OFFICE OF RAIL REGULATION

Annual efficiency and finance assessment of Network Rail 2011-12

November 2012

Contents

Acronyms and abbreviations

Abbreviation / acronym	Meaning
AICR	Adjusted interest cover ratio
ATOC	Association of Train Operating Companies
BCAM	Buildings & civils asset management
Capex	Capital expenditure
CaSL	Cancellations and significant lateness
CP3	Control period 3 (1 April 2004 – 31 March 2009)
CP4	Control period 4 (1 April 2009 – 31 March 2014)
CP5	Control period 5 (1 April 2014 – 31 March 2019)
DfT	Department for Transport
EBSM	Efficiency benefit sharing mechanism
ECML	East Coast Mainline
FIM	Financial indemnity mechanism
FVA	Financial Value Add
GBP	Pound sterling (£)
IOPI	Infrastructure output price index
NSIP	National Stations Improvement Programme
OM&R	Controllable opex, maintenance and renewals expenditure
ONS	Office of National Statistics
Opex	Operating expenditure
OSTI	Other single till income
OTM	On-Track Machinery
PDP	Performance delivery plan
PPM	Public performance measure
PR08	Periodic review 2008 (covering control period 4, 1 April 2009 – 31 March 2014
PR13	Periodic review 2013 (covering control period 4, 1 April 2014 – 31 March 2019

PwC	PricewaterhouseCoopers
RAB	Regulatory asset base
REEM	Real economic efficiency measure
RFOA	Rail Freight Operators Association
RICS	The Royal Institution of Chartered Surveyors
RPI	Retail price index (specifically RPI CHAW)
RVfM	McNulty rail value for money study
SBP	Network Rail's strategic business plan
TS	Transport Scotland

Executive summary

We have assessed Network Rail's financial performance in the round and have taken into account the company's failure to deliver required levels of train punctuality and reliability, and our concerns about aspects of its asset management, in particular the sustainability of its management of civils assets (bridges, tunnels and other major structures). Our assessment shows that Network Rail has achieved £775m (16.7%) 'controllable' opex, maintenance and renewals (OM&R) efficiency savings in 2011-12 compared to the start of the control period (1 April 2009) which is 0.6% ahead of the company's trajectory to deliver the stretching efficiency targets in the Periodic Review 2008 ('PR08') settlement. Savings have been achieved through a number of initiatives including rationalising signalling and control centres and reorganising its rail maintenance function, resulting in reduced staff costs and reduced use of sub-contractors. These savings are good news for Network Rail's customers and funders, and the company appears to be on target to deliver our CP4 efficiency targets.

This year, for the first time, we are approving payments by Network Rail to train and freight operating companies under the efficiency benefit sharing mechanism. This mechanism was established in our PR08 determination to incentivise train and freight operating companies to support Network Rail's efforts to improve its efficiency. Examples of how train operators have contributed to Network Rail's efficiencies include helping to reduce station operating costs and supporting activity to achieve lower energy costs.

Introduction

1. This document explains our assessment of Network Rail's efficiency and financial performance for the year ending 31 March 2012, the third year of control period 4 (CP4)[1]. It is intended to help customers, funders and other interested parties gain a better understanding of Network Rail's performance compared with the CP4 financial settlement that we set out in our Periodic Review 2008 (PR08) determination of Network Rail's access charges. It contains information and commentary on Network Rail's expenditure and its efficiency improvements compared to our PR08 determination, its income, regulatory asset base (RAB), debt and borrowing costs.

2. Our assessment separately covers Great Britain, England & Wales and Scotland. It underpins the calculation of payments to train operators under the Efficiency Benefit Sharing Mechanism (EBSM), which provides train operators with an incentive to help improve Network Rail's efficiency in return for a share of the resulting savings.

3. We also monitor Network Rail's operational performance, including in respect of safety risk, train performance, asset performance and planning. Our assessment of Network Rail's operational performance is critically important for holding Network Rail to account against its obligations and is included in our annual health and safety report and our 2011-12 Q4 Network Rail Monitor publication[2]. Monitoring

[1] Control period 4 covers the five year period from 1 April 2009 to 31 March 2014.

[2] Our 2012 Health and Safety report is available at http://www.rail-reg.gov.uk/upload/pdf/health-safety-report-2012.pdf and our 2012 Q4 Network Rail Monitor is available at http://www.rail-reg.gov.uk/server/show/nav.293.

operational performance is important in helping us to verify that Network Rail has delivered its obligations in return for the money it has received from train operators and the governments, and that it only retains the benefit of the savings that it has genuinely achieved, which is the focus of this document.

Key messages

Context

4. It is critically important that the rail industry delivers significant improvements in value for money. The rail industry plays a key role in the British economy and society by facilitating economic growth, social connectivity and environmental sustainability, as well as providing services directly for passengers and freight customers. Improvements in value for money allow more of these benefits to be realised at lower cost. This is particularly important given the current economic climate, and the financial pressures it brings for households, businesses and on the public purse.

5. The McNulty Rail Value for Money study (RVfM study) that we commissioned jointly with the Department for Transport has estimated that compared to 2008-09, UK rail industry costs could be reduced by between £2.5bn and £3.5bn per annum by 2018-19[3]. The study estimated that around 70% of these savings should come from Network Rail's management of the railway infrastructure, with the other 30% coming from the rest of the railway industry.

6. The RVfM study built upon analysis underpinning our 2008 determination of Network Rail's access charges (PR08) where we challenged Network Rail to deliver 21.0% efficiency improvements by 2013-14, the final year of CP4. This equates to a saving of £1.0bn per year compared to the start of the control period. If Network Rail delivers the efficiency improvements that we require in CP4 it will have achieved around a third of RVfM study estimated improvements by the end of 2013-14.

7. In considering Network Rail's efficiencies it is important for us to consider both how much money Network Rail has spent and what the company has delivered. If Network Rail has delivered the required outputs for a lower cost, this is likely to represent efficiency. But if Network Rail has incurred lower costs while not delivering the required outputs, we need to consider how much of the cost reduction it has achieved results from genuine efficiency and how much has resulted from the failure to deliver outputs. At PR08 we not only determined a set of outputs the company had to deliver but also areas where it needed to improve its capabilities. So, in assessing efficiency we need to consider whether lower spend might be because the company has compromised on doing what is necessary to improve its capability (and therefore its potential to deliver efficiency) including over the long term, or has not achieved its required CP4 outputs.

Efficiency analysis and financial performance

8. Figures from Network Rail show that its costs are lower at this stage in CP4 than we had assumed they would be on the basis of our efficiency challenge in PR08. Network Rail has reported cumulative controllable opex, maintenance and renewals (OM&R) efficiency savings of £775m (16.7%) in 2011-12 which is slightly ahead of the efficiency savings we said we expected the company to achieve in PR08[4]. Examples of where Network Rail has achieved efficiency savings include:

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[3] The study is available at http://assets.dft.gov.uk/publications/report-of-the-rail-vfm-study/realising-the-potential-of-gb-rail-summary.pdf. These numbers are in 2008-09 prices as the study was published in 2008-09 prices. In 2011-12 prices the range is between £2.7bn and £3.8bn.

[4] On a Real Economic Efficiency Measure (REEM) basis. This is 0.6 percentage points ahead of the 16.1% efficiency savings that Network Rail aimed to achieve by the end of 2011-12. On a PR08 basis Network Rail has claimed savings of 15.1% which is 2.6% higher than the 12.5% savings that we assumed it could achieve by the end of the third year of CP4. How we measure efficiency is explained in Annex A.

(a) controllable opex: rationalising the number of signalling and control centres resulting in reduced staff costs;

(b) maintenance: reorganisation of the maintenance organisation resulting in reduced staff costs and the reduced use of (more expensive) sub-contractors; and

(c) renewals: reduced volumes of track renewal following the change in asset policy to prioritise high usage track sections and reduced unit costs due to the beneficial effect of renegotiating contracts from ‘cost plus’ to fixed prices.

9. The company is also operating within the financial limits that we set for 2011-12[5].

Delivery of outputs and asset management

10. Network Rail is not currently delivering the outputs it was required by us in PR08 to deliver in CP4 and it is not on trajectory with some of the enablers of best practice asset management. Following our assessment of Network Rail’s performance in 2011-12, as set out in our Network Rail Monitors (2011-12 Q4 and 2012-13 Q1[6]), we have serious concerns about:

(a) aspects of Network Rail’s asset management, in particular the long term sustainability of its work to renew civil structures[7]; and

(b) the percentage of trains that are not running on time due to problems with the network.

11. It is important that we should not recognise as efficiencies those cost savings that have been achieved as a result of non-delivery of required outputs or not being on trajectory with enablers. In reaching our view of Network Rail’s financial performance in CP4 to date we have adjusted Network Rail’s originally reported efficiencies[8] in the following ways:

(a) we agreed with Network Rail that it should exclude efficiencies relating to civils renewals from its efficiency reporting within its regulatory financial statements (£76m deduction for 2011-12); and

(b) we have adjusted our assessment of Network Rail’s financial outperformance of our PR08 determination by £172m because our assessment has shown that part of the company’s underspend is related to its failure to deliver train punctuality and reliability targets, i.e. this underspend is not genuine outperformance[9].

EBSM

12. Given that Network Rail has weak corporate financial incentives, for example, it does not have equity shareholders, it is important that we provide strong incentives for train and freight operating companies to work with Network Rail to outperform our PR08 determination. This is in the long term interests of Network Rail’s customers and funders. We therefore established an efficiency benefit sharing mechanism (EBSM) in

[5] The two primary financial indicators that we monitor are the adjusted interest cover (AICR) ratio and the net debt to RAB ratio. We monitor these to assess whether Network Rail should be able to finance itself on reasonable terms.

[6] The 2012 Q4 Network Rail Monitor is available at http://www.rail-reg.gov.uk/upload/pdf/network_rail_monitor_1213q1.pdf.

[7] Network Rail’s asset management improvement programme does not yet meet our required standard. As reported in our Q4 Monitor, the company only met the September 2011 targets which Network Rail agreed with us for one of the six enablers of best practise asset management (risk & review). In particular, we have concerns about Network Rail’s understanding of the condition of its bridges, tunnels and other major structures (these assets are collectively known as civil structures or civils) and the amount of work that would be required to maintain these assets on a sustainable basis (i.e. if demand on the network were to remain steady, would application of the same asset management policy continue to deliver the outputs specified for the final year of CP4 indefinitely).

[8] These were included in the regulatory financial statements prepared by Network Rail.

[9] Note that train operators have been compensated for Network Rail’s failure to deliver its punctuality targets through the Schedule 8 mechanism.

our PR08 determination to incentivise train and freight operating companies to support Network Rail's efforts to improve its efficiency. Under the rules of the mechanism, train and freight operators share 25% of Network Rail's cumulative outperformance[10] on a number of elements of expenditure and revenue. There is an argument that Network Rail's failure to deliver required train punctuality targets means that we should judge that the company has not outperformed our PR08 determination. But we consider that such an approach would have an undesirable incentive effect because once the train or freight operator knew that Network Rail would not deliver the targets it would have no incentive to help it to deliver efficiencies.

13. We have instead decided to adjust the level of outperformance that we recognise and feed through into EBSM payments by deducting the estimated amount of PR08 funding that it received for required outputs which have not been delivered in 2011-12, i.e. this amount should be netted off any outperformance. This is difficult to do because of the difficulty in establishing a clear linkage between expenditure and performance given the diverse nature of the activities that Network Rail undertakes to operate and maintain the national rail infrastructure. But, after working with Network Rail to understand these costs, we have deducted £172m from the company's outperformance in recognition of this.

14. We take Network Rail's failure to deliver required outputs, including punctuality targets, very seriously. Separate from the adjustments we have made to outperformance, we have also taken licence enforcement action against Network Rail addressing its failure to deliver targets in relation to punctuality and reliability of long distance and freight services.

15. Our assessment of Network Rail's cumulative outperformance on the relevant elements of expenditure and income for the first three years of CP4 shows that EBSM payments to train and freight operators should be £2.7m in England & Wales and £13.2m in Scotland[11,12]. Our PR08 efficiency assumptions were challenging but achievable. Network Rail responded by developing a delivery plan which showed how they would meet our challenge. Overall, Network Rail has outperformed in terms of efficiency in CP4 to date. This includes areas of significant outperformance such as renewals, maintenance and Schedule 4 costs. These are partly offset by underperformance for operating costs. Also we have adjusted Network Rail's outperformance for its failure to deliver required train punctuality targets.

16. As required by our PR08 determination, the Association of Train Operating Companies (ATOC) and Rail Freight Operators Association (RFOA) have both written to us explaining ways in which their members have helped to improve Network's Rail's efficiency in CP4 to date, thereby fulfilling the requirement in our PR08 determination. Examples provided include the establishment of Local Delivery Groups to bring to identify ways of reducing stations costs though better integration of programmes, helping Network Rail to achieve lower energy costs through the organising and part of funding studies to identify the losses in the DC traction network; supporting Network Rail to develop more cost-effective network re-signalling schemes at freight yards and a programme of replacement or modification of older freight wagon types with more track friendly vehicles.

Input prices

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[10] This means expenditure lower than or income higher than our PR08 determination assumption.

[11] The components of the EBSM are explained in Chapter 3. We are aware that the Department for Transport and Transport Scotland may seek to recover any EBSM payments where they are entitled to do so, for example, using the Clause 18.1 / Schedule 9 provisions in their franchise agreements. The minimum amount that may be retained by passenger and freight operators will be around £1.1m for England & Wales and £6.3m for Scotland. This has been calculated in proportion to operators' cumulative variable usage charges (separately for England & Wales and Scotland).

[12] We did not have sufficient confidence in Network Rail's reporting of renewals efficiencies to sanction EBSM payments in 2010-11. As discussed in this report Network Rail has made sufficient improvements to its reporting processes in 2011-12 for us to sanction EBSM payments for 2011-12.

17. It is important that we appropriately incentivise Network Rail to manage inflation efficiently and we incentivised Network Rail in CP4 to manage input price inflation by exposing it to movements in input prices. As a result, if input prices are lower than we expected Network Rail will retain the benefit of that variance and if input prices are higher it will bear the cost[13]. As part of Periodic Review 2013 ('PR13') we are currently consulting on the treatment of inflation in Control Period 5 ('CP5') and expect to publish our decision on this issue shortly.

18. When we set our PR08 determination there was considerable uncertainty about the state of the economy. This meant that our inflation assumptions were also uncertain. In making our decisions we assumed that Network Rail would face 3.9 percentage points higher OM&R inflation than the retail price index (RPI) by the end of 2011-12. We exposed Network Rail to the risk that outturn input price inflation would be different to our assumption which means that Network Rail will bear the consequences if input prices are higher than we expected, and will benefit if input prices have risen by less than we expected[14].

19. The prices that Network Rail has paid for its inputs have in fact risen by less than the rate we assumed in our PR08 determination. We estimate that Network Rail's OM&R inflation has been 2.3 percentage points lower than RPI. Therefore, Network Rail may have experienced 6.2 percentage points lower input prices than assumed in our PR08 determination in CP4 to date. Not adjusting for input prices, Network Rail has achieved 2.6 percentage points higher OM&R efficiency improvements than we assumed in our PR08 determination. However, excluding the effect of input prices, we estimate that Network Rail may have achieved 3.6 percentage points lower cumulative OM&R efficiency savings than the 16.4% improvement assumed in our PR08 determination[15]. The reduction in the costs of Network Rail's inputs (labour and materials) will ultimately benefit Network Rail's customers and funders.

