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Accounting for producer needs: The case of Britain's rail infrastructure

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ABSTRACT

Academic studies of the industries privatised in Britain since the mid-1980s have focused on regulation and performance. This paper discusses the impact of changes in accounting policies within the British railway industry, which has been almost completely neglected in the literature to date.

The paper analyses the financial reporting of the railway infrastructure from 1992 to 2004: under state ownership, then as a listed company and finally as a 'not-for-dividend' entity. At each stage the accounting treatment of the infrastructure assets has been subject to major manipulation to suit the needs and convenience of the industry's management – not the users.

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1. Introduction

The performance of the British railway industry since privatisation has attracted increasing attention among the public, in the mass media, and in the academic literature, including the accounting literature. Much of the latter has been highly critical of the privatised industry, in various ways, but, somewhat strangely, its actual financial reporting has largely escaped critical commentary. Various writers have used the financial reports of the industry's entities to assess their performance but have largely avoided analysis of the accounting policies adopted therein. This paper aims to provide such commentary, by analysing how the physical infrastructure of the industry, the track, signalling and stations, etc. which constitute the bulk of its fixed assets, have been reported in financial statements since the last days of state-owned British Rail in the early 1990s. Railways are a quintessentially capital-intensive industry with particularly long-life assets: decisions on asset valuation and capital consumption are of crucial importance to the accounting numbers. Since the early 1990s these assets have undergone a series of drastic changes of ownership and purpose. They were transferred from an integrated state-owned railway corporation (British Rail) to a distinct (but still state-owned) infrastructure company (Railtrack) in 1994 in the run-up to privatisation. Shortly afterwards, Railtrack was floated in 1996 and for five years was an FTSE100 company; after the collapse of Railtrack in 2001 the assets were acquired by the peculiar 'not-for-dividend' entity that is Network Rail. This offers a particularly relevant case study in financial reporting: explaining how, if at all, these changes affected the accounts.

The generally accepted position on financial statements is, to quote a standard text, that they 'show the results of stewardship of management, or the accountability of management for the resources entrusted to it' (Ernst & Young, 2013,

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p. 47). Standard-setting bodies have explicitly adopted ‘User Needs’ i.e. the idea that the needs of the external users of financial statements should ultimately determine, via intermediate steps, their form and content, as the starting-point of their conceptual frameworks. Thus the *Statement of Principles* of the then UK standard-setting body explains that the

objective of financial statements is to provide information about the reporting entity’s financial performance and financial position that is useful to a wide range of users for assessing the stewardship of the entity’s management and for making economic decisions (ASB, 1999a, p. 16).

Prescribed accounting treatments, as set out in financial reporting standards are to be derived from this objective, thus adherence to the former by companies is deemed to achieve the latter.

If one considers accounting to be a ‘relatively independent art [whose] roles and consequences [are] primarily moderated by the cognitive properties of its immediate users rather than the setting in which it is placed’, it is not apparent that the accounts being considered here should have changed, but it has long been recognised that such a view is inadequate to understand or explain the workings of accounting in action (Hopwood, 1983, p. 288). Consequent studies of accounting change have focused on (for example) the relationship between accounting change and changes in organisational structure and culture as part of the process of privatisation (Skaerbaek & Melander, 2004); or how the changed external environment consequent on a firm’s privatisation drives change in its financial reporting (Thompson, 1993).

A different perspective is offered by the Positive Accounting Theory (PAT) associated with Watts and Zimmerman (1986) who argue that the ‘various parties’ involved in selecting accounting policies or procedures do so as ‘to maximise their own welfare (i.e. their expected utility)’ (p. 3). Two situations highlighted by Watts and Zimmerman are particularly pertinent to the subject of this paper: (1) where management remuneration is dependent on accounting numbers (e.g. earnings), managers will choose policies that enhance current reported earnings; and (2) conversely, where a firm is politically sensitive or its prices are regulated, managers will adopt income-decreasing policies to avoid political interference or to justify price increases (pp. 208–10; 231–3; 235).

The paper now proceeds as follows: the next section reviews some past studies of change in the financial reporting of privatised utilities; Section 3 briefly reviews the structural changes in the British railway industry between 1992 and 2006 and how these affected the ownership and control of its infrastructure assets; Section 4 examines how these assets were reported in the financial statements of the entities that owned these assets in that period; and Section 5 contains some discussion and conclusions.

2. Literature review

The privatisation programme of the British Government in the 1980s led to a number of academic studies: Vass (1992) and Kilpatrick and Lapsley (1996) review regulation of privatised utilities, and a number of writers have studied particular industries, including Harrison (1982) and Barnes (1988) on BT/telecommunications; Baldwin (1984) and Vass (1993) on water; Estrin, Marin, and Selby (1990) on electricity supply; and Price (1986) on the gas industry. These have tended to focus on regulation and performance of the privatised entities and pay little attention to financial reporting practice, although Vass (1992, p. 305) does note the ‘enthusiasm’ with which some nationalised utilities ‘embraced Current Cost Accounting (CCA) in the 1980s as a means of reducing reported profit’ to deflect criticism of price increases. He also discusses the regulatory use of asset valuation, and whether this should be based on current or historical cost but does not discuss specific accounting policies of particular entities. McInnes (1990a, p. 318) notes that the nationalised UK gas industry had implemented changes to accounting policies (including accelerated depreciation rates, immediate write-off of some exploration costs which had previously been capitalised, and ceasing to capitalise interest on new construction) that reduced ‘the reported net income and the reported rate of return’ for every year between 1969 and 1974. These changes, he argues, were made in order to justify price increases. The gas industry management had no direct pecuniary interest involved, but they did have an incentive to increase the industry’s cash flow, via price increases, and so gain autonomy *vis-à-vis* the government, an argument that is consistent with Watts and Zimmerman’s position regarding politically sensitive firms.

