OFFICE OF RAIL AND ROAD

Annual efficiency and finance assessment of Network Rail 2015-16

August 2016

Contents

Acronyms and abbreviations **4**

Summary 6

Introduction **10**

1. Great Britain **12**

Expenditure 12

Income 24

Financial performance and efficiency 27

Borrowing 33

Net debt 34

Regulatory Asset Base (RAB) 36

Financing costs 39

Financial indicators 40

2. Scotland **42**

Introduction 42

Expenditure 44

Income 49

Financial performance and efficiency 50

Borrowing 52

Net debt 52

Regulatory Asset Base 54

Financial indicators 56

3. Wales **57**

Introduction 57

Expenditure 59

Income 63

Financial performance 64

Net debt 66

Regulatory Asset Base 67

Financial indicators 69

4. Route analysis **70**

Introduction 70

Purpose 70
Internal governance 72
Expenditure and income 72
5. Appendix: Effect of the changes to baselines 87

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Acronyms and abbreviations

Abbreviation / acronym	Meaning
AICR	Adjusted Interest Cover Ratio
AMCL	Asset Management Consulting Limited
AMEM	Asset Management Excellence Model
Arup	Ove Arup & Partners Limited
BP	Network Rail's business plan (financial implications of the delivery plan)
BTP	British Transport Police
CAM	Civils Adjustment Mechanism
Capex	Capital expenditure
CaSL	Cancellations and Significant Lateness
CP4	Control Period 4 (1 April 2009 - 31 March 2014)
CP5	Control Period 5 (1 April 2014 - 31 March 2019)
CP6	Control Period 6 (This is likely to be 1 April 2019 - 31 March 2024)
CRI	Composite Reliability Index
CSI	Composite Sustainability Index
CSMM	Customer Service Maturity Model/Measure
DC	Direct Current
DfT	Department for Transport
DP	Network Rail's delivery plan (operational work plan of volumes & milestones)
EBSM	Efficiency Benefit Sharing Mechanism
ECAM	Enhancement Cost Adjustment Mechanism
ECML	East Coast Mainline
EDP	Enhancement Delivery Plan
EGIP	Edinburgh Glasgow Improvement Programme
FGW	First Great Western
FIM	Financial Indemnity Mechanism
FPM	Financial Performance Measure
FTN	Fixed Telecom Network
FVA	Financial Value Added
GBP	Pounds sterling (£)
GRIP	Governance of Railway Investment Projects (how Network Rail manages projects)
HLOS	High Level Output Specification
IAP	Industry Access Planning
LNE	London North East route
LNW	London North West route
MIP	Network Rail's Management Incentive Plan
NOS	Network Operating Strategy
OGC	Office of Government Commerce
ONS	Office of National Statistics
OSM	Operations, Support, Maintenance
OSMR	Operations, Support, Maintenance and Renewals
Opex	Operating expenditure
ORBIS	Offering Rail Better Information Services

ORR	Office of Rail and Road
OSTI	Other Single Till Income
PPM	Public Performance Measure
PR08	Periodic Review 2008 (covering CP4)
PR13	Periodic Review 2013 (covering CP5)
PR18	Periodic Review 2018 (covering CP6)
RAB	Regulatory Asset Base
RAGs	Regulatory Accounting Guidelines
REBS	Route Level Efficiency Benefit Sharing Scheme
RFOA	Rail Freight Operators Association
RPI	Retail Prices Index (specifically the all items 'RPI CHAW' which includes the cost of Housing)
SBP	Network Rail's Strategic Business Plan
SCADA	Substation Control And Data Acquisition
TOCs	Train Operating Companies (passenger)
TRIP	Timetable Rules Improvement Programme
TUPE	Transfer of Undertakings (Protection of Employment) Regulations

Summary

This assessment provides further detail on the expenditure and finance sections of the Network Rail Monitors for England & Wales and Scotland[1]. This report and this summary covers Network Rail's financial performance across Great Britain as a whole. The report also looks separately at Scotland and, for the first time, Wales. Financial information in our assessment is shown in 2015-16 prices, with the exception of the debt and borrowing numbers, which we present in nominal (cash) prices.