Conclusion

20. We have assessed Network Rail's financial performance in the round and have taken into account the company's failure to deliver required levels of train punctuality and reliability, and our concerns about aspects of its asset management, in particular the sustainability of its management of civils assets (bridges, tunnels and other major structures). We have adjusted Network Rail's efficiency savings to reflect the company's current underperformance for train punctuality and reliability. Network Rail has not claimed any efficiency in relation to its civils assets. Our assessment shows that Network Rail has achieved £775m (16.7%) 'controllable' opex, maintenance and renewals (OM&R) efficiency savings in 2011-12 compared to the start of the control period (1 April 2009) which is 0.6% ahead of the company's trajectory to deliver the stretching efficiency targets in the PR08 settlement. These savings are good news for Network Rail's customers and funders, and the company appears to be on target to deliver our CP4 efficiency targets.

21. We will continue to closely monitor Network Rail's financial performance and we if we find any issues that give us concerns we will take that into account in our future assessments.

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[13] As part of this policy we also adjust Network Rail's RAB for movements in the Infrastructure Output Price Index (IOPI).

[14] This approach also applies to the EBSM. Input price variations are possible modifiers that Network Rail's Remuneration Committee will consider at the end of CP4 in determining management's long-term bonuses.

[15] Measured on a PR08 basis, this is explained in Annex A. Care is required in interpreting these findings as Network Rail may have taken actions to reduce the effects of input prices on its cost base which would not be reflected in our analysis, also there is uncertainty in measuring input price inflation rates. Note that the indicative RAB has been significantly adjusted down (£471m) for movements in IOPI.

Regulatory financial reporting

22. If Network Rail cannot robustly show that the efficiencies it is claiming are genuine and consistent with our PR08 determination, then we cannot accept that the underspend is genuinely efficient. Therefore, it is very important that Network Rail has robust systems and processes in place to identify efficiencies.

23. A number of important issues were identified with Network Rail's reporting of efficiencies last year by the independent reporter Arup and us[16]. These issues included problems with calculations performed by Network Rail within a complex system of spreadsheets, limited documentation of its calculation methodology, commentaries and identifiers of source data, and a lack of a clear 'bottom up' quantified base of auditable evidence to justify efficiencies. We explained to Network Rail that if it failed to implement robust processes for efficiency reporting then we would consider whether it was in breach of condition 1 of its network licence (network management) and condition 11 of its network licence (regulatory accounts).

24. Network Rail recognised that it had not yet met our expectations and committed to improve its processes for calculating and reporting efficiencies this year. We jointly commissioned Arup to undertake an interim review of Network Rail's period six (mid-year) efficiency calculations to review whether the company had addressed our concerns about its reporting. Arup's interim review found that Network Rail has made efficiency reporting a significant priority since Arup's review of the 2010-11 regulatory financial statements and that based on the evidence presented, Arup considered that the reporting (e.g. improvements to documentation and internal challenge process) was adequate and fit for purpose. Based on its year-end review, Arup has maintained this view[17].

Summary financial information

25. Table 1 provides a summary of Network Rail's key financial information compared to our PR08 determination.

[16] Independent reporters are employed jointly by Network Rail and us to review aspects of the company's performance.

[17] Though Arup has recommended that Network Rail should adopt some changes to its efficiency reporting structure, incorporating greater visibility of projected outputs and expenditure for each asset and expenditure area.

Table 1: Summary of key financial information for Great Britain

£m, 2011-12 prices	2011-12			Cumulative		
	Actual	PR08	Variance	Actual	PR08	Variance
Expenditure	(A)	(B)	(B-A)	(C)	(D)	(D-C)
Controllable opex	906	811	-95	2,887	2,581	-306
Non-controllable opex	420	427	7	1,339	1,232	-107
Maintenance	968	1,174	206	3,335	3,629	294
Renewals	2,455	2,398	-57	7,339	8,489	1,150
Total OM&R expenditure	4,749	4,810	61	14,900	15,931	1,031
Enhancements	2,077	1,805	-272	4,887	6,154	1,267
Schedule 4&8	172	182	10	530	562	32
OM&R efficiency savings[a]	15.1%	12.5%	-2.6%	15.1%	12.3%	-2.8%
Income[b]						
Franchised track access income	1,593	1,621	28	4,932	4,855	-77
Other single till income	695	680	-15	2,012	1,974	-38
Grant income	3,989	4,099	110	12,069	12,128	59
Finance						
RAB (estimated)	42,371	45,492	3,121	42,371	45,492	3,121
Net debt	26,489	28,804	2,315	26,489	28,804	2,315
Financing costs	1,470	1,512	42	4,257	4,079	-178
Corporation tax	3	0	-3	12	2	-10
Adjusted interest cover ratio	2.15	1.70	0.45	2.15	1.70	-0.45
Gearing (RAB/net debt)	62.5%	63.5%	1.0%	62.5%	63.5%	1.0%
Rebates	40	0	-40	158	0	-158

a - A negative sign for this number implies a higher efficiency than assumed in our PR08 determination. This excludes non-controllable opex.

b - A positive sign for this number implies a lower income than assumed in our PR08 determination

26. In broad terms, our assessment reveals that Network Rail has:

(a) spent less on operating[18] and maintaining[19] the network than last year due to efficiency savings. The maintenance savings were higher than assumed in our PR08 determination and the opex savings were lower;

(b) spent more on renewals[20] than last year and more than we expected in our PR08 determination. The increase was due to Network Rail undertaking renewals work later in the control period than assumed in our PR08 determination and was partly offset by higher efficiency savings than we assumed;

(c) spent more on enhancements projects[21] than last year and more than we assumed in our PR08 determination. This was mostly due to Network Rail undertaking £495m of enhancements in 2011-12 on

[18] Operating expenditure ('opex') includes 'controllable' and 'non-controllable' costs. Controllable costs include network operations, e.g. signallers, and support costs, e.g. information management. Non-controllable costs include traction electricity costs.

[19] Maintenance expenditure relates to activities that sustain the condition and capability of the existing infrastructure to the previously assessed standard of performance.

[20] Renewals expenditure consists of expenditure where the existing infrastructure is replaced with new assets. Such expenditure does not result in any change or enhancement of the performance of the original asset.

[21] Enhancement expenditure is defined as expenditure resulting in a change to network outputs, which improves network capacity or capability (e.g. enabling higher speeds).

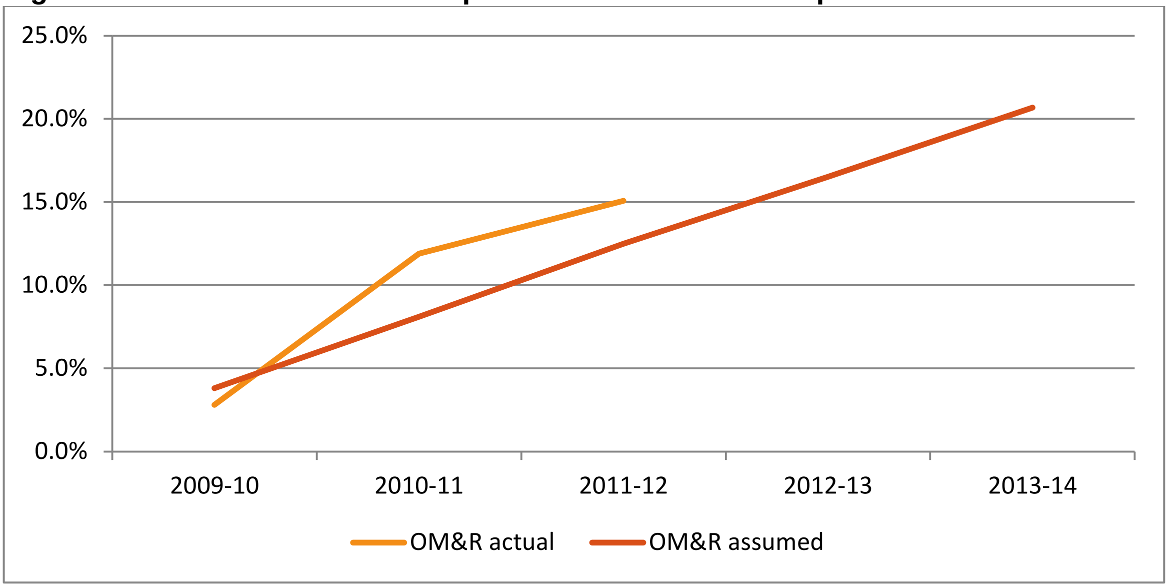
projects that were not included in our PR08 determination. This was partly offset by £223m lower expenditure on PR08-funded enhancements than we assumed in our PR08 determination;

(d) received broadly similar levels of franchised track access and other single till income to that which we expected in our PR08 determination. Grant income was lower, largely as a result of differences in the inflation rate assumed in the deed of grant with the Department for Transport (DfT) and Transport Scotland (TS), compared to that used to uplift the level of the grant in our determination from 2006-07 prices. In addition, grants paid by TS were lower than PR08 assumed for 2011-12 as TS brought forward £25m of grant payments from 2011-12 to 2010-11; and

(e) the lower levels of the RAB and debt are primarily due to Network Rail deferring capex work to later in the control period than we expected.

27. In addition to tracking Network Rail's performance against our PR08 determination, we also track the year-on-year financial efficiencies that the company achieves. We call this the Real Economic Efficiency Measure (REEM). On a REEM basis, Network Rail has reported cumulative OM&R efficiency savings compared to the start of the control period of 16.7%. This is 0.6% ahead of the company's trajectory to deliver the efficiency savings that we challenged it to achieve by the end of CP4. As shown in Figure 1, this equates to an efficiency improvement of 15.1% on a PR08 basis which is 2.6% ahead of the efficiency improvements that we assumed that Network Rail could achieve by the end of the third year of CP4[22].

Figure 1: OM&R efficiencies compared to our PR08 assumptions



[22] The PR08 determination challenged Network Rail to make efficiency improvements of 21% across OM&R by the end of CP4. This equates to a required efficiency improvement of 23.5% on a REEM basis. The 23.5% improvement covers both the PR08 efficiency target and 'catch up' from CP3. REEM is not adjusted for Network Rail's failure to deliver required outputs.

1. Introduction

Purpose of this document

1.1 Network Rail operates and maintains the majority of railway infrastructure in Great Britain. One of our key roles as a regulator is to set the charges that Network Rail can levy for access to this infrastructure. We do this in periodic reviews of charges, the last of which we concluded in 2008. This review of charges (sometimes called a price control) was called the PR08 determination and covers the period from 1 April 2009 to 31 March 2014 (control period 4 (CP4).

1.2 A key element of a review is the assessment of what activities Network Rail needs to undertake to efficiently operate, maintain, renew and enhance its infrastructure, and what the efficient cost of these activities should be. In doing this, we challenge Network Rail to improve its efficiency. During the period until the next review we monitor Network Rail's expenditure, its progress in improving its efficiency and its financial position.

1.3 This document provides our assessment of Network Rail's efficiency and financial performance for the year ending 31 March 2012, the third year of CP4 to Network Rail's customers, funders and other interested parties. This includes an assessment of whether Network Rail is operating within the financial settlement we set out in our PR08 determination. We include separate analysis for Great Britain, England & Wales and Scotland.

1.4 We also monitor Network Rail's operational performance, including in respect of safety risk, train performance, asset performance and planning. These assessments are included in our annual health and safety report and our 2011-12 Q4 Network Rail Monitor publication[23].

1.5 The information contained within this document has been compiled from Network Rail's 2011-12 regulatory and statutory accounts, Network Rail's 2009 delivery plan for CP4 and updates to that plan, our PR08 determination, the work of independent reporters and other sources as specified.

1.6 We made changes to our regulatory accounting guidelines to require Network Rail to publish audited regionally disaggregated regulatory financial statements from 2011-12. The company's move towards devolved route management and the development of alliancing arrangements with local train operators will place increasing importance on this type of route-level financial information. An analysis of this information will be included in our GB rail industry financial information 2011-12 publication early next year[24].

Structure of this document

[23] The 2012 Q4 Network Rail Monitor is available at http://www.rail-reg.gov.uk/server/show/nav.293.

[24] We published our first GB rail industry financial information report for the financial year 2010-11 in January 2012. It is available to download at http://www.rail-reg.gov.uk/server/show/ConWebDoc.10814.

1.7 Chapter 2 presents our analysis of Network Rail's expenditure and efficiencies, income, regulatory asset base and financing.

1.8 Chapter 3 reports on the efficiency benefit sharing mechanism for 2011-12.

1.9 Chapters 4 and 5 present separate analysis for England & Wales and Scotland. We explain variances only where the reasons for variances differ from that of Great Britain.

1.10 Annex A explains how we monitor Network Rail's efficiency in more detail.

1.11 Annex B provides supporting information for the efficiency benefit sharing mechanism.

1.12 Unless otherwise stated, all numbers in this document are in 2011-12 prices. There might be some differences in numbers in the tables due to rounding.

Feedback

1.13 We welcome comments on the content of this document. These should be sent to:

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2. Great Britain

Summary

2.1 This chapter presents our analysis of Network Rail's expenditure and efficiencies, income, regulatory asset base and financing for Great Britain. It covers

(a) expenditure and efficiency;

(b) income;

(c) regulatory asset base (RAB);

(d) net debt and financing costs;

(e) financial indicators; and

(f) issues with Network Rail's efficiency reporting.

2.2 Our analysis relies primarily on information within Network Rail's regulatory financial statements and our PR08 determination. Where appropriate, we also draw upon other sources of information including Network Rail's performance last year, the company's 2011 delivery plan update (which set out Network Rail's own expected performance for 2011-12) and the findings of work by the independent reporters.

Expenditure and efficiency

2.3 As shown in Table 2.1, Network Rail's total operating and capital expenditure (excluding financing costs and corporation tax) in Great Britain in 2011-12 was £6,998m. This was £201m (3.0%) lower than assumed in our PR08 determination. A number of factors have contributed to this variance including efficiency savings, deferral of expenditure and input price inflation. These factors are considered below.

2.4 We monitor Network Rail's controllable operating, maintenance and renewals ('OM&R') efficiency improvements using a real (or year-on-year) economic efficiency measure (REEM) and against the efficiency assumptions assumed in our PR08 determination. These measures are explained in Annex A. Network Rail has reported OM&R efficiency savings of £775m (16.7%) in 2011-12 compared to the start of the control period. This is 0.6% ahead of the efficiency savings that Network Rail aimed to achieve by the end of 2011-12 in order to deliver the OM&R efficiency savings that we challenged it to achieve by the end of CP4. On a PR08 basis Network Rail has achieved savings of 15.1% which is 2.6% higher than the 12.5% savings that we assumed it could achieve by the end of the third year of the control period.