McInnes (1990b) examines in detail the South of Scotland Electricity Board (SSEB) in 1978–88. The SSEB proposed price increases in 1978, arguing these were needed to meet its statutory duty to break even. The Price Commission, a government body which had to approve the increases, criticised some of the accounting policies adopted by the SSEB, for example, that the estimated operating lives of generating assets were between 17% and 50% longer than the estimated remaining lives used for calculating depreciation, and the supplementary depreciation which SSEB charged in its accounts from 1977/78 (p. 62). McInnes argues that these income-decreasing changes are consistent with positive accounting theories – that companies subject to regulation will adopt income-decreasing policies to justify price increases.

Other authors have analysed organisational change consequent on privatisation. For example Ogden and Andersen (1999) investigate the ways by which senior management effected the ‘strategic change’ involved in transforming a water company after privatisation. This centred on ‘changes in accounting information systems’, but not financial reporting (pp. 91–92). Conrad (2005) reviews post-privatisation organisational change in British Gas, and analyses the impact of regulation on accounting systems and systems of accountability, but says relatively little about accounting policy. But she does point out that before privatisation British Gas published only CC (Current Cost) accounts [which reported lower profit figures than HC (Historical Cost)] and afterwards continued to publish CC accounts with supplementary HC information. In 1985, shortly

before privatisation, a revision of asset lives added £150m pa to the depreciation charge, which worked in the same direction, to deflect criticism of price increases (pp. 11, 16).

Assessments of the performance of privatised entities (and of claims that privatisation would enhance efficiency) have often utilised information from financial statements. [Shaoul \(1997a\)](#) analyses the performance of the UK water industry after privatisation in 1986, and makes extensive use of accounting data. [Shaoul \(1997b\)](#) uses a value-added cash-flow model and applies it to information extracted from water companies' financial statements, but neither paper considers accounting policies of the companies and whether these were changed as a result of privatisation.

The privatisation of rail in the UK has generated an enormous literature, much of it devoted to assessing the performance of the entities into which the nationalised industry was broken up. [Shaoul](#) examines (2004) the performance of the franchised train operators and Railtrack up to 2001 and (2006) the levels of subsidy and costs of operating the various component business sectors of Britain's privatised railways; [Crompton and Jupe \(2003a, 2003b\)](#) analyse the privatised industry and the collapse of Railtrack; [Jupe and Crompton \(2006\)](#) focus on the performance and regulation of the train operating companies; [Jupe \(2009, p. 175\)](#) evaluates how Network Rail has provided a 'fresh start' for the privatised railways; and [McCartney and Stittle \(2012\)](#) analyse the role and profitability of the Rolling Stock Companies (ROSCOs). These papers all use information extracted from published accounts of the entities concerned, but do not analyse the accounting policies therein.

However, a limited number of studies have analysed in some detail the financial reporting of privatised entities.

[Arnold and Wearing \(1988\)](#) analyse the financial statements of British Airways in the decade prior to privatisation, and argue that accounting treatments were adopted 'to make the industry more saleable to the private sector.' In one year (to March 1982) the Income Statement showed £426m of extraordinary charges, mainly restructuring provisions and write-downs of fixed assets. These improved operating results in following years (immediately before privatisation) as some expenditure incurred had already been charged (indeed some £45m of provisions were simply written back), and there was a lower depreciation charge on a reduced asset base. The authors conclude that the 'combined effect' of these factors would make 'the future reported profits of British Airways more attractive to future private investors' (p. 323).

[Thompson \(1993\)](#) examines the financial reporting of the electricity supply industry over the period 1988–92 (actual privatisation was in December 1990), in particular accounting disclosures choices and accounting policies. She notes 'a radical shift' within the industry in the presentation of accounting information and in general 'HC accounts become much more prominent' (p. 145). That apart, there is remarkable continuity in the accounts pre- and post-privatisation.

[Hooks and Perera \(2006\)](#) examine the 'choice of accounting policies and reporting practices' of an electricity company in New Zealand as it was transformed (in stages) from a public utility controlled by an elected authority into a fully private commercial company, and identify significant changes at each stage in the process. Thus, prior to privatisation, provisions and write-offs produced an annual loss in 1991/92 (the only one since formation in 1924), but enhanced profits in later years. Accounting policies were changed to enhance profits e.g. contributions from property developers towards network construction, which were formerly taken to a capital reserve, were now treated as income. An accountant working for the company at the time confirmed that the management wanted to enhance profits to ensure a successful flotation and that their 'rewards were based on the successful float of the company' (p. 91) which is consistent with the PAT, although the authors' own stance is to focus 'on the environmental forces that can influence accounting and annual reporting disclosures' (p. 86).

[Craig and Amernic \(2006\)](#) have provided a detailed analysis of the privatisation of the Canadian National Railway (CN) in 1995, arguing that the management of the company 'used accounting strategically to justify and sustain the privatisation'. In the run-up to privatisation they 'deliberately preened the accounts' to improve its apparent performance when the company was floated, most notably by restructuring provisions (over \$900m) and writing down assets by \$1.3bn (justified by a valuation procedure the authors describe as 'highly questionable') thus reducing subsequent depreciation charges (pp. 82, 88–9). Craig and Amernic argue that the senior managers of CN did this for two reasons: first, to 'ensure that investment analysts' share valuation models yielded a value of CN that was above the issue price' in the flotation; and second to enhance their own remuneration (via performance-linked bonuses and share options), noting that this 'behaviour is consistent with the bonus plan hypothesis of positive accounting theory' (p. 86). In a later paper ([Craig & Amernic, 2008](#)) the same authors discuss the use of accounting language and metrics to project the privatised CN as a 'success story' and point out how metrics were manipulated to sustain this narrative e.g. by calculating a metric under US GAAP (rather than Canadian) to give more flattering figures.

[Puxty \(1997\)](#) analyses the financial statements of British Telecom (BT) and British Gas (BG) two large, capital-intensive state-owned monopolies which were both privatised in the mid-1980s (in 1984 and 1986 respectively), but made contrasting accounting policy choices.

