. Immediate investment in rail infrastructure to enable rail to compete more effectively and efficiently with other forms of transport is likely to spur private sector utilisation and future investment. Increased utilisation, in turn, should consolidate rail's share of the interstate freight market, leading to reduced costs, in terms of pavement damage, noise and air pollution and traffic congestion associated with long distance road use.