2.5 We separately consider the effects of input price movements in our assessment of efficiencies below.

Table 2.1: Analysis of expenditure (Great Britain)

£m 2011-12 prices	Actual	PR08 determination	PR08 variance	Actual 2010-11	Prior year variance
	(A)	(B)	(B-A)	(C)	(C-A)
2011-12					
Controllable opex	906	811	-95	956	50
Non-controllable opex	420	427	7	441	21
Maintenance	968	1,174	206	1,123	155
Renewals	2,455	2,398	-57	2,349	-106
Sub-total (OM&R)	**4,749**	**4,810**	**61**	**4,869**	**120**
Enhancements (PR08)	1,582	1,805	223	1,107	-475
Enhancements (non-PR08)	495	-	-495	300	-195
Total enhancements[25]	2,077	1,805	-272	1,407	-670
Schedule 4 & 8	172	182	10	193	21
Total expenditure	**6,998**	**6,797**	**-201**	**6,469**	**-529**
Cumulative					
Controllable opex	2,887	2,581	-306		
Non-controllable opex	1,339	1,232	-107		
Maintenance	3,335	3,629	294		
Renewals	7,339	8,489	1,150		
Sub-total (OM&R)	**14,900**	**15,931**	**1,031**		
Enhancements (PR08)	3,844	6,154	2,310		
Enhancements (non-PR08)	1,043	0	-1,043		
Total enhancements	4,887	6,154	1,267		
Schedule 4 & 8	530	562	32		
Total expenditure	**20,317**	**22,647**	**2,330**		

Source: Network Rail and PR08 determination.

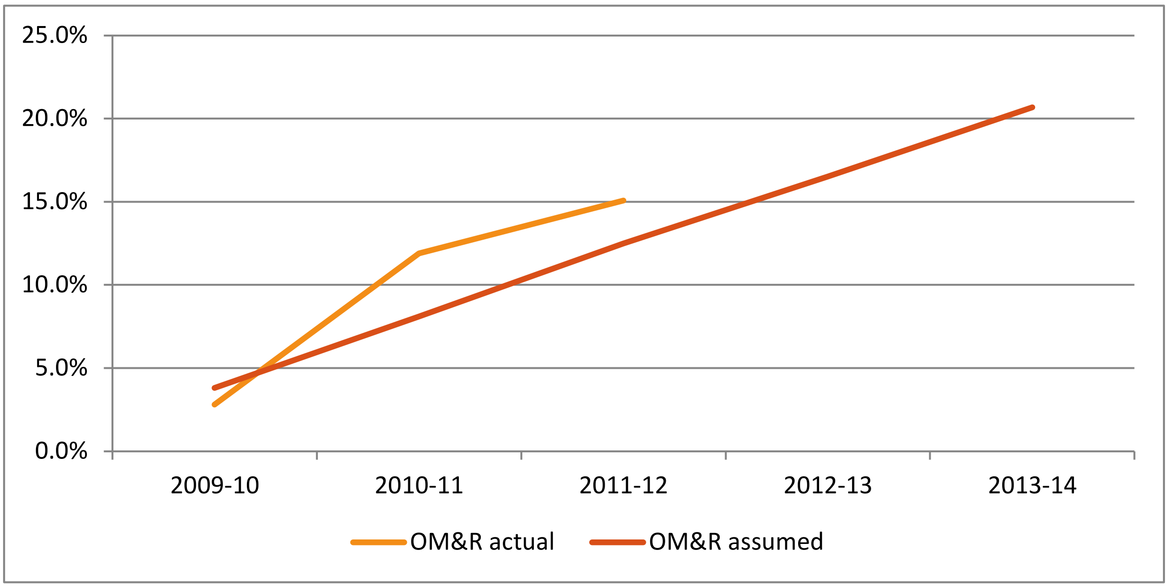
Table 2.2: Analysis of efficiency savings (Great Britain)

	REEM basis			PR08 basis		
	Actual	Assumed	Variance	Actual	Assumed	Variance
In-year						
Controllable opex	6.6%	1.8%	4.8%	5.6%	4.0%	1.6%
Maintenance	8.0%	7.2%	0.8%	10.8%	4.0%	6.8%
Renewals	0.3%	0.3%	0.0%	0.3%	5.5%	-5.2%
OM&R total	**3.9%**	**3.9%**	**0.0%**	**3.7%**	**4.7%**	**-1.0%**
Cumulative						
Controllable opex	9.8%	4.0%	5.8%	-1.3%	9.3%	-10.6%
Maintenance	20.3%	18.9%	1.4%	23.8%	10.1%	13.7%
Renewals	17.7%	19.1%	-1.4%	17.7%	14.7%	3.0%
OM&R total	**16.7%**	**16.1%**	**0.6%**	**15.1%**	**12.5%**	**2.6%**

Source: Network Rail, PR08 determination and our own analysis. These measures are explained in Annex A. These numbers have not been adjusted for input price variances.

[25] This includes all Network Rail funded enhancements but excludes third party funded schemes (£190m) which are funded by external parties on a pay-as-you-go basis.

Figure 2.1: Efficiencies compared to our PR08 assumptions



Controllable opex

2.6 Network Rail categorises network operations and support function costs as controllable operating expenditure (controllable opex). Network operations encompass signalling, timetabling and other activities directly relating to the operation of the network. Support functions include activities that largely do not directly affect the running of the network such as information management, human resources and finance.

2.7 Controllable opex in Great Britain was £906m. This was £95m (11.7%) higher than assumed in our PR08 determination and £50m (5.2%) lower than in 2010-11.

2.8 On a REEM basis, Network Rail has achieved controllable opex efficiency savings of 9.8% compared to the start of CP4. However, Network Rail started CP4 having achieved lower savings than we expected in setting our PR08 determination. Therefore on a PR08 basis, Network Rail has achieved cumulative savings of -1.3% compared to the 9.3% improvement that we assumed the company could achieve by the end of 2011-12[26].

2.9 Network Rail has explained that the majority of the controllable opex savings that it has achieved since the start of CP4 are due to headcount reductions resulting from introducing new technologies. These include the implementation of a strategy to rationalise signalling and control centres. Cost savings have been achieved from the associated reduction in staff costs though these savings have been partly offset by associated redundancy and re-organisation costs. Insurance costs have decreased due to a change in policy to increase the level of excess on insurance policies. Although these savings in insurance costs will be expected to result in reduced claims and hence higher costs elsewhere in the business this approach should result in an overall saving.

2.10 Input prices have increased by less than assumed in our PR08 determination for Network Rail's controllable opex activities. As examined elsewhere within this chapter, this may have had a beneficial effect on the company's controllable opex costs.

[26] The REEM and PR08 efficiency measures are explained in Annex A.

Non-controllable opex

2.11 Network Rail categorises the costs associated with a number of operating activities as non-controllable opex[27]. The most significant of these are traction electricity, cumulo (i.e. business) rates and British Transport Police costs.

2.12 Non-controllable opex was £420m which was £7m (1.6%) lower than assumed in our PR08 determination and £21m (4.7%) lower than in 2010-11 primarily due to cheaper market electricity prices. Non-controllable opex is not included within Network Rail's efficiency reporting in CP4 to avoid confusion with the OM&R efficiency assumptions set out in our PR08 determination[28].

Maintenance

2.13 Maintenance expenditure relates to activities that sustain the condition and capability of existing assets to a required standard of performance. Maintenance expenditure in Great Britain was £968m which was £206m (17.6%) lower than assumed in our PR08 determination and £155m (13.8%) lower than in 2010-11.

2.14 Network Rail has made substantial cost reductions in its maintenance of the network in the first three years of CP4. On a REEM basis, Network Rail is reporting cumulative savings of 20.3% compared to the start of the control period which is ahead of the 18.9% savings that the company aimed to achieve. On a PR08 basis, Network Rail has achieved cumulative savings of 23.8% compared to the 10.1% improvement that we assumed the company could achieve by the end of 2011-12.

2.15 Network Rail has attributed the majority of the maintenance cost reductions as labour-related. Headcount reduced by around 740 staff (4.5%) in 2011-12 as the result of a continuing reorganisation of the maintenance organisation. Network Rail has also identified several other initiatives which have helped to reduce maintenance costs including reducing the use of subcontractors and the introduction of new technologies such as equipment which enables the ends of new rail to be welded simultaneously.

2.16 Arup, the independent reporter for data assurance, has raised concerns about Network Rail's ability to demonstrate that cost reductions in the maintenance organisation have not affected the robustness and serviceability of the network. This matter and our assessment of its effect on Network Rail's efficiency are discussed in the Issues section below.

2.17 Input prices have increased by less than assumed in our PR08 determination for Network Rail's maintenance activities. As examined elsewhere within this chapter, this may have had a beneficial effect on the company's maintenance costs.

Renewals

2.18 Renewal expenditure covers work to replace assets which have reached, or are nearing, the end of their useful lives with the modern equivalent asset. It is treated as capital and is eligible for addition to the

[27] In PR08, even though we treated some of these costs in a similar way to support costs (i.e. by applying an efficiency challenge to them) we continued to call this group of costs "non-controllable" to be transparent, as at the start of PR08 they were called "non-controllable costs". This reflects our view that some aspects of these costs are controllable and we refer to them as industry costs and rates in our Periodic Review 2013.

[28] Our CP4 efficiency assumptions are summarised in Table 8.4 of the PR08 determination. This is available at http://www.rail-reg.gov.uk/upload/pdf/383.pdf.

regulatory asset base (RAB) as discussed separately below. Track, signalling and civil structures[29] account for nearly two-thirds of all renewals expenditure.

2.19 Renewals expenditure in Great Britain was £2,455m. This was £57m (2.4%) higher than assumed in our PR08 determination and £106m (4.5%) higher than in 2010-11. These variances are due to a combination of factors which we consider below;

(a) Deferral of renewals work:

(i) Network Rail established a CP4 delivery plan in 2009 which set out how it intended to achieve required CP4 outputs. This delivery plan had a different profile of renewals work across CP4 than we assumed in our determination;

(ii) in its 2010 and subsequent 2011 delivery plan updates Network Rail made revisions to its plan to defer planned levels of renewals to later in the control period; and

(iii) to catch-up on work deferred in the first two years of CP4, Network Rail delivered more work than we originally expected in 2011-12, although the company did not undertake all of the renewals work in 2011-12 that was set out in its 2011 delivery plan update,

(b) renewals efficiency savings in excess of our PR08 determination; and

(c) renewals input prices have been lower than our PR08 assumptions in the control period to date.

2.20 As shown in Figure 2.2, Network Rail deferred approximately £1 billion of renewals work from the first two years of CP4 compared to the work profile that was assumed in our PR08 determination. It has subsequently failed to deliver over £200m of planned work in 2011-12. Whilst Network Rail has flexibility to re-profile its delivery of renewals within a control period, the greater than expected volumes of work that Network Rail will need to deliver in the final two years of CP4 increases the pressure on the company to deliver these volumes of work efficiently[30].

2.21 On a REEM basis, Network Rail is reporting cumulative renewals savings of £420m (17.7%) compared to the start of the control period. The majority of these savings were in track (£223m) and signalling (£108m). Network Rail has explained that savings have been achieved in these areas as follows:

(a) £133m (60%) of track efficiencies relate to reduced volumes of work and £90m (40%) relate to unit cost savings. Following changes to Network Rail's track asset management policy in CP4, Network Rail now prioritises track renewals on high usage sections with the aim of improving network performance whilst reducing overall volumes of work. The majority of track unit cost savings have been attributed to the beneficial effect of renegotiating contracts from cost reimbursement to fixed prices; and

(b) Network Rail has identified a number of initiatives which have contributed to the £108m of signalling efficiencies including the use of new signalling technologies which have lower design and installation costs, better alignment of signalling possession schedules with other work banks and better security resulting in reduced theft from construction projects.

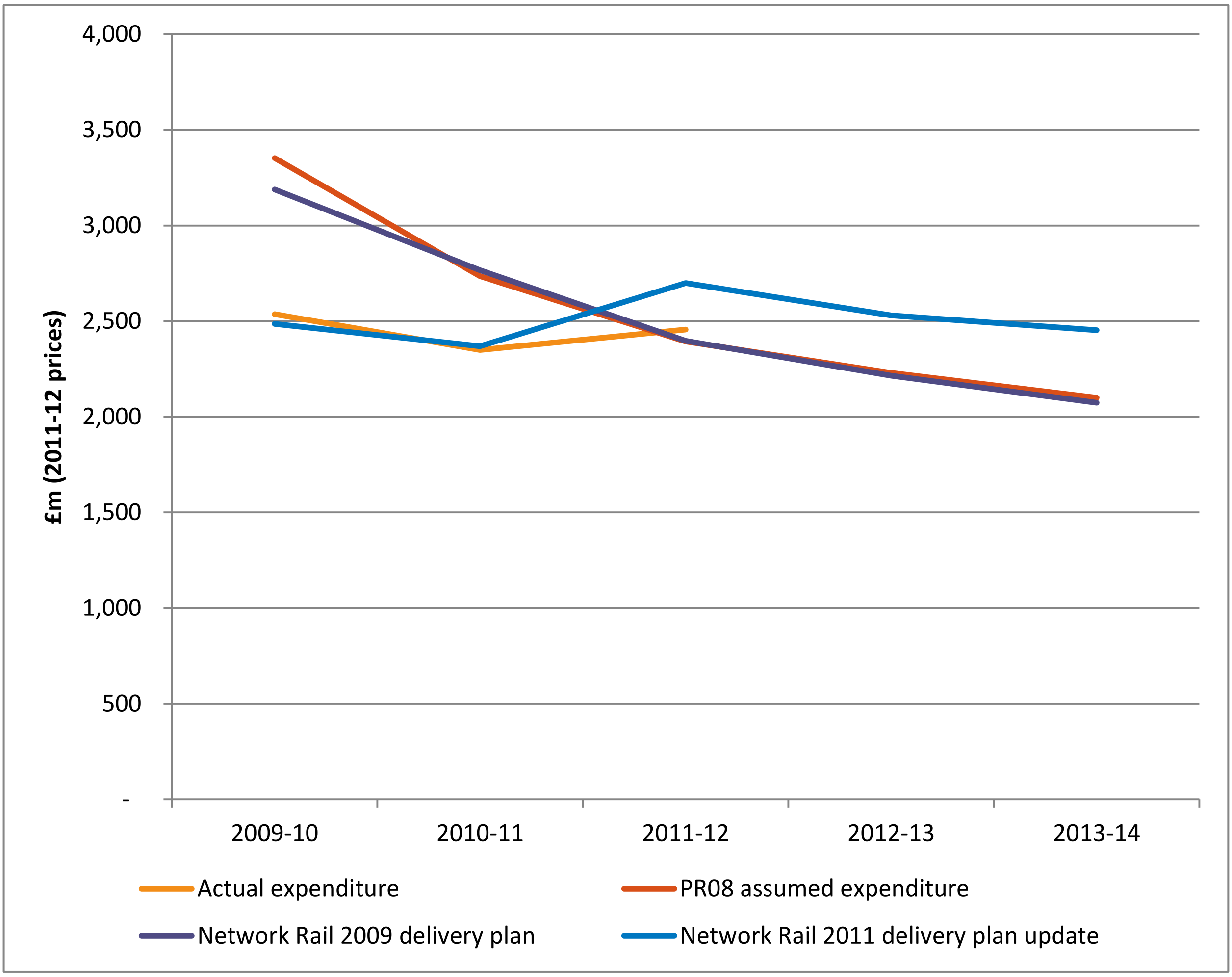
2.22 As discussed in the Issues section below, at our request, Network Rail has excluded civils renewals from its efficiency reporting due to the company's poor understanding of the condition of its civils structures and the amount of work that will be required to maintain these assets on a sustainable basis.

[29] The other main categories are telecommunications, electrification, plant & machinery, and operational property.

[30] Network Rail will not financially benefit from reprofiling renewals work with CP4. If Network Rail does not deliver the required levels of renewals that were set out in our PR08 determination for CP4 we will adjust the CP5 opening regulatory asset base.

2.23 Input prices have increased by less than assumed in our PR08 determination for Network Rail's renewals activities. As examined elsewhere within this chapter, this may have had a beneficial effect on the company's renewals costs.