As noted, BG had embraced CCA in 1981 and until 1986 did not report HC figures at all. Puxty argues that this resulted from a decision of the government in 1980 to drastically increase gas prices which generated a lot of hostility and so 'raised considerable legitimacy problems for the government' (p. 724). Policies that reduced reported profits were a way of managing this legitimacy crisis: Puxty calculates that the last accounts before privatisation, which disclosed a CC profit of £688m, would have reported £1248m on a conventional HC basis (Table 8, p. 728). These problems did not disappear with privatisation, so the decision to continue reporting on CC basis was completely logical.

However, at the same time BT (which was only demerged from the Post Office in 1981) did not adopt CC accounting, and reported (higher) HC figures, and further, in its last accounts before privatisation made a number of accounting policy changes (e.g. revising asset lives and charging some capital expenditure to revenue) which had the effect of increasing profits

from £267m to £990m (Table 7, p. 727). Puxty concludes that positive accounting theory cannot explain this contrast in policy choices since it assumes these are ‘made by managers on the basis of individual utility maximization’ – from which viewpoint the directors on BT and BG were in a similar position – and so ‘cannot capture the richness and complexity of the social contradictions that result in the interplay of crisis avoidance in the context of a fundamentally disequilibrium capitalist society’ (pp. 713, 733).

But it could be argued that BG was more politically sensitive in that its high profits and price increases increasingly attracted widespread and hostile attention and its management felt the need to ward off government intervention (e.g. tighter regulation or a windfall profits tax). BT had not faced this public hostility and so was able to adopt income-increasing policies to make the company more attractive to private investors, possibly because gas supply was regarded as an essential commodity in a way that telephony was not.

In summary, there have been few studies specifically focused on the financial reporting policy choices of privatised entities (and none on the British railway industry) and those that have been carried out diverge in terms both of approach and findings.

3. The privatisation of rail

The Conservative Party’s Election Manifesto in 1992 stated that if re-elected the Major Government would ‘end British Rail’s monopoly [and] give the private sector the opportunity to operate existing rail services and introduce new ones, for both passengers and freight’ (Conservative Party, 1992, p. 35) and in fact a complete industry privatisation was carried out by early 1997.

The key structural feature of the process was the separation of infrastructure (track and stations) from passenger train operations. Infrastructure was transferred to a separate company, Railtrack, which was then floated, and passenger train services were separated into 25 franchises, with would-be operators bidding to accept the lowest subsidy or pay the highest premium in respect of particular routes. In addition, the rolling stock was sold off to three separate private sector companies (the ‘ROSCOs’), who in turn then leased the locomotives and carriages to the train operating companies. Freight was dealt with separately, and much of the engineering and maintenance work was transferred to separate entities, which were then sold off. British Rail was broken up into more than 100 separate companies, creating what in modern times is a uniquely fragmented structure (Gourvish, 2002; McCartney & Stittle, 2012; Shaoul, 2004).

The rationale for the break-up² was the imperative to promote competition, impossible if train operators were integrated enterprises with their own infrastructure. Vesting the assets of British Rail (track and rolling stock) with separate entities, which did not themselves operate trains but charged Train Operating Companies (TOCs) for their services, meant that would-be train operators could bid for, and win franchises without making large-scale capital commitments, thus removing barriers to entry and encouraging competition (McCartney & Stittle, 2011).

Yet the whole history of British railways until the Second World War was one of a trend towards integration and unification. The first railways were relatively small in scale and it was originally envisaged that they would act like canals, owning an infrastructure over which competing carriers would offer services. This was quickly proved impractical and railways became integrated enterprises, which themselves underwent a process of consolidation, of which the ‘Big Four’ of the inter-war years and the nationalised British Rail (from 1948) were but the logical culmination (Arnold & McCartney, 2005). The economic logic of this, rejected by the Major government, was clear even to many nineteenth century writers (see e.g. Hadley, 1886, p. 83; Lardner, 1850, p. 503) and certainly the post-privatisation structure is not one that could have arisen through market forces.

The basic structure established in the mid-1990s is still in place, although Railtrack collapsed in 2001 and was replaced by Network Rail (NR), a ‘not for dividend’ quasi-public sector company. In some ways the privatised railways have been a success – certainly in terms of passenger traffic³ which has dramatically increased for example. But the fragmentation of the industry has fuelled an even greater escalation of costs and consequently of government support (see e.g. Bowman et al., 2013, p. 4; McNulty, 2011; Taylor & Sloman, 2012, p. 7, fig. 2, p. 18). The ROSCOs, for example, are entirely a creation of the post-privatisation structure, yet have been the most profitable entities within it, increasing operating costs (McCartney & Stittle, 2012); the economics of scale and density implied that BR should have been broken up into no more than ‘three or four network operators’ i.e. broadly reproducing the structure of the industry before nationalisation, or the way BR was evolving through sectorisation before privatisation. Inviting tenders for 25 franchises encouraged tenderers to come forward and was essential to make the privatisation a success, but pushed up overall costs (Crompton & Jupe, 2003a, p. 623; Preston, 1996, pp. 9–10).

On the other hand, the fragmentation has also allowed governments to mask these problems by heavily subsidising NR, which then undercharges the train operators, enabling the latter to appear profitable and the privatised industry as a whole, a success (Bowman, 2014).

² It has been argued that the separation of train operations from infrastructure was mandated by the EU through Directive 91/440 (in July 1991), but this required only that the infrastructure be accounted for separately to allow access by international freight operators (Gourvish, 2002, p. 262).

³ Total passenger journeys have increased from 801m in 1996/97 to 1.59bn in 2013–14, and passenger km from 32bn to 60bn (ORR, 2006, pp. 12, 14; 2014b, pp. 9, 12).

4. Asset valuation and depreciation

4.1. The nineteenth century

The railways have always been extremely capital intensive, indeed more so in the nineteenth century than today. One of the first writers to take a statistical approach to the cost question (Lardner, 1850, p. 307) estimated that in the 1840s receipts on British railways were a mere 5.5–8 per cent of the cost of construction, a figure that rose gradually in the rest of the century to some 10% or so in the 1900s (Mitchell, 1988: 543–7).⁴ In 2012/13 passenger revenues of £7.7bn were some 19% of the valuation of the network (£46.4bn) (NRIL, 2013, p. 10; ORR, 2014b, p. 15, para. 2).

Thus accounting for railway assets – in particular the charge for depreciation – has always had a major effect on reported performance, even in the earliest days of the industry.

At first it was generally believed that the ‘permanent way’ would have an almost infinite useful life, so that depreciation could be ignored. Experience showed this to be fallacious by the late 1840s, and writers such as Lardner urged railways to make provisions against its replacement (op. cit., pp. 41–2, 52–3). Some companies experimented with depreciation funds (Arnold and McCartney, 2002) but by the 1860s these had been abandoned in favour of Replacement Accounting i.e. ‘all expenditures on maintenance, repairs, and renewals (replacements) [are] charged directly to expense’. This policy, also universally adopted by US railways, means that ‘recognition of depreciation associated with the original plant is delayed’ until scrapping and replacement takes place, and capitalisation is limited to ‘additions and betterments’.⁵ Reported profits are thus greater than they would be ‘under a formal system of depreciation accounting’, which largely explains why it was abandoned: it was a ‘casualty of the demand for dividends’ (Brief, 1965, pp. 14–15; Edwards, 1986, p. 255; Fishlow, 1966, p. 591).

4.2. Preparing for privatisation

The accounts of the British Railways Board (BRB) were prepared under a ‘Direction’ from the Secretary of State for Transport. In the early 1990s, this generally required BRB to follow ‘best commercial accounting practices’ including ASB standards, and to give a ‘true and fair view’, except as varied by the Direction. This specifically required that:

- 1 supplementary CC accounts be furnished;
- 2 infrastructure expenditure other than ‘new routes and new electrification’ be charged to revenue; and
- 3 the income statement be charged a ‘Capital Renewal Provision’ (CRP) which is to be included in the P&L account ‘towards the replacement of assets in the grant supported sectors’.

In the 1992 accounts many of BRB’s historic infrastructure assets (some of which dated back to the 1820s) were simply not valued at all. Only stations, rolling stock, and ‘expenditure on major additions to new routes and new electrification schemes’ stock were capitalised at historical cost less straight-line depreciation over useful economic life (BRB, 1992, pp. 34–5). However, the Direction in the following year’s accounts, published in June 1993 when legislation enacting privatisation was before Parliament, dropped the instructions on capitalisation and the CRP, and the resulting accounts were radically different. All capital expenditure including ‘land, buildings, track, signalling, electrification and associated structures, rolling stock and plant and equipment required for the ongoing operation of the Board’ were now capitalised (at historical cost) and subsequently depreciated over ‘estimated useful economic life’ (e.g. track, 14–40 years; electrification schemes, 33 years) (BRB, 1993, pp. 39–40), and this policy was applied retrospectively. However, in many cases the industry’s records were incomplete or missing, and actual historical costs could not be established. In such cases, where

records of historical costs [were unavailable] an estimate [was] made of the cost of the modern equivalent asset [which was then] deflated using appropriate indices to the estimated purchase price date to give an estimated gross historic cost. The remaining useful economic life of the asset [has] been applied to give a depreciated net book value.’ (BRB, 1993, p. 40).

The adoption of Modern Equivalent Asset Value (MEAV) was not uncontroversial: Stittle (1996, p. 64) described MEAV as a ‘flawed’ method and the National Audit Office (NAO) later criticised its use by Railtrack, arguing there was a lack of clarity about the concept and no ‘clear guidance’ on applying it. Even Railtrack admitted that the use of ‘modern equivalent form had ‘been difficult to apply in practice: it was often a subjective judgement as to what was the modern equivalent of an ageing asset.’ The NAO was also concerned that ‘when new assets have been capable of doing a better job than those they have replaced there has been difficulty in determining whether the replacement constitutes renewal, which is paid for from

⁴ This was partly due to extremely high capital costs in Britain. In the 1880s an American engineer estimated that the US network had cost about £8000 per mile, compared to £40,000 in Britain. However, a lower level of receipts produced a US turnover to capital ratio of 11%, only slightly higher than the 9% prevailing in Britain (Dorsey, 1887, Tab. 16, p. 45).

⁵ This last point was controversial: whether the element of ‘betterment’ in replacement expenditure, most notably the replacement of iron rails by steel with a longer economic life, should be charged to revenue or could be treated as capital, was much discussed (Brief, 1965; Fishlow, 1996, p. 632; Simmons & Biddle, 2000, pp. 232–3).

existing access charges, or enhancement, for which Railtrack are entitled to charge extra'. These difficulties had undermined the ORR's ability assess Railtrack's performance and consequently the ORR intended 'to make much less use [of MEAV] when they set access charges for the period from 2001 to 2006' (NAO, 2000, paras. 3.27–9).

This policy change increased the net book value of fixed assets at 1st April 1992 from £3492.7m to £5235.4m, a boost to the industry's balance sheet assets which presumably helped to attract investors. Depreciation in the Income Statement increased from £178.6m to £287.2m, but capitalising previously expensed investment meant that an operating loss of £101m in 1991/92 became an operating profit of £18.7m (BRB, 1993, pp. 43, 58, note 23).

This policy was justified as bringing BRB's 'accounting policies more closely into line with best commercial practice' although it is unclear why historical cost was superior (say, to market valuation) for a company being prepared for flotation.