Figure 2.2: Renewals expenditure profile in CP4



Enhancements

2.24 Enhancement expenditure is defined as expenditure which results in improvements to network capacity or capability, for example enabling higher line speeds. It is treated as capital and, together with renewals expenditure is eligible for addition to the regulatory asset base.

2.25 Total enhancement expenditure in 2011-12 was £2,077m. This includes £1,582m of PR08 funded schemes and £495m of other Network Rail funded schemes[31]. Expenditure on PR08 funded schemes was £558m (26.1%) lower than Network Rail's initial CP4 delivery plan. Cumulative PR08 funded enhancements expenditure was £1,626m (30.2%) lower. The principal reasons for the underspend on PR08 funded enhancement schemes in 2011-12 are:

[31] This includes £48m of expenditure not meeting our requirements for RAB addition (mostly income generating schemes). Network Rail also undertook £190m of work on third party funded enhancement schemes. These schemes are not included in our analysis.

(a) firstly, there have been a number of projects where some expenditure has been partly deferred out of CP4 with the governments' agreement. The most significant of these are Thameslink and West Coast Mainline (WCML) committed schemes. Thameslink has been deferred to ensure a more affordable and deliverable solution, and the WCML schemes have been de-scoped as the original scope in CP4 was in excess of what is now required. Further deferrals have been agreed with the DfT due to the reduced number of additional trains that would be ready to use by 2014. This has meant that the scope of some enhancement projects in CP4 has been reduced to ensure that Network Rail only provides the infrastructure necessary for the lower number of additional trains that will be available in CP4. These projects included the Intercity Express programme and the Northern Urban Centres projects. Overall, these changes mean that a total of £335m of expenditure planned for 2011-12, and £684m cumulatively for the first three years of the control period, has been deferred to CP5. The PR08 determination baseline (£1,805m in Table 2.1) incorporates these changes[32]; and

(b) secondly, Network Rail has re-profiled some enhancements projects compared to its initial 2009 delivery plan with some projects being delivered earlier and some later[33]. The schemes with the largest underspend against plan are East Coast Mainline (ECML) improvements (£101m), Crossrail / Reading (£64m), and Midlands Mainline and Trans Pennine line speed improvements (£37m). These slippages are partly offset by projects for which more work has been completed than planned. Although these project slippages increase the delivery challenge later in CP4, we consider that Network Rail should be able to adequately manage these risks and deliver the schemes before the end of CP4. To make sure this happens we will continue to review Network Rail's progress in delivering its enhancements programme.

2.26 Network Rail undertook £495m of work in 2011-12 on enhancements projects that were not included in the PR08 determination but which are intended to be funded through the RAB. As such, there is no PR08 baseline to compare these schemes to. They include £217m of government sponsored schemes (principally Crossrail, Electrification and the Edinburgh-Glasgow Improvement Programme), £146m of Network Rail sponsored schemes (principally the Victoria Place shopping centre) and £84m of schemes promoted by third parties (principally the Evergreen 3 improvements to services to London Marylebone).

2.27 Most of Network Rail's CP4 enhancements projects have not yet been completed and there are delivery risks with large cost implications that Network Rail will need to manage. For this reason Network Rail does not consider that it is yet outperforming our PR08 determination. However, Network Rail is confident that its enhancements programme is on track and, as stated in its 2012 delivery plan update, its current forecast is to deliver savings of £182m in the final two years of CP4. By the end of CP4 we will review and validate the company's claimed savings relating to enhancements.

Effect of input prices

2.28 It is important that we appropriately incentivise Network Rail to manage inflation efficiently and we incentivised Network Rail in CP4 to manage input price inflation by exposing it to movements in input prices. As a result, if input prices are lower than we expected Network Rail will retain the benefit of that variance and if input prices are higher it will bear the cost[34]. As part of PR13 we are currently consulting on the treatment of inflation in CP5 and expect to publish our decision on this issue shortly.

[32] These changes have been agreed with the governments through the change control process. Details of the agreed changes are available on our website.

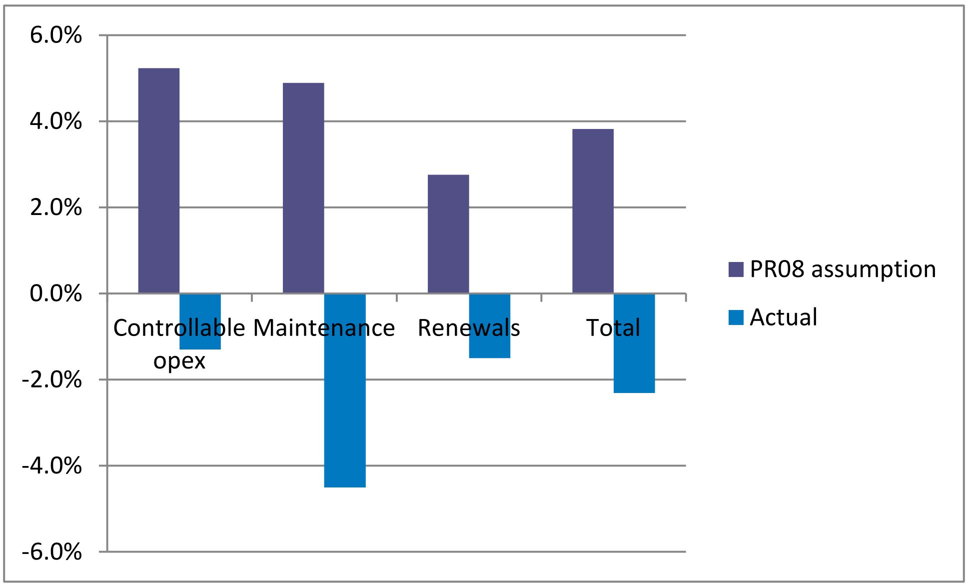
[33] Our RAB funding will be adjusted so that Network Rail will not benefit from the financing costs avoided in delivering these schemes later than was expected in our PR08 determination.

[34] As part of this policy we also adjust Network Rail's RAB for movements in the Infrastructure Output Price Index (IOPI).

2.29 When we set our PR08 determination there was considerable uncertainty about the state of the economy. This meant that our inflation assumptions were also uncertain. In making our decisions we assumed that Network Rail would face 3.9 percentage points higher OM&R inflation than the retail price index (RPI) by the end of 2011-12. We exposed Network Rail to the risk that outturn input price inflation would be different to our assumption which means that Network Rail will bear the consequences if input prices are higher than we expected, and will benefit if input prices have risen by less than we expected[35].

2.30 Network Rail commissioned a study by LEK to examine the key input price trends which influence the company's OM&R expenditure and has subsequently updated and simplified LEK's PR08 input price model for Network Rail. As summarised in Table 2.3 and Figure 2.3, OM&R input prices have increased by an estimated 2.3 percentage points less than RPI in the first three years of CP4, whereas our PR08 determination assumed that they would increase by 3.9 percentage points more than RPI. This 6.2 percentage points positive variance suggests that the company may have substantially benefitted from lower than expected input price inflation. The reduction in the costs of Network Rail's inputs (labour and materials) will ultimately benefit Network Rail's customers and funders.

Figure 2.3: Actual and PR08 assumed OM&R input price variances to RPI



Source: Own analysis of Network Rail submissions to us.

2.31 The estimated 6.2 percentage points variance in input price inflation is subjective and inherently uncertain. Excluding this variance, Network Rail's cumulative OM&R efficiency would be 3.6 percentage points lower than the 16.4 percentage points assumed in our PR08 determination. This contrasts with the 2.6 percentage point higher efficiency shown in Table 2.2, i.e. excluding the estimated effect of input prices[36].

[35] This approach also applies to the EBSM. Input price variations are possible modifiers that Network Rail's Remuneration Committee will consider at the end of CP4 in determining management's long-term bonuses.

[36] Care is required in interpreting these findings as Network Rail may have taken actions to reduce the effects of input prices on its cost base which would not be reflected in our analysis. Also, there is uncertainty in estimating input price inflation rates. Note that the indicative RAB has been significantly adjusted down (£471m) for movements in IOPI.

Table 2.3: Estimated effect of input prices on Network Rail's efficiencies

	Actual efficiency (PR08 basis)		PR08 assumed efficiency	
	2011-12	**Cumulative**	**2011-12**	**Cumulative**
Controllable opex				
Efficiency including input prices	5.6%	-1.3%	4.0%	9.3%
Adjust for input prices	-0.9%	-1.3%	1.1%	5.2%
Efficiency excluding input price effect	*4.7%*	*-2.6%*	*5.1%*	*14.5%*
Maintenance				
Efficiency including input prices	10.8%	23.8%	4.0%	10.1%
Adjust for input prices	-1.3%	-4.5%	1.3%	4.9%
Efficiency excluding input price effect	*9.5%*	*19.3%*	*5.3%*	*15.0%*
Renewals				
Efficiency including input prices	0.3%	17.7%	5.5%	14.7%
Adjust for input prices	-1.7%	-1.5%	0.8%	2.8%
Efficiency excluding input price effect	*-1.4%*	*16.2%*	*6.3%*	*17.5%*
Total OM&R				
Efficiency including input prices	3.7%	15.1%	4.7%	12.5%
Adjust for input prices	-1.4%	-2.3%	1.1%	3.9%
Efficiency excluding input price effect	*2.3%*	*12.8%*	*5.8%*	*16.4%*

Source: Network Rail's regulatory accounts and our own calculations.

Income

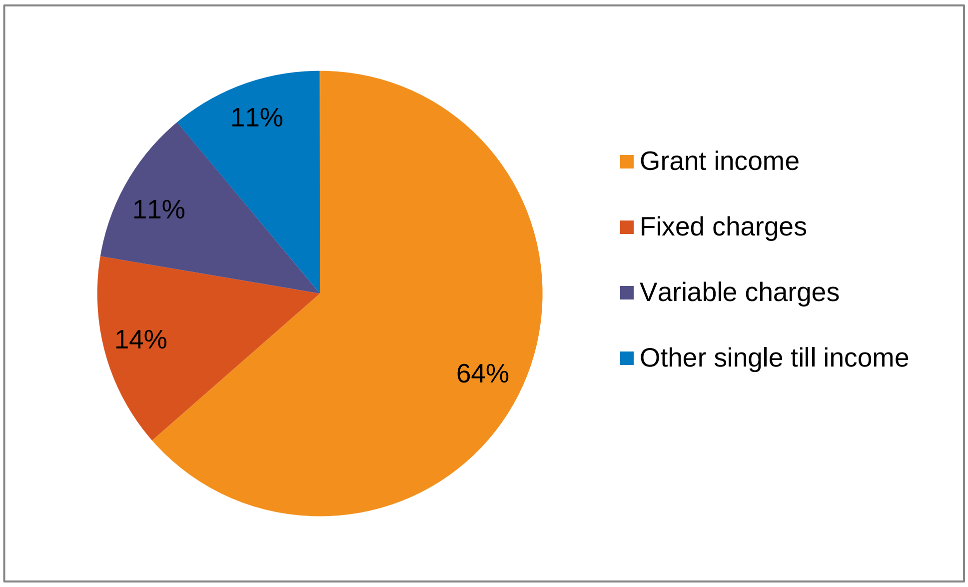
2.32 Network Rail receives income from three primary sources; government grants, track access charges and other single till income (OSTI).

2.33 As shown in Figure 2.4, 64% of Network Rail's income in 2011-12 was from grants paid by the Department for Transport and Transport Scotland[37]. Franchised track access charges comprised 25% of income. These include fixed charges (14%) and variable charges (11%) paid by franchised train operators[38]. The remaining 11% of income came from other single till income which includes income earned from Network Rail's stations, depots and property portfolio, and also from track access charges from freight and open access train operators.

[37] Network Rail receives grants from the Department for Transport and Transport Scotland in return for delivering the strategic outputs specified in the two governments' High Level Output Specifications (HLOSs) for CP4. See http://www.rail-reg.gov.uk/server/show/conGlossary.100 for further details.

[38] Variable charges include traction electricity, schedule 4 income, the variable usage and capacity charges.

Figure 2.4: Sources of income



Source: Network Rail's regulatory accounts

Table 2.4: Comparison of income (Great Britain)

(£m, 2011-12 prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 variance	Prior year variance
	(A)	(B)	(C)	(A-B)	(A-C)
Grant income	3,989	4,099	3,974	-110	15
Fixed charges	887	901	959	-14	-72
Variable charges	706	720	727	-14	-21
Total franchised track access income	1,593	1,621	1,686	-28	-93
Other single till income	695	680	671	15	24
Total income	**6,277**	**6,400**	**6,331**	**-123**	**-54**

Source: Network Rail's regulatory accounts and our own calculations.

2.34 As shown in Table 2.4, total income in 2011-12 for Great Britain was £6,277m. This was £123m (1.9%) lower than assumed in our PR08 determination assumption and £54m (0.8%) lower than last year. These variances are due to a combination of factors, in particular;

(a) grant income was £110m (2.7%) lower than assumed in our PR08 determination, largely as a result of differences in the inflation assumed in the deed of grant with the Department for Transport and Transport Scotland compared to that used to uplift the level of the grant in our determination from 2006-07 prices. In addition, grants paid by Transport Scotland were lower than the PR08 assumed this year as Transport Scotland brought forward £25m of grant payments into 2010-11. Grant income was £15m (0.4%) higher than the previous year due to a combination of these differences and a change of profile between fixed charges payable by franchised train operators to grant payments;

(b) fixed charges were £14m (1.6%) lower than assumed in our PR08 determination and £72m (7.5%) lower than last year. The decrease compared to last year was partly due to the favourable settlement of commercial claims in 2010-11 and partly due to a planned 3% decrease in fixed charges payable by franchised train operators. The planned decrease in fixed charges was offset by a planned increase in the level of network grant paid by government to Network Rail;

(c) variable charges were £14m (1.9%) lower than assumed in our PR08 determination and £21m (2.8%) lower than last year. The most significant variance was in the capacity charge which was £10m lower than our determination due to the impact of weekend discounts offered by Network Rail to train operators; and

(d) these variances were partially offset by other single till income which was £15m (2.2%) higher than assumed in our PR08 determination and £24m (3.6%) higher than last year. The sources of other single till income are shown in Table 2.5. The key variances were;

(i) higher stations and other income than assumed in our PR08 determination. Stations income was £29m (8.1%) higher than our PR08 determination assumption due to better than expected business performance and the receipt of additional investment framework income. Other income was £32m (370%) higher than our PR08 determination assumption as a result of Network Rail including income from its subsidiary Network Rail (High Speed) Limited[39] within its regulatory accounts for the first time in 2011-12 (this includes income from years one and two of the control period in accordance with our determination); and

(ii) these variances were offset by property and freight income being lower than we assumed reflecting more difficult market conditions than anticipated at the time of our PR08 determination.

Table 2.5: Comparison of other single till income (Great Britain)

(£m, 2011-12 prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 variance	Prior year variance
	(A)	(B)	(C)	(A-B)	(A-C)
Property income	130	157	147	-27	-17
Freight income	51	84	45	-33	6
Open access income	26	21	22	5	4
Stations income	383	354	391	29	-8
Depots income	64	55	63	9	1
Other	41	9	2	32	39
Total other single till income	**695**	**680**	**671**	**15**	**24**

Source: Network Rail's regulatory accounts and our own calculations.

Regulatory asset base

2.35 The RAB is a key building block of our methodology for determining Network Rail's revenue requirement in future control periods[40]. Under our RAB roll-forward policy, we will undertake a full assessment of the level of RAB to be rolled forward into the next control period at the end of CP4 and the RAB therefore remains provisional until the end of the control period. This section reviews indicative movements in the RAB in 2011-12.