The Capital Renewal Provision (CRP) was a provision for 'the replacement of assets in the grant supported sectors', amounting to £209m in 1991/92, which was deducted from the Public Sector Obligation (PSO) grants⁶ received before they were included in turnover. This sum was added to a Capital Reserve which totalled £1538m as at 31.3.92 (BRB, 1992, pp. 36, 40, 48). All other capital grants were offset against the asset cost to which the grants related. However, from 1992/93 the accounting policy changed with all capital grants now being credited to deferred income and then subsequently released to profit and loss account over the estimated economic life of the assets (BRB, *op. cit.*, p. 46).

The accounts do not say why the policy was changed, but the explanation may rest in the impact the change had on the reported performance of Network Southeast (NSE),⁷ one of the business operating sectors into which British Rail had been 'divisionalised' in the early 1980s to move 'towards a more "business-led" railway' (Gourvish, 2002; Simmons & Biddle, 2000, p. 56). In the originally reported 1992 accounts, NSE's turnover was credited with £175m in PSO grant out of a total of £683m (£892m less CRP of £209m) (BRB, 1993, note 3b, p. 48). However, in the restated accounts the total PSO grant comprises £484m of capital and £408m of revenue support – none of the latter being attributable to NSE. In addition, this change of policy enabled NSE to report its first ever operating profit of £5.0m in 1993 without the aid of revenue subsidy, whereas the 1992 accounts originally reported an operating loss of £7m despite the above-mentioned PSO credit (BRB, 1992, note 1, p. 40), thus meeting its 'target of operating without subsidy by 1992/93' (Nash, 1990, p. 3). It is possible that there were underlying motives behind this, relating to the impending privatisation of the industry. The form that the privatisation took was decided very late, and the separation of train operations from maintenance of the infrastructure was resisted by BR managers who would have preferred an option that maintained an integrated structure such as 'regionalisation' (similar to that existing in the inter-war years) or 'sector-isation', options supported by 'more cautious government ministers' (Wolmar, 2005, p. 54). NSE would have been a prime candidate in the latter case, attractive to private investors, and its profitability could strengthen the case for 'sectoral' privatisation.

4.3. The privatised industry – Railtrack

The vast majority of BRB's assets were transferred to a separate, and newly formed entity, Railtrack, on 1st April 1994, which was floated on the stock market in 1996.⁸

While state-owned, Railtrack largely adopted BR's treatment of fixed assets, and charged straight-line depreciation on '[o]perational assets other than land' over 'estimated useful economic lives'; capital work-in-progress was not depreciated (Railtrack Group, 1995, p. 10).

However, Railtrack also adopted an Asset Maintenance Plan (AMP). This took

account of plans which forecast the maintenance requirements over a ten year period for maintaining the operating capability of track, route structures, stations and depots. . . . The timing of the maintenance programme . . . may result in uneven patterns of renewal and maintenance expenditure

which would be smoothed by accruals and prepayments. The Finance Director justified the change by explaining that the AMP would 'reflect the long term maintenance that these assets require' and further claimed that adopting the AMP would 'extend the commercial lives of these assets' although no evidence was adduced to support this assertion (Railtrack Group, 1995, pp. 12, 32). The introduction of the AMP provided a justification for a revision of the 'remaining useful life of track, stations and depots' as from 1 April 1994, and indeed the lives of other assets were also revised (Table 1).

In addition, some buildings not part of the infrastructure were reclassified as Investment Properties, and shown as a separate category of asset from 1995/96 onwards (beginning with a valuation of £253m at 31 March 1996) and not depreciated if the property was freehold or held on a lease with more than 20 years to expiry (Railtrack, 1996, pp. 10, 21). Both these changes in policy acted to reduce the depreciation charge, which fell from £160m in 1993/94 to £93m in 1994/95 (BRB, 1994, p. 55; Railtrack, 1995, p. 19) and provide one obvious motive for them.

⁶ The PSO grant was a state subsidy to BRB to support loss-making services which were 'considered desirable to retain on social grounds'. This supported both 'day-to-day operation of the railways (the revenue element) [and] the replacement of assets (the capital element)'. After privatisation, under European Commission regulations, PSO grants may be awarded as 'part of a franchise agreement under which payments are made to private operators' (BRB, 1992, note 1, p. 40; BRB, 1993, note 1, p. 46; Simmons & Biddle, 2000, p. 484).

⁷ NSE primarily served markets in London and Southeast England.

⁸ Strictly speaking two entities were created, Railtrack Group plc (which was floated) and its wholly-owned subsidiary Railtrack plc (which owned the infrastructure).

Table 1
Revision of asset lives.

Category of Asset	BRB 1993/94	Railtrack 1994/95
Stations and Depots	30–40 years	50 years
Track/Route Structures	14–40 years	100 years
Signalling	10–50 years	15–50 years
Electrification	33 years	40–50 years
Telecommunications	7–40 years	15 years
Plant and equipment	3–20 years	3–20 years

Sources: BRB (1994, p. 43) and Railtrack (1995, p. 11).

Under the AMP, forecast maintenance expenditure in the decade from 1 April 1994 was £3250m at 1994/95 prices. The annual charge to the Income Statement would thus be £325m plus a price adjustment, with an 'allowable variation' of 16% i.e. the charge could be between £273m and £377m (at 1994/95 prices). Actual charges in 1994/95 and 1995/96 were £483m and £503m respectively, both above the upper limit and well in excess of actual expenditure, so that at flotation in May 1996, Railtrack actually had a provision of £267m against future maintenance costs, thus moving profits from before to after privatisation. Railtrack also made a provision of £450m against future maintenance expenditure on depots and stations at 1 April 1994 (which did not appear in the Income Statement, being charged directly to Reserves), justified as the 'cost of repairs [necessary] to bring them into the condition required to meet statutory obligations'. Over £442m of this provision was still on the balance sheet in March 1996: thus substantial post-flotation expenditure had been charged to pre-flotation accounts. Indeed in the case of the property maintenance provision, only £325m was used over the following four years, and £117m was simply written back to income (Railtrack, 1995, p. 14, Note 3; p. 26, Note 19; 1996, p. 24, Note 14; 2001, p. 15, Note 5; p. 21, Note 32).

In 1999 Railtrack changed its policy again, adopting Renewals Accounting for 'track, route structures, stations and depots', which were now assumed to have an indefinite life: actual expenditure was capitalised, while the AMP charge was treated as depreciation, and the new policy was backdated to 1 April 1994.⁹

From 1 April 1994 to 31 March 1998 actual expenditure under the AMP had been £1870m, whilst charges to the Income Statement were £2002m. These were reclassified as capital expenditure and depreciation respectively, reducing the book value of Tangible Fixed Assets at the latter date by £132m. Historical cost depreciation on these categories of assets (£36m in 1997/98) was no longer charged, a small but welcome boost to reported profits (Railtrack, 1998, p. 21; 1999, pp. 10, 22).

Critics of rail privatisation are fond of pointing out that the policy was originally justified, *inter alia*, as a means of ending the perennial unprofitability of the industry, but has actually made it worse. BRB's accounts for 1992, the last before impending privatisation began to exert an effect, disclosed a pre-tax loss of £145m. Changes to the treatment of fixed assets in 1992/93 reduced this loss to £25m when the 1992 accounts were restated. Later changes to the policies of Railtrack (detailed above) further reduced annual depreciation charges by more than £100m. BRB could have been made profitable, not by privatising it (which proved a failure in any case) but merely by adopting private sector accounting policies.

While still state-owned, a bonus scheme permitted the Executive Directors (EDs) to be awarded additional payments of up to 40% of basic salary conditional on meeting 'objectives set by the Secretary of State for Transport each year' (Railtrack Group, 1995, p. 38). A Compensation Committee (of Non-Executive Directors) set the criteria after privatisation, and increased the maximum bonus to 45% of salary in 1997 and 50% in 1999. The criteria were not disclosed, but the Committee stated that 'any incentive compensation awarded should be tied to the interests of the Company's shareholders and that the principal measure of those interests is shareholder value' (Railtrack Group, 1996, p. 29). Further, under a special incentive scheme, EDs could defer up to half their bonus payments for 1996/97 and 1997/98, to be invested in shares and held in trust for a three year period, after which they would be returned together with additional shares representing up to five times the amount of bonus deferred, dependent on the company meeting (undisclosed) targets in Earnings per Share and Train Performance. In theory, bonuses of nearly £4m could have been paid to the EDs between 1996 and 2001. In 1999, the incentive scheme was replaced by a conventional share option scheme, and by March 2001 five EDs held options to acquire 213,400 shares, worth nearly £1.8 m at the peak share price of 1768p (Railtrack Group, 2001, p. 17; Wolmar, 2005, p. 95).

Thus Directors of Railtrack had strong personal incentives, through their remuneration arrangements, to adopt income-increasing accounting policies, and to defer profits from before flotation to after it (when they would be independent of the Transport Minister).

4.4. Railtrack's demise

Railtrack did not hide the fact that its priorities were not those of the nationalised railway: the Chairman stated that he had 'new responsibilities to the shareholders' (Railtrack Group, 1997, p. 4) i.e. high dividend levels, which would be financed, *inter alia*, by what he described as 'substantial cuts in the maintenance and repair bills' (Bagwell, 2004, p. 116). Railtrack

⁹ This followed the issue of FRS 15, Tangible Fixed Assets, which permits this treatment for a network or infrastructure system whose operational capacity has to be maintained indefinitely (ASB, 1999b, pp. 51–52).

dividends rose to 22% in 1998 and 28% by 2001: between 1995/96 and 2000/01 distributions totalled £709 million, 41% of operating profits (Bagwell, 2004; Jupe, 2011, p. 46).

However, a 'progressive dividend policy' (Murray, 2001, p. 31) at the expense of maintenance and investment led to a growing public and political perception that shareholders' interests were placed before reliability and rail safety, which ultimately destroyed the company. The trigger for this collapse was an accident in October 2000 on the UK's major arterial route (between London and Edinburgh) at Hatfield. Accident investigators blamed negligent management of the track infrastructure, and Railtrack was forced to take ruinously expensive emergency measures. Even then, when the company reported an after-tax loss of £314m for the year to 31 March 2001, it still declared a dividend of £138m, which the chief executive justified as 'a signal to shareholders that better times were ahead' (Murray, 2001, p. 118).

Belatedly, even Railtrack was forced to admit the seriousness of the problem it had created, acknowledging that its 'asset knowledge and engineering policies were seriously inadequate' whilst the chief executive admitted to a House of Commons Select Committee that 'the condition of the track... was appalling, it was totally unacceptable'. Tom Winsor, the Rail Regulator¹⁰ at the time, accused Railtrack of having 'had... almost a policy, certainly latterly, of neglecting their assets' (Transport Select Committee, 2002, Q5, Q799).

The financial and management problems of Railtrack¹¹ proved insurmountable, and in October 2001 Railtrack was put into administration under the terms of the 1993 Railways Act (McCartney & Stittle, 2006, pp. 142–3; Jupe, 2007, p. 250).

The scale of Railtrack's financial problems was made clear in its financial statements for the year to 31 March 2002. These disclosed a loss of £1.069bn, compared to £314m the year before, a difference more than accounted for by an increase in the AMP charge from £764m to £1601m due to the 'significant increase in annual expenditure needed to maintain and renew the existing network at its current operational level' (Railtrack, 2002, p. 19). On 27 June 2002, Railtrack Group agreed to sell the entire share capital of Railtrack to Network Rail.

4.5. Network Rail

Network Rail Ltd (hereinafter NR) started trading in October 2002, and acquired Railtrack Limited (renamed Network Rail Infrastructure Ltd, hereinafter NRIL) from the Railtrack Group for £510m, partly offset by a government grant of £300m (NR, 2003, pp. 7, 39, 53). The book value of assets acquired was £537m – although with a fair value of £935m, giving rise to £425m negative goodwill in NR's balance sheet (NR, 2003, p. 53). NR, which now owned the railway infrastructure, is a 'public interest company' or a 'not-for-dividend company' (see McCartney & Stittle, 2006, p. 144; Jupe, 2007, p. 252).