2.36 Network Rail has reported a provisional value of the RAB at 31 March 2012 of £42,371m, which is £3,121m lower than we assumed in our PR08 determination. As shown in Table 2.6, this variance is mostly due to Network Rail's decisions to re-phase capex to later years in the control period than assumed in our PR08 determination. The deferral affects both the value of the RAB at the start of the year (£2,880m lower), renewals (£211m lower) and PR08-funded enhancements additions (£326m lower). These

[39] Network Rail receives income from its contract with HSL Ltd to operate and maintain the High Speed 1 railway through its subsidiary Network Rail (High Speed) Limited.

[40] Our treatment of the regulatory asset base is set out in Chapter 15 of our PR08 determination and also in our 2011-12 regulatory accounting guidelines, available at http://www.rail-reg.gov.uk/upload/pdf/regulatory-accounting-guidelines-2012.pdf.

variances are partly offset by £445m of expenditure on enhancements projects that were not included in our PR08 determination.

Table 2.6: Comparison of movements in the RAB (Great Britain)

(£m)	Actual 2011-12	PR08 determination	Variance
	(A)	(B)	(A-B)
Opening RAB at 1 April 2011 (2010-11 prices)	**38,594**	**41,474**	**-2,880**
Additions to the RAB:			
Indexation for the year	1,991	2,140	-149
Renewals additions	2,187	2,398	-211
Enhancements additions	1,926	1,807	119
Reductions to the RAB:			
Capex funded from the ring-fenced fund	-598	-597	-1
Amortisation	-1,729	-1,729	0
Closing RAB at 31 March 2012 (2011-12 prices)	**42,371**	**45,492**	**-3,121**

Source: Network Rail's 2011-12 regulatory accounts and our own calculations.

2.37 A number of adjustments have been made to the PR08 assumed levels of renewals and enhancements expenditure in 2011-12 to determine the provisional closing RAB. These adjustments are summarised in Table 2.7 and are examined below. The adjustments include the effect of capitalised financing where appropriate[41].

Table 2.7: Comparison of movements in the RAB (Great Britain)

(£m,2011-12 prices)	Renewals	Enhancements
PR08 determination	**2,398**	**1,805**
Adjustments to PR08 assumed expenditure	-31	-191
Adjusted PR08 determination	**2,367**	**1,614**
IOPI index adjustment	-343	n/a
Adjustments for efficient over/under spend*	42	-
Deferrals to later in CP4	121	-133
Adjustments for non-delivery of outputs	-	-
Non-PR08 expenditure	n/a	445
Total additions to RAB in 2011-12	**2,187**	**1,926**

* - Including 25% retention

Source: Network Rail's 2011-12 regulatory accounts and our own calculations.

Renewals adjustments to the RAB

2.38 Adjustments to PR08 assumed expenditure (£31m) includes a £27m adjustment for renewals overheads. Network Rail included these overheads as additions to the RAB last year but has since concluded that these costs could not be separately identifiable as relating to capital expenditure and has removed the RAB addition.

2.39 The PR08 determination requires renewals additions to the RAB to be adjusted for the effect of input price inflation through an infrastructure output price index (IOPI) adjustment[42]. The result of applying the

[41] Capitalised financing is the return that Network Rail earns from adding capex to the RAB as set out in our PR08 determination.

[42] See Chapter 15 of our PR08 determination for further details about how the IOPI adjustment is calculated.

IOPI adjustment has been to reduce renewals additions to the RAB by £343m in 2011-12. The Royal Institution of Chartered Surveyors (RICS) revised the way in which the IOPI index is calculated during 2011-12[43]. Updating the 2009-10 and 2010-11 IOPI adjustments for this change contributed £135m to the IOPI adjustment.

2.40 A £42m addition has been included for the additional capital expenditure in relation to the relocation of several business functions in offices in London and elsewhere to a new national operations centre in Milton Keynes. Network Rail has made this investment to improve future efficiency. We have not yet verified whether this expenditure is efficient but will do in Periodic Review 2013 ('PR13').

2.41 Including adjustments for IOPI and capitalised financing, Network Rail has made a £121m adjustment for the catch-up of renewals expenditure that was deferred from earlier in the control period to 2011-12 with no adjustment for inefficient underspend.

2.42 Our PR08 determination stated that where Network Rail has underspent on its capex programme but this is due to a failure to deliver required outputs we will, at the beginning of CP5 reduce the level of the RAB to reflect this. Network Rail's has failed to deliver required performance outputs for several sectors throughout 2011-12. As examined in the issues section below, Network Rail has estimated that the amount of PR08 funding that it received for required outputs which have not been delivered in 2011-12 may be £172m. Network Rail has not included this as an adjustment to its RAB at 31 March 2012 in its regulatory accounts. Although our final assessment will not be made until the end of the control period we consider that based on the current available information, the RAB should be adjusted by £172m in Network Rail's 2012-13 regulatory financial statements[44].

Enhancements adjustments to the RAB

2.43 Adjustments to PR08 assumed expenditure (£191m) relate to enhancements projects for which there has been a change of scope compared to our PR08 determination. These are discussed in the enhancements section above.

2.44 Enhancements RAB additions includes £445m of expenditure on enhancements projects that were not included in our PR08 determination. This includes £138m of expenditure on Network Rail income generating schemes which are regulated under the investment framework. As part of our normal review of these schemes, we asked Halcrow, one of the independent reporters for enhancements, to review a representative sample of these schemes. Halcrow concluded that the sample of schemes that it reviewed is suitable for inclusion within the RAB.

Financing

2.45 This section reviews Network Rail's financing activities and costs in 2011-12.

2.46 The sources of Network Rail's funding are summarised in Table 2.8. As the ultimate parent company, Network Rail Limited is a company limited by guarantee without shareholders, Network Rail is almost

[43] Details are available at the RICS building cost information service (BCIS) website; http://www.bcis.co.uk/site/scripts/news_article.aspx?newsID=200.

[44] Should it be necessary, we intend to use the same methodology to assess underspend associated with any further deterioration in required performance in the final two years of CP4. We will not make any change to our assessment in the event that performance remains the same or improves.

entirely dependent on issued debt and bank loans for its sources of funding. These borrowings are currently guaranteed under a financial indemnity mechanism (FIM) by the government[45].

2.47 Network Rail has issued debt in a number of currencies and with a range of maturities. Some of this debt was issued with a floating interest rate and some is exposed to movements in inflation (so called index-linked bonds). Network Rail uses financial derivatives to reduce its exposure to the foreign exchange and interest rate risks that arise from these financing activities.

2.48 Overall, there has been little change to the sources of Network Rail's funding from nominal and index-linked borrowings in 2011-12. Network Rail has explained that the significant increase in net cash balances was due to new debt issued towards the end of the year in light of current market conditions, to fund expenditure plans in 2012-13 and to prefund debt that needs to be refinanced.

Table 2.8: Sources of Network Rail's funding (Great Britain)

(£m, nominal prices)	As at 31 March 2012		As at 31 March 2011	
	£m	% of total borrowing	£m	% of total borrowing
Nominal borrowings (GBP)	8,019	28%	7,551	30%
Nominal borrowings (Foreign currency)	5,636	20%	4,322	17%
Total nominal borrowings	13,654	48%	11,873	47%
Index-linked borrowings (GBP)	14,686	52%	13,248	53%
Total regulatory borrowings	**28,340**	**100%**	**25,121**	**100%**
Uncleared cash items	-47		-35	
Obligations under finance leases	1		2	
Net cash balances	-1,805		-612	
Regulatory net debt as at 31 March	**26,489**		**24,476**	

Source: Network Rail's 2011-12 regulatory accounts.

Movements in net debt

2.49 Table 2.9 shows the movements in Network Rail's regulatory net debt net in 2011-12. Closing net debt was £26,489m which was £2,315m (8.0%) lower than assumed in our PR08 determination. This variance was primarily due to the company starting the year with £2,418m lower debt than we had assumed. The in-year variances in income, expenditure, financing costs and rebates are examined in other sections of this report. The £222m decrease in 'other' is due to an increase in Network Rail's working capital[46]. The £3m of corporation tax relates to tax payable on interest received and property sales[47].

2.50 Network Rail issued £5,489m of nominal and index-linked debt in the year to fund the net expenditure in the year, increase its cash balances to fund anticipated expenditure in 2012-13 and refinance debt that matured. Accretion on the capital component of index-linked bonds increased by £521m[48].

[45] The government receives an 80 basis point (0.8%) fee in CP4 for providing this credit protection.

[46] Movements in working capital arise where there are timing differences between the recording of income or expenditure in the accounts and the actual receipt or payment of the cash. Also, Crossrail Ltd paid Network Rail a £160m retention payment in 2011-12 in advance of future work that Network Rail will deliver.

[47] Note that as Network Rail inherited significant corporation tax losses from Railtrack PLC it currently does not pay corporation tax on the majority of its income.

[48] The capital component of these bonds increases (accretes) with the retail price index (RPI).

Table 2.9: Analysis of the movements in net debt (Great Britain)

(£m, nominal prices)	Actual 2011-12	PR08 determination	Variance
	(A)	(B)	(A-B)
Regulatory net debt at 1 April 2011	**24,476**	**26,894**	**-2,418**
Total income	-6,277	-6,400	123
Total expenditure	6,998	6,797	201
Financing costs	1,470	1,512	-42
Corporation tax	3	-	3
Rebates	40	-	40
Other	-221	1	-222
Regulatory net debt at 31 March 2012	**26,489**	**28,804**	**-2,315**
Movement in the year	**2,013**	**1,910**	**103**
Represented by:			
New debt issued	5,489		
Index-linked debt inflation (capital accretion)	521		
Debt repaid	-2,545		
Increase in net cash balances	-1,193		
Other	-259		

Source: Network Rail's 2011-12 regulatory accounts.

Table 2.10: Maturity profile of Network Rail's gross debt (Great Britain)

Maturity of debts	£m
On demand or within one year	1,156
Due within one to two years	3,727
Due within two to five years	4,711
Due in more than five years	19,491
Total gross debt (as per statutory accounts)	**29,085**

Source: Network Rail submission to us.

Financing costs

2.51 Network Rail's financing costs in 2011-12 are summarised in Table 2.11.

Table 2.11: Summary of financing costs (Great Britain)

(£m, nominal prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 determination variance
	(A)	(B)	(C)	(A-B)
Interest on nominal debt - FIM covered	564	708	511	-144
Interest on IL debt - FIM covered	185	192	176	-7
FIM fee	200	202	187	-2
Total interest costs	**949**	**1,102**	**874**	**-153**
Accretion on IL debt - FIM covered	521	306	665	215
Interest on nominal debt - unsupported	-	104	-	-104
Total financing costs	**1,470**	**1,512**	**1,539**	**-42**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

2.52 Overall, Network Rail incurred £42m lower financing costs than we assumed in our PR08 determination. This was due to a number of factors including Network Rail having lower levels of opening and closing debt resulting in less interest payable and Network Rail not issuing unsupported debt which would have incurred a higher interest rate, partly offset by higher accretion on index-linked debt due to the higher than expected level of inflation and a higher level of FIM payments due to Network Rail not issuing unsupported debt[49].

2.53 Table 2.12 compares the average interest rates on Network Rail's debt in 2011-12 compared to our PR08 assumptions and last year[50].

Table 2.12: Summary of average interest rates

(£m, nominal prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 determination variance
	(A)	(B)	(C)	(B-A)
Average interest rate on nominal debt - FIM covered	5.2%	5.0%	5.3%	-0.2%
Average interest rate on nominal debt - unsupported	n/a	6.7%	n/a	n/a
Average interest rate on IL debt - FIM covered	1.3%	1.7%	1.4%	0.4%
Accretion on IL debt - FIM covered	3.9%	2.8%	5.3%	-1.2%
FIM fee rate	0.8%	0.8%	0.8%	0.0%

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Financial indicators

2.54 We use financial indicators to help assess Network Rail's ability to raise finance and service its debt obligations. Table 2.13 shows the two main financial indicators that we use. One of the trigger points in the access charges contracts for Network Rail's access review to be potentially re-opened is the adjusted interest cover ratio (AICR). Network Rail's network licence also places limits on the company's overall level of net debt to RAB. Both of these indicators are discussed below.

2.55 The AICR is a measure of Network Rail's ability to pay interest charges taking account of running costs. It is a ratio that lenders and credit rating agencies tend to focus on. The net debt to RAB ratio measures the value of Network Rail's net debt against the value of its RAB, i.e. Network Rail's notional gearing[51].

Table 2.13: Summary of the key financial indicators (Great Britain)

	Actual 2011-12	PR08 determination	Actual 2010-11
Adjusted interest cover ratio (AICR)	2.15	1.70	1.93
Net debt/RAB	62.5%	63.5%	63.4%

[49] We expected Network Rail to issue unsupported debt in CP4, i.e. debt issued without the guarantee of the government's financial indemnity mechanism. However, given the economic conditions and volatility in the financial markets Network Rail has not issued any unsupported debt.

[50] Network Rail raises debt on a Great Britain basis, so these average interest rates also apply for England & Wales and Scotland.

[51] The definitions of each financial indicator are set out in our regulatory accounting guidelines.

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

2.56 The actual adjusted interest cover ratio of 2.15 in 2011-12 was higher than the 1.70 assumed in our PR08 determination, largely due to the impact of the lower level of capital expenditure resulting in lower interest costs. The actual adjusted interest cover ratio is higher than the 1.40 trigger level in the access charges contracts, which means it does not meet the threshold level for a re-opener to be considered.

2.57 The net debt to RAB at the end of 2011-12 was 62.5%. This was 1 percentage point better than our PR08 determination assumption of 63.5%, largely due to the lower than expected level of capital expenditure in the control period to date. It is lower than the 72.5% limit in Network Rail's network licence for 2011-12[52].

Issues with Network Rail's efficiency reporting

Network Rail's failure to deliver required outputs

2.58 As explained in our PR08 determination, our framework for assessing Network Rail's financial outperformance involves determining whether the company has delivered its required train performance targets for each of the five years within CP4. Where it has not done this, we assess the extent to which any underspend is related to the company's failure to deliver the required outputs. There are punctuality and cancellation targets (PPM and CaSL)[53] for the long distance, London & South East, regional and Scotland passenger sectors, as well as delay minute targets for the passenger and the freight sectors. There are also targets for minimising disruption to passengers and freight from planned engineering works.

2.59 As documented in our 2011-12 Q4 Monitor[54] Network Rail's performance against these targets for several sectors was poor throughout the year. The long distance, Scotland and London & South East sectors missed their end of year PPM targets by 1.8%, 1.0% and 0.7% respectively. The London & South East sector also missed its CaSL target by 0.28%. Freight ended the year 11.2% worse than the regulatory target[55].

2.60 At our request, Network Rail has estimated that the amount of PR08 funding that it received for required outputs which have not been delivered in 2011-12 may be £172m, i.e. this amount should be netted off any outperformance[56]. The calculation is based on analysis that Network Rail undertook to develop its Performance Delivery Plan for CP4[57] and the expected performance improvements that could be achieved by the end of the control period for each sector from the CP4 performance fund[58].

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[52] Table 3.1 of the network licence granted to Network Rail Infrastructure Limited states the financial indebtedness limits for each year of CP4.

[53] The Public Performance Measure (PPM) and Cancellations and Significant Lateness (CaSL) measure.