At the time that Network Rail commenced trading, the then Labour government 'had repeatedly ruled out renationalisation' of the railways for reasons of cost and political ideology (Jupe, 2007, p. 252; Wolmar, 2005, p. 190). But neither did they wish to repeat previous mistakes and so adopted a compromise approach as a 'practical manifestation of the third way' in politics (Whitehouse, 2003, p. 218). Network Rail Limited was incorporated as a company limited by guarantee, so has no equity, being funded entirely by debt, supported by a government guarantee, without which it would be unable to borrow, and so is arguably a 'de facto nationalised company' (Shaoul, 2004, p. 36), although it was technically a private company whose debt was therefore excluded from government borrowing. The creation of Railtrack's successor in this form was highly controversial and was the subject of widespread criticism in the press and from the political opposition (McCartney & Stittle, 2006).

NRIL published its first accounts (to March 2003) under this regime in June 2003, and they disclosed yet another major change in accounting policy in that it had decided to

value the railway network at its depreciated replacement cost, make provision for impairment as necessary down to its value in use, and depreciate it on a straight line basis over its estimated remaining weighted average economic life (NRIL, 2003, p. 49).

Simply put, the network was now treated as a single asset, with a weighted average economic life of 25 years, and a Depreciated Replacement Cost (DRC) of £73bn, impaired down to a value in use ('primarily comprised of the discounted future cash flows to arise from the Regulatory Asset Base') of £12.8bn, compared to £8.9bn in Railtrack's 2002 accounts.

The change in policy also had a major impact on the Income Statement (see Table 2).

Similarly, applying the new policy retrospectively to Railtrack in 2001–2 would turn the previously reported loss of £1638m into a surplus of £295m (SRA, 2003, p. 76). It should be noted that the gross replacement cost of the network (even after excluding 'embankments, cuttings and tunnels') was approximately £180bn, implying a depreciation charge of £2.92bn but for the 'impairment down to the RAB [which effects a reduction in] the depreciation charge of £2.48 billion' (NRIL, 2003, p. 14).

At first sight this change of policy is puzzling. NR management had a terrible legacy from Railtrack, and could not possibly be blamed for poor results when they had only taken control midway through the financial year. One might have expected,

¹⁰ The Rail Regulator, through the Office of Rail Regulation, is the independent statutory for Britain's railways, with responsibility for ensuring safety in the public interest (Gourvish, 2002, pp. 424–5).

¹¹ Railtrack's accounts for the year to 31 March 2001, published before it was placed in Administration, included an exceptional charge of £641m relating to the costs of Hatfield (mostly compensation payments to train operating companies) (Railtrack plc, 2001, p. 15).

Table 2
The impact of adopting DRC.

	DRC £m	HCA £m
Profit before network depreciation and tax	148	148
Depreciation charge on network	(438)	(1889)
Other items		(5)
Profit before tax	(290)	(1746)
Taxation	35	35
Profit/(Loss) after tax	(255)	(1711)
Revaluation of network during year to 31.3.03	935	
Gains (and losses) during the year	680	(1711)

on the contrary, a 'big bath', with provisions and write-downs to exaggerate losses and enhance performance in subsequent years. However, Railtrack's 2002 accounts disclosed Net Assets of only £1182m which would be more than wiped out by the loss for the following year. On the basis of unchanged accounting policies NRIL would have negative net assets, and so, on some definitions, been insolvent.¹² Moreover the scale of investment required to remedy past infrastructure neglect, all to be financed by borrowings, implied that the 'negative equity' could only increase in future years. Adopting a new valuation basis avoided this potential embarrassment for Network Rail and the government.

In subsequent years, debt has increased, but is still below asset valuation: the accounts to March 2013 show a value for the network of more than £46bn, comfortably exceeding the £33bn of debt (NRIL, 2013, pp. 10, 38–9).

NR put forward three reasons to justify its change of accounting policy. First, the directors argued that DRC

better reflect[s] the economic value of the railway and ensure[s] that both the book value of fixed assets and the depreciation charge [are] accounted for on a consistent current cost basis . . . the historic cost basis adopted previously . . . does not reflect the true economic value of the network (NRIL, 2003, p. 49).

However, the only evidence adduced in support was the Rail Regulator's statement of 27 June 2002 on the proposed acquisition of Railtrack PLC by Network Rail which had undertaken to increase the Regulatory Asset Base (RAB), used by the Rail Regulator to determine the track access charges the infrastructure holder may levy, to allow for the above-plan expenditure¹³ needed to rectify the network after the Hatfield accident. They added that since 'the RAB represents the value in use of the railway network (being, in effect, a discounted cash flow calculation) . . . it gives a much clearer and more accurate economic assessment of the value to the business of the network as an asset [which is] particularly vital at a time when the RAB has increased significantly in a short period of time' (NRIL, 2003, p. 14).

This 'explanation' was repeated by the Strategic Rail Authority almost word for word, but again, no meaningful explanation was provided as to why this change would 'better reflect' the economic value of the network (SRA, 2003, pp. 85, 111).

Second, it was argued that this would bring the valuation 'much closer into line' with that in NR's regulatory financial statements i.e. the RAB. Thus the valuation of the network at 31 March 2004 was £18.7bn compared to an RAB of £18.2bn (NRIL, 2004a, p. 29; NRIL, 2004b, p. 7).

But this does not explain why the regulatory accounts, which are 'prepared on a basis that differs significantly from [UK GAAP] and do not [under the Companies Acts] constitute statutory accounts' are somehow superior to these accounts, such that the latter should be brought into line with them. Preparation of regulatory accounts has always been a condition of the Network Operating Licence issued by the Department for Transport – yet it was never suggested that Railtrack should align its published accounts with their regulatory counterpart (DfT, 2004, pp. 68–74).