[54] This is available at http://www.rail-reg.gov.uk/upload/pdf/network_rail_monitor_1112q4.pdf.

[55] As measured on a moving annual average (MAA) basis. The freight regulated target is expressed as delay per 100 train km to allow for any change in freight mileage.

[56] Note that train operators have been compensated for Network Rail's failure to deliver its punctuality targets through the Schedule 8 mechanism.

[57] This is available at http://www.networkrail.co.uk/searchresult.aspx?q=Performance%20delivery%20plan.

[58] Network Rail considers that this amount could be reduced by £54m due to the attribution of delay minutes due to the impact of weather and external factors such as cable theft. However, we consider that the risks associated with severe weather and other externalities such as cable theft, vandalism, fatalities and trespass were included within our PR08 determination and that we expect Network Rail to manage these risks within the PR08 financial settlement. The issues that Network Rail has identified do not appear to be sufficiently material to warrant an adjustment.

2.61 There is uncertainty about Network Rail's calculation due to the difficulty in establishing a clear linkage between expenditure and performance given the diverse nature of the activities that Network Rail undertakes to operate and maintain the national rail infrastructure. However, we consider that Network Rail has adopted a reasonable approach in the circumstances to estimate the PR08 funding that it received for required outputs that it failed to deliver in 2011-12.

2.62 It is important to note that we take Network Rail's failure to deliver required outputs very seriously. Separate to informing our assessment of the company's financial performance, we have taken licence enforcement action in relation to the long-distance and freight failures, and we will continue to monitor these issues.

2.63 Should it be necessary, we intend to use the same methodology to assess underspend associated with any further deterioration in required performance in the final two years of CP4. We will not make any change to our assessment of the above £172m adjustment in the event that performance remains the same or improves.

Uncertainty about the sustainability of civils work in CP4

2.64 A key test in our assessment of efficiency and financial outperformance is whether Network Rail can show that any reductions in expenditure below the level of the determination will not adversely affect the serviceability and sustainability of the network in the short, medium and long term. Network Rail entered CP4 with a poor understanding of the condition of its bridges, tunnels and other major structures (these assets are collectively known as civils) and the amount of work that would be required to maintain these assets on a sustainable basis. This position was not helped by poorly defined measures of civils renewals work and related unit costs.

2.65 Network Rail's CP5 asset management policy for civils is in development. However, we are concerned about aspects of the company's current civils management. These include a backlog of bridge strength assessments and weaknesses in asset knowledge. Network Rail is continuing with its efforts to remedy these matters including its Buildings & Civils asset management (BCAM) transformation programme[59] and we are gaining more confidence in Network Rail's understanding of the condition and whole life performance of its civils structures and what work needs to be done on a prioritised basis. Also, in its review of Network Rail's 2012 regulatory accounts, Arup considers that Network Rail's approach to demonstrating the impact of positive management actions to achieve efficiency savings for civils activities is reasonable.

2.66 Despite the improvements to Network Rail's understanding of its civils structures, there remains uncertainty about the sustainability of civils work in CP4, especially given the poor quality of the volume and unit costs underpinning Network Rail's 2009 Delivery Plan. On these grounds, we agreed with Network Rail that civils renewals should be excluded from Network Rail's reporting of efficiency and financial performance for CP4. As Network Rail is not projecting civils efficiencies to be lower than other OM&R efficiencies (on average), excluding civils will not improve the company's reported efficiencies. Network Rail has stated that it is reinvesting £80m - £100m of civils outperformance that it thinks it will achieve in the control period into undertaking additional civils renewals work and that this expenditure is reflected in its 2012 delivery plan update. The exclusion of civils from Network Rail's reporting of its efficiency and financial performance for CP4 will mean that the company will not claim this outperformance in CP4.

[59] Network Rail initiated the Building & Civils Asset Management (BCAM) transformation programme in 2010 to address key recommendations from an Independent Reporter review of its civils asset management policy and to undertake additional activities to improve the way that these assets are managed.

2.67 It is important that the work that Network Rail has done on improving its civils asset policy, condition monitoring, volume and unit cost reporting, and identifying and documenting its management actions for civils continues and is embedded in the routes so that Network Rail can clearly demonstrate to us that its civils asset management policy is both effective and sustainable ahead of our PR13 determination of Network Rail's funding for CP5. In the future we would expect Network Rail to have robust condition monitoring in place and accurate systems for identifying, understanding and reporting variances in civils renewals activity and expenditure[60].

Robustness of maintenance efficiencies

2.68 A substantial proportion of Network Rail's reported efficiencies relate to its maintenance of the railway infrastructure. As documented in our Q4 Monitor, Network Rail's planning and delivery of maintenance and renewals do not yet meet our required standard. An area of particular concern is the company's planning of maintenance work which the independent reporter for asset management, AMCL has assessed as being significantly below the agreed position for 2011 and the end of CP4 target[61]. This reduces our confidence in Network Rail's claimed efficiencies. We also wrote to Network Rail in November 2011 about misgivings we have about the safety implications of inadequately managed risk in maintenance[62].

2.69 As part of its review of the regulatory financial statements, Arup concluded that a proportion of Network Rail's reported maintenance efficiencies may not be robust. Arup considers that Network Rail has not been able to demonstrate that there is no linkage between reductions in expenditure for certain categories of maintenance activity and the non-delivery of required performance outputs. Specifically, Arup is concerned that reductions in On-Track Machinery (OTM) activity (including tamping and stone blowing) may not be genuine efficiencies. Arup therefore considers that there is a risk that maintenance efficiencies may have been overstated by up to £16.7m.

2.70 As identified above we have estimated that Network Rail received £172m of PR08 funding for required outputs which have not been delivered in 2011-12. Some of this funding is likely to be in relation to maintenance activities. If we separately adjust for the on-track machinery issue raised by Arup, we may be double-counting our output adjustment. Therefore, we consider that there should be no additional adjustment to the £172m adjustment discussed above.

Update on issues reported last year

2.71 The independent reporter, Arup identified a number of important issues with Network Rail's reporting of efficiencies in 2010-11. These issues included:

(a) calculations performed within a complex system of spreadsheets supported by limited commentaries and identifiers of source data and calculation methodology;

(b) lack of a clear 'bottom up' quantified base of auditable evidence to justify efficiencies;

(c) a general assumption that expenditure incurred is by its nature efficient; and

[60] Our requirements for Network Rail's unit cost framework were set out in a letter to Network Rail on 9 May 2011, which is available at http://www.rail-reg.gov.uk/upload/pdf/unit_costs_letter-090511.pdf.

[61] The AMCL report is available at http://www.rail-reg.gov.uk/upload/pdf/amcl-amem-may-2012.pdf. AMCL scored 'Opex Evaluation' (maintenance planning) at 41% compared to the 2011 roadmap target of 51%. Note that under AMCL's assessment criteria a 1% improvement is considered a big step, hence a 10% shortfall is a serious matter.

[62] Letter from Allan Spence, ORR to Robin Gisby, Network Rail sent 14 November 2011. We have made a number of safety recommendations relating to Network Rail's maintenance of the rail infrastructure and we are tracking Network Rail's progress in the closure of each recommendation. Our latest health and safety report is available at http://www.rail-reg.gov.uk/upload/pdf/health-safety-report-2012.pdf.

(d) significant levels of variability in projected renewals volumes and costs in delivery plans compared to actual volumes and costs, implying instability in the renewals delivery process.

2.72 We worked closely with Arup to understand how these issues may result in uncertainty in Network Rail's reported renewals efficiencies. In particular:

(a) civils efficiencies had been claimed in Network Rail's 2010-11 regulatory financial statements despite uncertainty about the sustainability of civils work in CP4;

(b) reported renewals volumes may have been up to five per cent over or understated for signalling work undertaken; and

(c) there was a degree of uncertainty about Network Rail's processes for identifying and calculating efficiencies in renewals categories which are not supported by agreed volume measures. In particular, there was insufficient evidence that variances in expenditure were real efficiencies, rather than simply the deferral of work.

2.73 If Network Rail cannot robustly show that the efficiencies it is claiming are genuine and consistent with our PR08 determination, then we cannot accept that the underspend is efficient. Therefore, it is very important that Network Rail has robust systems and processes in place to identify efficiencies. We explained to Network Rail that if it failed to implement robust processes for renewals efficiency reporting we would consider whether it was in breach of condition 1 of its network licence (network management) and condition 11 of its network licence (regulatory accounts).

(a) Civils

2.74 As discussed earlier in this Chapter, at our request, Network Rail has excluded civils renewals from its efficiency reporting for 2011-12.

(b) Renewals volumes reporting

2.75 Arup has recently completed a further assessment of the accuracy of Network Rail's volume reporting process using a larger statistical sample under a separate mandate. Based on these findings it would appear that there is a low risk of volumes of work being over or understated for the purpose of efficiency reporting. Based on this further assessment by Arup, we consider that the adjustment to efficiency made in 2010-11 is no longer required.

(c) Evidence supporting renewals efficiencies

2.76 Network Rail recognised that it had not yet met our expectations for identifying and calculating efficiencies in renewals categories which are not supported by agreed volume measures and the company committed to improve its processes for reporting in 2011-12. We jointly commissioned Arup to undertake an interim review of Network Rail's period six (mid-year) efficiency calculations and Arup has subsequently completed its year-end review of parts of Network Rail's regulatory financial statements.

2.77 Arup's interim review found that Network Rail had made efficiency reporting a significant priority since Arup's review of the 2010-11 regulatory financial statements and that based on the evidence presented, Arup considered that the reporting and challenge process was adequate and fit for purpose. Based on its year-end review, Arup has maintained this view[63]. Arup has, however, qualified its review opinion for 2011-

[63] Though Arup has recommended that Network Rail should adopt some changes to its efficiency reporting structure, incorporating greater visibility of projected outputs and expenditure for each asset and expenditure area.

12 due to uncertainty about the robustness of some maintenance efficiencies. This issue is considered separately in this chapter.

2.78 As a result of the improvements that Network Rail has made to its efficiency reporting processes we also need to consider the appropriateness of the £34m adjustment that was made to our assessment of efficiency last year. This requires an assessment of the extent to which cumulative efficiency gains by the end of 2011-12 compared to the start of the control period can provide retrospective assurance over efficiency gains at the end of 2010-11. We commissioned Arup to provide an assessment of the extent to which the positive management actions supporting cumulative efficiency gains in 2011-12 may plausibly apply to efficiencies reported for 2010-11. Due to the limited information available to support their assessment, Arup was unable to comment conclusively on this matter. However, based on our discussions with Network Rail and Arup, and our own review of the evidence presented to support efficiencies, we consider that the adjustment to efficiency made in 2010-11 is no longer required.

3. Efficiency Benefit Sharing Mechanism (EBSM)

Introduction

3.1 We established the Efficiency Benefit Sharing Mechanism (EBSM) in our PR08 determination to incentivise train and freight operating companies to support Network Rail's efforts to outperform our PR08 determination assumptions. The EBSM is designed to operate at the national level with separate schemes for England & Wales and Scotland.

3.2 If Network Rail performs better than our PR08 assumptions, under the EBSM mechanism train and freight operators share 25% of cumulative outperformance on a number of elements of expenditure and revenue with each operator receiving a pay-out in proportion to their variable track access charges. For items of expenditure, cumulative outperformance is measured as the amount that cumulative expenditure is less than the cumulative post-efficient assumed expenditure in the control period to date. Likewise for revenue items, cumulative outperformance is measured as the amount that cumulative revenue is greater than the cumulative post-efficient assumed revenue in the control period to date.

EBSM payments for 2011-12

3.3 As summarised in Tables 3.1 and 3.2, our assessment of Network Rail's cumulative performance in the first three years of CP4 shows that the company has outperformed financially and that EBSM payments to train and freight operators should be £2.7m in England & Wales and £13.2m in Scotland.

3.4 We are aware that the Department for Transport and Transport Scotland may seek to recover any EBSM payments where they are entitled to do so, for example, using the Clause 18.1 / Schedule 9 provisions in their franchise agreements. The minimum amount that may be retained by passenger and freight operators will be around £1.1m for England & Wales and £6.3m for Scotland. This has been calculated in proportion to operators' cumulative variable usage charges (separately for England & Wales and Scotland).

Table 3.1: EBSM calculation for England & Wales

(£m, 2011-12 prices)	Cumulative (CP4 to date) Actual	PR08 determination	Adjustments	Outperformance
Expenditure				
Controllable opex	2,615	2,346	-	(269)
Non-controllable opex - BTP	212	183	-	(29)
Non-controllable opex - RSSB	24	26	-	2
Maintenance	3,044	3,283	(98)	141
Renewals	6,516	7,455	(726)	213
Schedule 4 costs	368	529	(61)	101
				158
Income				
Advertising income	53	61	-	(8)
Retail income	216	185	-	31
Concessions income	51	33	-	18
Other property income	326	327	-	(1)
Property sales	36	60	-	(24)
				16
Outperformance				
Adjustment for output failures			(163)	(163)
Net outperformance				**10.9**
EBSM payable (25% share)				**2.7**

Table 3.2: EBSM calculation for Scotland

(£m, 2011-12 prices)	Cumulative (CP4 to date) Actual	PR08 determination	Adjustments	Outperformance
Expenditure				
Controllable opex	272	235	-	(37)
Non-controllable opex - BTP	22	20	-	(2)
Non-controllable opex - RSSB	3	2	-	(1)
Maintenance	291	346	-	55
Renewals	823	1,034	(171)	40
Schedule 4 costs	25	34	(5)	3
				58
Income				
Advertising income	3	-	-	3
Retail income	19	19	-	-
Concessions income	-	3	-	(3)
Other property income	20	19	-	1
Property sales	5	2	-	3
				4
Outperformance				
Adjustment for output failures			(9.0)	(9.0)
Net outperformance				**52.8**
EBSM payable (25% share)				**13.2**

Adjustments to EBSM

Deferral of expenditure

3.5 Our assessment of outperformance involves assessing the extent to which underspend is related to efficiency gains beyond those assumed in our PR08 determination rather than the deferral of expenditure.

Deferral of opex and maintenance expenditure
3.6 The PR08 determination included funding for specific improvement schemes in CP4. Three of these schemes (the National Stations Improvement Programme (NSIP), HLOS performance fund and Seven Day Railway) included a mix of both capex and non-capex expenditure. Network Rail has undertaken less work on these schemes in the first three years of CP4 than we assumed in our PR08 determination resulting in a cumulative £98m deferral. Our assessment of outperformance has been adjusted for this deferral. The resulting maintenance outperformance is £141m in England & Wales and £55m in Scotland[64]. The adjustment will unwind later in the control period if Network Rail catches up on the deferred work on these schemes.

Deferral of renewals expenditure
3.7 As shown in Network Rail's CP4 delivery plan updates, the company has deferred significant amounts of renewals in the first three years of CP4. Our assessment of renewals outperformance involves assessing the extent to which Network Rail has outperformed only on renewals work that it has actually undertaken, i.e. excluding deferral.

3.8 The most practical way to measure 'deferral adjusted' renewals outperformance is to use Network Rail's Real Economic Efficiency Measure (REEM) for renewals. Renewals REEM is a measure of efficiency improvements since the start of the control period on work done, i.e. it is adjusted for deferral. Comparing Network Rail's renewals REEM to the efficiency improvements assumed in our PR08 determination provides a measure of renewals outperformance[65]. We have assessed cumulative renewals deferral in the first three years of CP4 to be £726m in England & Wales and £171m in Scotland resulting in financial outperformance of £213m in England & Wales and £40m in Scotland.

Deferral of Schedule 4 costs
3.9 Network Rail compensates train operators for the track possessions required to undertake planned engineering works. As 80% of planned track possessions relate to renewals work, the deferral of renewals in the control period to date has resulted in the deferral of some Schedule 4 costs. This deferral has been factored into our assessment of Schedule 4 outperformance.

Adjustment for failure to deliver required outputs

3.10 As explained in the issues section of Chapter 2 we have assessed the extent to which Network Rail's underspend in the first three years of CP4 is related to its failure to deliver required outputs. The long distance, Scotland and London & South East passenger sectors missed their end of year PPM targets by

[64] Note that these are England & Wales schemes and so there is no adjustment for Scotland. Network Rail has also adjusted its efficiency reporting in Statement 12 of the regulatory financial statements for this deferral. It is not possible to fully identify the separate components for maintenance and operating expenditure, so we have applied the total adjustment to just maintenance expenditure in Table 3.1. This does not affect the EBSM calculation which is a measure of total outperformance across a number of items of expenditure and revenue including opex and maintenance.

[65] The renewals REEM baseline is a combination of our PR08 determination pre-efficient assumed expenditure for some assets, and PR08 determination pre-efficient volumes multiplied by 2008-09 unit costs for other assets, such as track. To be consistent with our PR08 determination an adjustment was applied for the EBSM calculation to use PR08 pre-efficient unit costs rather than 2008-09 actual unit costs where these were separately identifiable.

1.8%, 1.0% and 0.7% respectively. The London & South East passenger sector also missed its CaSL target by 0.28%. Freight ended the year 11.2% worse than the regulatory target.

3.11 At our request Network Rail has estimated that the amount of PR08 funding that it received for required outputs which have not been delivered in 2011-12 may be £163m in England & Wales and £9m in Scotland (i.e. this amount should be netted off any outperformance[66]). Our assessment of outperformance has been adjusted for this.

Civils renewals expenditure

3.12 As explained in the issues section of Chapter 2 Network Rail has excluded renewals expenditure on civil structures (bridges, tunnels etc.) from its reporting of efficiency due to uncertainty about the sustainability of civils work in CP4.

EBSM calculation for 2009-10 and 2010-11

3.13 As documented in our Annual Efficiency and Finance Assessment 2011 we had concerns about uncertainties in Network Rail's reporting of efficiencies in 2010-11. As a result of these uncertainties, we did not think that it was appropriate to sanction any EBSM payments until we had sufficient confidence in the efficiencies that Network Rail reports. As discussed earlier, as a result of improvements to Network Rail's efficiency reporting this year and work undertaken by Arup, the independent reporter, we have concluded that the adjustments relating to renewals volumes reporting and lack of supporting evidence relating to non-volume renewals categories are no longer required.

Industry participation

3.14 As required by our PR08 determination, the Association of Train Operating Companies (ATOC) and Rail Freight Operators Association (RFOA) have both written to us explaining ways in which their members have helped to improve Network's Rail's efficiency in CP4 to date, thereby fulfilling the requirement in our PR08 determination. Examples provided include:

(a) Stations: The establishment of Local Delivery Groups has brought together Network Rail managers with station responsibilities with their counterparts in train operators to identify ways of reducing costs though better integration of programmes, and giving the party with the lowest cost responsibility for the delivery of station renewals and enhancements;

(b) Energy: Helping Network Rail to achieve lower energy costs through the organising and part funding studies to identify the losses in the DC traction network leading Network Rail to identify investments which can reduce the scale of these losses;

(c) Freight yards: Supported Network Rail to develop more cost-effective network re-signalling schemes; and

(d) Freight rolling stock: Programme of replacement or modification of older wagon types with more track friendly vehicles. Examples in this year include new flat wagons with track friendly suspension.

[66] Note that train operators have been compensated for Network Rail's failure to deliver its punctuality targets through the Schedule 8 mechanism.

4. England & Wales

Summary

4.1 This chapter summarises Network Rail's overall financial performance in England & Wales compared to our PR08 determination assumptions. The chapter separately covers expenditure and efficiency, income, regulatory asset base (RAB), net debt, financing costs, financial indicators and compliance with licence limits.

4.2 In this chapter, we provide explanations of observed variances only where the reasons for variances differ from that of Great Britain. Please refer to the discussions in the relevant sections of Chapter 2 for this information.

Expenditure and efficiency

4.3 As shown in Table 4.1, Network Rail's total expenditure (excluding financing costs and corporation tax) in England & Wales in 2011-12 was £6,369m. This was £219m (3.6%) lower than assumed in our PR08 determination. The factors that have contributed to this underspend are largely similar to those for Great Britain.

Table 4.1: Analysis of expenditure (England & Wales)

£m 2011-12 prices	Actual	PR08 determination	PR08 variance	Actual 2010-11	Prior year variance
	(A)	(B)	(B-A)	(C)	(C-A)
2011-12					
Controllable opex	819	738	-81	869	50
Non-controllable opex	389	392	3	411	22
Maintenance	884	1,061	177	1,022	138
Renewals	2,156	2,087	-69	2,072	-84
Sub-total (OM&R)	**4,248**	**4,279**	**31**	**4,374**	**126**
Enhancements (PR08)	1,505	1,700	195	953	-552
Enhancements (non-PR08)	457	0	-457	253	-204
Total enhancements[67]	1,962	1,700	-262	1,206	-756
Schedule 4 & 8	159	171	12	182	23
Total expenditure	**6,369**	**6,150**	**-219**	**5,762**	**-607**
Cumulative					
Controllable opex	2,615	2,346	-269		
Non-controllable opex	1,243	1,132	-111		
Maintenance	3,044	3,283	239		
Renewals	6,516	7,455	939		
Sub-total (OM&R)	13,418	14,216	798		
Enhancements (PR08)	3,422	5,712	2,290		
Enhancements (non-PR08)	959	0	-959		
Total enhancements	4,381	5,712	1,331		
Schedule 4 & 8	493	528	35		
Total expenditure	**18,292**	**20,456**	**2,164**		

Source: Network Rail and PR08 determination.

Table 4.2: 2011-12 efficiency savings summary (England & Wales)

	REEM basis			PR08 basis		
	Actual	Assumed	Variance	Actual	Assumed	Variance
In-year						
Controllable opex	7.4%	2.0%	5.4%	6.3%	4.0%	2.3%
Maintenance	7.5%	7.2%	0.3%	10.0%	4.0%	6.0%
Renewals	0.0%	0.0%	0.0%	0.0%	5.5%	-5.5%
OM&R total	**3.8%**	**3.8%**	**0.0%**	**3.6%**	**4.7%**	**-1.1%**
Cumulative						
Controllable opex	10.1%	3.8%	6.3%	-0.7%	9.3%	-10.0%
Maintenance	20.2%	18.9%	1.3%	22.8%	10.1%	12.7%
Renewals	17.3%	19.8%	-2.5%	17.3%	14.7%	2.6%
OM&R total	**16.5%**	**16.4%**	**0.1%**	**14.7%**	**12.5%**	**2.4%**

Source: Network Rail, PR08 determination and our own analysis. These measures are explained in Annex A. These numbers have not been adjusted for input price variances.

[67] This includes all Network Rail funded enhancements but excludes third party funded schemes (£181m) which are funded by external parties on a pay-as-you-go basis.

Controllable opex

4.4 Controllable operating expenditure (controllable opex) in England & Wales in 2011-12 was £819m. This was £81m (11.0%) higher than assumed in our PR08 determination and £50m (5.7%) lower than in 2010-11. On a REEM basis, Network Rail has achieved cumulative controllable opex efficiency savings of 10.1% compared to the start of CP4. This is largely due to the same reasons as for Great Britain.

Non-controllable opex

4.5 Non-controllable opex in England & Wales in 2011-12 was £389m. This was £3m (1.0%) lower than assumed in our PR08 determination and £22m (5.4%) lower than in 2010-11. The variances, compared to our PR08 determination assumptions, are largely due to the same reasons as for Great Britain.

Maintenance

4.6 Maintenance expenditure in England & Wales in 2011-12 was £884m. This was £177m (16.7%) lower than assumed in our PR08 determination and £138m (13.5%) lower than in 2010-11. The variances, compared to our PR08 determination assumptions, are largely due to the same reasons as for Great Britain.

4.7 On a REEM basis, Network Rail is reporting cumulative savings of 20.2% compared to the start of CP4 which is ahead of the 18.9% savings in Network Rail's REEM trajectory.

Renewals

4.8 Renewals expenditure in England & Wales in 2011-12 was £2,156m. This was £69m (3.3%) higher than assumed in our PR08 determination and £84m (4.1%) higher than in 2010-11. The variances, compared to our PR08 determination assumptions, are largely due to the same reasons as for Great Britain.

4.9 On a REEM basis, Network Rail is reporting cumulative renewals savings of 17.3% (£365m) compared to the start of CP4.

Enhancements

4.10 Total enhancement expenditure for England & Wales in 2011-12 was £1,962m. This includes £1,505m of PR08 funded schemes and £457m of other Network Rail funded schemes[68]. Expenditure on PR08 funded schemes was £195m (11.5%) lower than our PR08 determination for 2011-12. Cumulative PR08 enhancements expenditure was £2,290m (40.1%) lower than our determination. The variances, compared to our PR08 determination assumptions, are largely due to the same reasons as for Great Britain.

Income

4.11 As shown in Tables 4.3 and 4.4, total income in 2011-12 for England & Wales was £5,645m. This was £91m (1.6%) lower than assumed in our PR08 determination assumption and £66m (1.2%) lower than last year. The variances in income, compared to our PR08 determination assumptions, are largely due to the same reasons as for Great Britain.

[68] Network Rail also undertook £181m of work on third party funded enhancement schemes in England & Wales. These schemes are not included in our analysis.

Table 4.3: Comparison of income (England & Wales)

(£m, 2011-12 prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 variance	Prior year variance
	(A)	(B)	(C)	(A-B)	(A-C)
Grant income	3,582	3,665	3,570	-83	12
Fixed charges	755	766	835	-11	-80
Variable charges	664	680	686	-16	-22
Total franchised track access income	1,419	1,446	1,521	-27	-102
Other single till income	644	625	620	19	24
Total income	**5,645**	**5,736**	**5,711**	**-91**	**-66**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Table 4.4: Comparison of other single till income (England & Wales)

(£m, 2011-12 prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 variance	Prior year variance
	(A)	(B)	(C)	(A-B)	(A-C)
Property income	123	149	140	-26	-17
Freight income	44	73	38	-29	6
Open access income	26	21	22	5	4
Stations income	353	324	362	29	-9
Depots income	57	49	57	8	0
Other	41	9	2	32	39
Total other single till income	**644**	**625**	**620**	**19**	**24**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Regulatory asset base

4.12 Movements in the RAB for England & Wales compared to our PR08 determination are summarised in Table 4.5. The provisional value of the RAB at 31 March 2012 was £38,045m, which was £2,888m lower than assumed in our PR08 determination. The variance in the RAB, compared to our PR08 determination assumptions, is largely due to the same reasons as for Great Britain.

Table 4.5: Comparison of movements in the RAB (England and Wales)

(£m, nominal prices)	Actual 2011-12	PR08 determination	Variance
	(A)	(B)	(A-B)
Opening RAB at 1 April 2011 (2010-11 prices)	**34,563**	**37,279**	**-2,716**
Additions to the RAB			
Indexation for the year	1,783	1,924	-141
Renewals additions	1,947	2,087	-140
Enhancements additions	1,810	1,701	109
Reductions in the RAB			
Capex funded from the ring-fenced fund	-535	-535	0
Amortisation	-1,523	-1,523	0
Closing RAB at 31 March 2012 (2011-12 prices)	**38,045**	**40,933**	**-2,888**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Financing

4.13 Network Rail issues debt at a group level for the company as a whole. As with other aspects of its business activities, Network Rail disaggregates its debt to England & Wales, and Scotland. Our analysis of finance in this document, except for movements in net debt, is at the Great Britain level and is covered in Chapter 2.

4.14 As shown in Table 4.6, closing net debt for England & Wales in 2011-12 was £23,829m. This is £2,161m (8.3%) lower than we assumed in our PR08 determination assumptions. The variance in net debt, compared to our PR08 determination assumptions, is largely due to the same reasons as for Great Britain.

Table 4.6: Analysis of the movements in net debt (England & Wales)

(£m, nominal prices)	Actual 2011-12	PR08 determination	Variance
	(A)	(B)	(A-B)
Opening net debt at 1 April 2011	**21,939**	**24,211**	**-2,272**
Total income	-5,645	-5,736	91
Total expenditure	6,369	6,149	220
Financing costs	1,322	1,365	-43
Corporation tax	3	-	3
Rebates	40	-	40
Other	-199	1	-200
Movement in net debt during the year	**1,890**	**1,779**	**111**
Closing net debt at 31 March 2012	**23,829**	**25,990**	**-2,161**

Source: Network Rail's 2011-12 regulatory accounts and own calculations.

Financial indicators

4.15 The actual adjusted interest cover ratio of 2.15 in 2011-12 was better than the 1.69 assumed in our PR08 determination. The reasons for this variance are the same as for Great Britain overall. The actual adjusted interest cover ratio is higher than the 1.40 trigger level in the access charges contracts, which means it does not meet the threshold level for a re-opener to be considered

4.16 The net debt to RAB ratio at the end of 2011-12 was 62.6%. This was 1.1 percentage points better than our PR08 determination assumption of 63.7%, largely due to the same reasons as for Great Britain. It is lower than the 72.5% limit in Network Rail's network licence for 2011-12.

Table 4.7: Summary of the key financial indicators (England & Wales)

	Actual 2011-12	PR08 determination	Actual 2010-11
Adjusted interest cover ratio (AICR)	2.15	1.69	1.94
Net debt/RAB	62.6%	63.7%	63.5%

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

5. Scotland

Summary

5.1 This chapter summarises Network Rail's overall financial performance in Scotland compared to our PR08 determination assumptions. The chapter separately covers expenditure and efficiency, income, regulatory asset base (RAB), net debt, financing costs, financial indicators and compliance with licence limits.

5.2 In this chapter, we provide explanations of observed variances, only where the reasons for variances differ from that of Great Britain. Please refer to the discussions in the relevant sections of Chapter 2 for this information.

Expenditure and efficiency

5.3 As shown in Table 5.1, Network Rail's total expenditure (excluding financing costs and corporation tax) in Scotland in 2011-12 was £629m. This was £19m (2.9%) lower than assumed in our PR08 determination. Where the factors that have contributed to Scotland's underspend differ from Great Britain, these have been identified in the rest of this chapter.

Table 5.1: Analysis of expenditure (Scotland)

£m 2011-12 prices	Actual	PR08 determination	PR08 variance	Actual 2010-11	Prior year variance
	(A)	(B)	(B-A)	(C)	(C-A)
2011-12					
Controllable opex	87	73	-14	87	0
Non-controllable opex	31	35	4	29	-2
Maintenance	84	113	29	101	17
Renewals	299	311	12	278	-21
Sub-total (OM&R)	**501**	**532**	**31**	**495**	**-6**
Enhancements (PR08)	77	105	28	155	78
Enhancements (non-PR08)	38	0	-38	46	8
Total enhancements[69]	115	105	-10	201	86
Schedule 4 & 8	13	11	-2	12	-1
Total expenditure	**629**	**648**	**19**	**708**	**79**
Cumulative					
Controllable opex	272	235	-37		
Non-controllable opex	96	100	4		
Maintenance	291	346	55		
Renewals	823	1,034	211		
Sub-total (OM&R)	**1,482**	**1,715**	**233**		
Enhancements (PR08)	422	442	20		
Enhancements (non-PR08)	84	0	-84		
Total enhancements	506	442	-64		
Schedule 4 & 8	37	34	-3		
Total expenditure	**2,025**	**2,191**	**166**		

Source: Network Rail and PR08 determination.