Third, the directors pointed to proposals to bring UK standards into line with International Accounting Standards (specifically IAS16, *Plant, Property and Equipment* (IASB, 2003)) 'which will not permit renewals accounting' (NRIL, 2003, p. 49). This was a strange statement. Although it is now generally agreed that renewals accounting' does not appear to be allowable' under IAS 16 (Ernst & Young, 2009, p. 1133) this was challenged at the time, with some arguing that 'renewals accounting is merely an estimation technique and that its continued use could be sustained' (CIPFA, 2004).

Even if one accepts that IAS 16 does unambiguously exclude renewals accounting, NR seems to have been a little hasty in assuming that UK GAAP would soon conform to it.¹⁴ And this justification for the change in policy looks even stranger in view of the fact that in its 2004 accounts NRIL states that it 'will be required, as part of its licence condition, to comply with accounting practices of publicly listed companies' and so, like all listed companies in the EU, to adopt international

¹² e.g. a company is 'deemed unable to pay its debts if ... the value of the company's assets is less than the amount of its liabilities, taking into account its contingent and prospective liabilities' (Insolvency Act, 1986, sec 123 (2)).

¹³ The ORR indicated that the RAB will increase 'by an amount greater than the level of actual additions to the network, reflecting the additional expenditure on operating, renewing and maintaining the network in the two years to 31 March 2003. Without this increase [NR] would have needed to write down the carrying value of the network in its accounts, resulting in an additional impairment charge to its profit and loss account' (SRA, 2003, p. 76). The RAB was set at £5.5bn for the beginning of the 2001–06 control period, and Railtrack was permitted a real pre-tax rate of return of 8% pa (ORR, 2000, paras. 6.28, 5.32).

¹⁴ At the time of writing (Spring 2014) the 1999 version of FRS 15 is still in force.

accounting standards at the latest in its 2005/06 accounts. Yet the 2003 accounts made no mention of this licence condition, or of the pertinent Regulation, although this had been promulgated in July 2002 (EU, 2002).

It is difficult not to conclude that this policy change was motivated by the reduction in the reported loss, and the increase in asset value that avoided negative equity. As noted, the depreciation charge in 2002/3 was £438m compared with £1889m on a Historical Cost basis. Presumably subsequent years would have shown a similar divergence, but the accounts for 2003/04 did not disclose HC figures since they could not 'be accurately determined as the information is not available' – although why this was so, when it had been available the previous year, was not explained (NRIL, 2004a, p. 50).

5. Conclusion

The break-up the integrated British rail industry as part of the privatisation process, separating control of infrastructure and rolling stock from the operation of train services, flew in the face of historical experience and has been widely credited in the literature with driving up both overall costs and government subsidy. Most of the many academic papers on the post-privatisation railways have highlighted regulatory and performance issues: this paper has examined one significant aspect of the financial statements produced by entities in the industry, namely the treatment of the assets comprising the railway network infrastructure—the valuation of these assets and the charging of capital consumption.

The accounting treatment of fixed assets is often contentious in many industries, but in the railway industry the difficulties are especially pronounced. The very nature of an industry that needs costly and long term investment – with assets being maintained at a high level (for safety and operational reasons) – means that these can be key factors in determining earnings and asset values. Even small changes in, say, assumptions of asset lives can have a significant impact on overall figures.

The study has focused on the period from 1992 to 2004, when the infrastructure of the railway industry (track, signalling and stations etc.) underwent several changes of ownership, from the state-owned British Rail to Railtrack, a publicly listed company and finally to Network Rail, a 'not-for-dividend' (limited by guarantee) company. These successive entities, initially at least, all prepared financial statements in accordance with the reporting regime of the UK's Accounting Standards Board, whose basic principle is that of User Needs: users should be furnished with the information they need to assess the stewardship of management and to make economic decisions. Nevertheless in the period under consideration the financial statements are affected by a bewildering series of major accounting policy changes, such that one might consider that for users they had very little use at all.

Much of what was done parallels the financial reporting of earlier privatisations. The accounts of BRB and Railtrack were 'preened' by improving operating results and boosting the balance sheet to make them more attractive to investors, as well as demonstrating the viability of one of BRB's business sectors (and possibly to promote the preferred privatisation model of BRB's directors). Pre-flotation provisions enhanced Railtrack's post-flotation earnings, 'proving' the success of privatisation, and helping its Directors 'earn' profit-dependent bonuses. Income-enhancing policy changes adopted after privatisation worked in the same direction.

The accounting policy changes of BRB and Railtrack are consonant with, and offer support for the 'positivist' theoretical approach of Watts and Zimmerman (1986) that emphasises the self-interest of managers and other actors as the drivers of accounting policy choice, and, to some extent with those that stress changes in a firm's external environment. The government and the directors of Railtrack both wanted and needed the flotation to be a success and the privatised company to be able to reward investors. The directors had direct personal incentives (initiated by themselves) to maximise its profitability and share price.

The adoption of DRC by Network Rail seems to closely parallel accounting change at British Gas in the early 1980s as analysed by Puxty (1997). In that case, government-imposed increases in the price of gas generated hostility and a legitimacy problem managed by income-reducing accounting policies. In this case, hostility to a controversial political creation produced a legitimacy problem managed by changing policies so as to report an (apparently) healthy balance sheet. Nor should such a cynical motivation (in its way also consonant with the Watts and Zimmerman approach) be surprising: the government had after all structured NR as an ostensibly private (but *de facto* nationalised) entity in a manoeuvre widely criticised as a type of creative accounting designed merely to keep its debt out of government figures – it was even castigated as an 'Enron-on-wheels' (McCartney & Stittle, 2006, p. 150).

In sum, it is difficult to explain the accounting policies outlined in this paper other than as purely pragmatic devices to serve the policies or interests of those controlling the reporting entities – accounting for Producer Needs.

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