Table 5.2: 2011-12 efficiency savings summary (Scotland)

	REEM basis			PR08 basis		
	Actual	Assumed	Variance	Actual	Assumed	Variance
In-year						
Controllable opex	-1.5%	0.0%	-1.5%	-1.2%	4.0%	-5.2%
Maintenance	13.6%	5.2%	8.4%	17.5%	4.0%	13.5%
Renewals	2.9%	2.9%	0.0%	2.9%	5.5%	-2.6%
OM&R total	**4.8%**	**4.8%**	**0.0%**	**4.7%**	**4.7%**	**0.0%**
Cumulative						
Controllable opex	6.9%	5.6%	1.3%	-8.0%	9.3%	-17.3%
Maintenance	21.0%	19.0%	2.0%	33.1%	10.1%	23.0%
Renewals	20.7%	14.3%	6.4%	20.7%	14.7%	6.0%
OM&R total	**18.0%**	**13.8%**	**4.2%**	**17.6%**	**12.5%**	**5.1%**

Source: Network Rail, PR08 determination and our own analysis. These measures are explained in Annex A. These numbers have not been adjusted for input price variances.

[69] This includes all Network Rail funded enhancements but excludes third party funded schemes (£9m) which are funded by external parties on a pay-as-you-go basis.

Controllable opex

5.4 Controllable operating expenditure (controllable opex) in Scotland in 2011-12 was £87m. This was £14m (19.1%) higher than assumed in our PR08 determination and in line with 2010-11. On a REEM basis, Network Rail has achieved cumulative controllable opex efficiency savings of 6.9% compared to the start of CP4. The variances compared to our PR08 determination assumptions, are largely due to the same reasons as for Great Britain.

Non-controllable opex

5.5 Non-controllable opex in Scotland in 2011-12 was £31m. This was £4m (11.8%) lower than assumed in our PR08 determination and £2m (5.3%) higher than in 2010-11. The variance mainly reflects a £3m underspend on cumulo rates in Scotland, relative to our PR08 determination assumptions, whereas in England and Wales there was a £3m overspend. At a Great Britain-level, Network Rail's expenditure on cumulo rates matched our PR08 determination, however the actual spend across England and Wales, and Scotland differed from our PR08 assumptions.

Maintenance

5.6 Maintenance expenditure in Scotland in 2011-12 was £84m. This was £29m (25.6%) lower than assumed in our PR08 determination and £17m (16.8%) lower than in 2010-11. The underspend is relatively higher in Scotland than the rest of Great Britain. This is partly due to prior year efficiency in Scotland (13.5%) being greater than England and Wales (8.3%), which resulted in Scotland building on these previous efficiency savings in 2011-12.

5.7 On a REEM basis, Network Rail is reporting cumulative savings of 21.0% compared to the start of CP4 which is significantly ahead of the 19.0% savings in Network Rail's REEM trajectory.

Renewals

5.8 Renewals expenditure in Scotland in 2011-12 was £299m. This was £12m (3.9%) lower than assumed in our PR08 determination but £21m (7.7%) higher than in 2010-11. The majority of the underspend was in track (£16m) and signalling (£10m), which is partially offset by an overspend on operational property (£9m).

5.9 On a REEM basis, Network Rail is reporting cumulative renewals savings of 20.7% compared to the start of CP4.

Enhancements

5.10 Total enhancement expenditure for Scotland in 2011-12 was £115m. This includes £77m of PR08 funded schemes and £38m of other Network Rail funded schemes[70]. Expenditure on PR08 funded schemes was £28m (26.5%) lower than our updated PR08 determination for 2011-12. Cumulative PR08 enhancements expenditure was £20m (4.5%) lower than our determination. The underspend on enhancements in Scotland is largely a result of underspend on the Paisley Corridor Improvement (£12m), re-profiling of expenditure until later in the control period (£12m) and underspend in Network Rail's project funds (£12m). This is partially offset by an overspend in the control period on Airdrie to Bathgate (£14m).

[70] Network Rail also undertook £9m of work on third party funded enhancement schemes in Scotland. These schemes are not included in our analysis.

Income

5.11 As shown in Tables 5.3 and 5.4, total income in 2011-12 for Scotland was £632m. This was £32m (4.8%) lower than assumed in our PR08 determination assumption and £13m (2.0%) higher than last year. The variance in income, compared to our PR08 determination assumptions, is largely due to the same reasons as for Great Britain.

Table 5.3: Comparison of income (Scotland)

(£m, 2011-12 prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 variance	Prior year variance
	(A)	(B)	(C)	(A-B)	(A-C)
Grant income	407	434	404	-27	3
Fixed charges	132	135	124	-3	8
Variable charges	42	40	41	2	1
Total franchised track access income	174	175	165	-1	9
Other single till income	51	55	50	-4	1
Total income	**632**	**664**	**619**	**-32**	**13**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Table 5.4: Comparison of other single till income (Scotland)

(£m, 2011-12 prices)	Actual 2011-12	PR08 determination	Actual 2010-11	PR08 variance	Prior year variance
	(A)	(B)	(C)	(A-B)	(A-C)
Property income	7	8	7	-1	-
Freight income	7	11	7	-4	-
Open access income	-	-	-	-	-
Stations income	30	30	29	-	1
Depots income	7	6	6	1	1
Other	-	-	-	-	-
Total other single till income	**51**	**55**	**50**	**-4**	**1**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Regulatory asset base

5.12 Movements in the RAB for Scotland compared to our PR08 determination are summarised in Table 5.5. The provisional value of the RAB at 31 March 2012 was £4,326m, which was £233m lower than assumed in our PR08 determination. The variance in the RAB, compared to our PR08 determination assumptions, is largely due to the same reasons as for Great Britain.

Table 5.5: Comparison of movements in the RAB (Scotland)

(£m, nominal prices)	Actual 2011-12	PR08 determination	Variance
	(A)	(B)	(A-B)
Opening RAB at 1 April 2011 (2010-11 prices)	**4,031**	**4,195**	**-164**
Additions to the RAB:			
Indexation for the year	208	216	-8
Renewals additions	240	311	-71
Enhancements additions:	116	106	10
Reductions to the RAB:			
Ring-fenced fund	-63	-63	0
Amortisation	-206	-206	0
Closing RAB at 31 March 2012 (2011-12 prices)	**4,326**	**4,559**	**-233**

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Financing

5.13 Network Rail issues debt at a group level for the company as a whole. As with other aspects of its business activities, Network Rail disaggregates its debt to England and Wales, and Scotland. Our analysis of finance in this document, except for movements in net debt, is at the Great Britain level and is covered in Chapter 2.

5.14 As shown in Table 5.6, closing net debt for Scotland in 2011-12 was £2,660m. This is £154m (5.5%) lower than we assumed in our PR08 determination assumptions. The variance in net debt, compared to our PR08 determination assumptions, is largely due to the same reasons as for Great Britain.

Table 5.6: Analysis of the movements in net debt (Scotland)

(£m, nominal prices)	Actual 2011-12	PR08 determination	Variance
	(A)	(B)	(B-A)
Opening net debt at 1 April 2011	**2,537**	**2,683**	**-146**
Total income	-632	-664	32
Total expenditure	629	648	-19
Financing costs	148	147	1
Corporation tax	-	-	-
Rebates	-	-	-
Other	-22	-	-22
Movement in net debt during the year	**123**	**131**	**-8**
Closing net debt at 31 March 2012	**2,660**	**2,814**	**-154**

Source: Network Rail's 2011-12 regulatory accounts and own calculations.

Financial indicators

5.15 The actual adjusted interest cover ratio of 2.20 in 2011-12 was better than the 1.70 assumed in our PR08 determination. The reasons for this variance are the same as for Great Britain overall. The actual adjusted interest cover ratio is higher than the 1.40 trigger level in the access charges contracts, which means it does not meet the threshold level for a re-opener to be considered.

5.16 The net debt to RAB at the end of 2011-12 was 61.5%. This was 2 percentage points better than our PR08 determination assumption of 63.5%, largely due to the same reasons as for Great Britain. It is lower than the 72.5% limit in Network Rail's network licence for 2011-12.

Table 5.7: Summary of the key financial indicators (Scotland)

	Actual 2011-12	PR08 determination	Actual 2010-11
Adjusted interest cover ratio (AICR)	2.20	1.70	1.84
Net debt/RAB	61.5%	63.5%	62.9%

Source: Network Rail's 2011-12 regulatory accounts, Network Rail submissions to us and our own calculations.

Annex A: How we monitor efficiency

Introduction

Improving efficiency is essential if the railway is to provide value for money for customers and taxpayers, so the reporting of economic efficiencies fulfils an important function explaining Network Rail's performance to stakeholders and providing a key input into the calculation of Network Rail's management bonuses through its management incentive plan. It also provides a key input into the efficiency benefit sharing mechanism and assists in setting our PR13 determination.

Within our PR08 determination we challenged Network Rail to make progressive efficiency savings in the work that it undertakes in CP4 to operate, maintain and renew its infrastructure. As summarised in Table A1, we assumed that Network Rail could achieve cumulative savings of 21.0% compared to the expenditure that we expected Network Rail to incur in 2008-09, the final year of control period 3 ('CP3')[71].

Table A1: Efficiency improvements assumed in our PR08 determination (net of input price assumptions)

	2009-10	2010-11	2011-12	2012-13	2013-14
Controllable opex					
Annual efficiency	2.8%	2.8%	4.0%	4.0%	4.0%
Cumulative efficiency	*2.8%*	*5.5%*	*9.3%*	*12.9%*	*16.4%*
Maintenance					
Annual efficiency	3.2%	3.2%	4.0%	4.5%	4.5%
Cumulative efficiency	*3.2%*	*6.3%*	*10.1%*	*14.1%*	*18.0%*
Renewals					
Annual efficiency	5.0%	5.0%	5.5%	5.5%	5.5%
Cumulative efficiency	5.0%	9.8%	14.7%	19.4%	23.8%
Total					
Annual efficiency	4.2%	4.1%	4.7%	4.9%	4.9%
Cumulative efficiency	*4.2%*	*8.2%*	*12.5%*	*16.8%*	*21.0%*

Source: PR08 final determination Table 8.4.

[71] Note that our PR08 determination was concluded in October 2008. Consequently, in determining what efficiency improvements could be made in CP4 it was necessary to assume the level of expenditure that Network Rail would incur in 2008-09, the final year of CP3. Network Rail subsequently made lower controllable opex efficiency savings in 2008-09 than we had expected resulting in Network Rail starting CP4 in a worse position than assumed in our PR08 determination.

Measuring efficiency

Network Rail established a five-year delivery plan in 2009 to deliver the required outputs for CP4 and the efficiency savings assumed in our PR08 determination. Network Rail's delivery plan, which was subsequently updated in 2010, 2011 and again in 2012, had a different phasing of expenditure compared to our PR08 determination and consequently a different trajectory of efficiency savings across the five years of CP4.

We recognised that in addition to measuring efficiency on a PR08 determination basis we could also use a real (or year-on-year) economic efficiency measure (REEM) measure for reporting on efficiency in CP4. REEM reflects Network Rail actual expenditure in the final year of CP3, rather than the costs that we expected when setting the PR08 determination for CP4. REEM also reflects Network Rail's re-profiling of expenditure in CP4 compared to the profile assumed in our PR08 determination.

Our monitoring of efficiency uses both PR08 and REEM measures of efficiency. The main differences between the comparison to our PR08 determination measure and REEM are:

a) for controllable opex and maintenance expenditure, the comparison to our PR08 determination measure compares actual expenditure to the level of pre-efficient expenditure assumed in our PR08 determination. Whereas the REEM baseline is the 2008-09 actual expenditure plus adjustments for inflation and other exogenous factors, e.g. changes in traffic and required outputs;

b) for some renewals categories, such as track, the REEM baseline is calculated by multiplying the PR08 determination implied volumes by 2008-09 unit costs; and

c) for other renewals categories, such as plant & machinery, the REEM baseline is the level of pre-efficient expenditure in our PR08 determination.

Network Rail's own REEM trajectory for CP4 is shown in Table A2. If Network Rail achieves its trajectory to deliver 23.5% cumulative REEM savings it will have delivered the 21.0% efficiency improvements assumed in our PR08 determination. This difference is mostly due to Network Rail achieving lower efficiency savings in the final year of CP3 than we expected.

Table A2: Network Rail's trajectory for cumulative improvements in real economic efficiency (net of input price assumptions)

	2009-10	2010-11	2011-12	2012-13	2013-14
Controllable opex					
Annual efficiency	-4.4%	6.3%	1.8%	3.9%	8.2%
Cumulative efficiency	*-4.4%*	*2.2%*	*4.0%*	*7.7%*	*15.3%*
Maintenance					
Annual efficiency	2.8%	10.1%	7.2%	3.2%	5.1%
Cumulative efficiency	*2.8%*	*12.6%*	*18.9%*	*21.5%*	*25.5%*
Renewals					
Annual efficiency	7.1%	10.2%	2.5%	2.6%	5.6%
Cumulative efficiency	*7.1%*	*16.6%*	*18.7%*	*20.8%*	*25.2%*
Total					
Annual efficiency	3.6%	9.5%	3.8%	3.0%	6.0%
Cumulative efficiency	*3.6%*	*12.8%*	*16.1%*	*18.6%*	*23.5%*

Source: Network Rail's cumulative REEM trajectory was published in a 2010 letter titled 'Success in CP4'[72].

[72] A copy of this letter is available at: http://www.rail-reg.gov.uk/upload/pdf/nr-cp4-success-010311.pdf.

Annex B: EBSM supporting information

Items of expenditure and revenue included within the EBSM calculation

Our PR08 determination set out that outperformance would be measured on (i) all operating, maintenance and renewals expenditure; and (ii) a number of revenue elements (variable track access charges associated with additional traffic, retail and property rental income and Schedule 4).

Following the conclusion of the periodic review, we considered it right to make some adjustments and clarifications to the policy as follows:

(a) to exclude variable track access charges from the calculation. The EBSM rewards operators for their contribution to the outperformance of Network Rail against the determination. Variable track access charges are a means for Network Rail to recover the 'wear and tear' cost to the network it incurs through additional network traffic. This means if Network Rail pays out additional variable charge income outperformance it will be out of pocket. We therefore decided that these elements should not be included in the calculation of outperformance;

(b) to exclude traction electricity, business rates[73], licence fee and safety levy from operating expenditure in the calculation. Unlike other items of operating expenditure, these are considered to be largely outside of the control of both Network Rail and train operators;

(c) that property sales income should be included as this is an area of revenue that train operators should be able to influence; and

(d) that Schedule 4 should refer to Schedule 4 payments rather than revenues. Schedule 4 payments are made by Network Rail to train operators in compensation for planned engineering works which affect network availability. As we want to encourage improvements to these working arrangements we consider it more appropriate for the mechanism to include Schedule 4 costs and not Schedule 4 revenues[74].

[73] Note that we have not yet agreed with Network Rail the efficient level of business rates for CP4.

[74] Schedule 4 revenues are transfers between two industry members. They have little or no incentive effect on performance improvements.

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