There are a number of ways of looking at Network Rail's expenditure and finances, with the main choices being whether the comparison is against Network Rail's budget or against our PR13 determination, and whether the calculation is simply in terms of actual spend or whether it is adjusted for the volume of work not carried out (that is, removing the value of work deferred to get the cost of the work actually delivered).

Comparison to budget

In the Monitors we first compared Network Rail's expenditure against its budget for 2015-16. We showed that in 2015-16 for Great Britain, Network Rail underspent its net budget of £5,255m by £728m[2]. This underspend included £243m saved in financing costs, largely due to lower than expected inflation.

But we also noted that work to the value of £1,032m will be delivered at a later date including £703m on renewals work, £293m on enhancements work and £39m on associated schedule 4 & 8 compensation payments for track possessions and delays.

Taking this into account, for the work delivered, Network Rail underperformed against its own budget by £394m on renewals (adjusted to £99m in line with the 25% sharing mechanism)[3] and £115m on enhancements (adjusted to £37m in line with the 25% sharing mechanism)[4].

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[1] The Monitors covering the second half of 2015-16 and the full year, were published on 5 July 2016 and are available at: http://orr.gov.uk/publications/reports/network-rail-monitor

[2] Figures for England & Wales and Scotland are shown separately in the Monitors. The underspend for England and Wales was £718m and £10m for Scotland. Other numbers quoted from the Monitors in this Summary are combined GB totals and in this section we have not adjusted the numbers for changes to them since the date our Monitors were published.

[3] In our calculation of financial performance, Network Rail generally retains 25% of any out/underperformance of the renewals and enhancement costs. This is consistent with our RAB roll forward policy.

[4] The interpretation of this variance now reflects the recommendations of the Hendy review (November 2015) and the subsequent Enhancement Delivery Plan (EDP), which changed the baseline of the calculation of financial performance reflecting the increased anticipated final costs (AFC) for many enhancement projects (but not in Scotland). This has significantly reduced underperformance compared to Network Rail's budget because adopting the Hendy review baseline has changed the recognition of financial underperformance in England & Wales. The Hendy review is available at: https://www.networkrail.co.uk/Hendy-review/.

The renewals underperformance of £394m was largely due to supply chain issues, contractor performance, delays in programmes, more work than expected to keep assets in an appropriate condition, severe weather and reduced volumes in some areas resulted in increased unit costs. It has also not delivered its planned efficiency initiatives.

The enhancements underperformance of £115m was largely due to underperformance on Crossrail due to delays, extra station works, and more signalling contractor works.

Comparison to our PR13 determination

This annual assessment uses our PR13 determination[5] as the base, or point of comparison, and it also includes a simple comparison against 2014-15 actual spend. Then, as with the Monitors, it adjusts for the volume of work not done. Against these measures:

(a) Network Rail's expenditure in 2015-16 was £287m higher than our PR13 determination and £479m higher than in 2014-15.

(b) The backlog of work is increasing. Work to the value of £953m (compared to our PR13 determination) was delayed from 2015-16 to a later date including £579m on renewals work, £340m on enhancements work and £34m on associated schedule 4 compensation payments for track possessions. For the first two years of the control period to date, work to the value of £1,758m has been delayed to a later date (£1,004m renewals work, £684m enhancements and £42m on associated schedule 4 compensation payments). Taking this into account, for the work delivered, Network Rail underperformed against our determination by £932m on renewals (adjusted to £233m in line with the 25% sharing mechanism) and £179m on enhancements (adjusted to £44m in line with the 25% sharing mechanism)[6]. By the end of CP5 the total amount of renewals work deferred to a later date is currently forecast by Network Rail to be £3.1bn.

We also report on:

(a) For the control period to date Network Rail reported a decline in efficiency[7] on its core business (i.e. excluding enhancements) of -8.0%, compared to our PR13 determination

[5] This is available at: PR13 Final determination of Network Rail's outputs and funding for 2014-19

[6] Adopting the Hendy review baseline has changed the recognition of GB financial underperformance, before the adjustments for under-delivery of PPM and CaSL outputs.

[7] Our measure of efficiency is a simple measure of the change over time in support, operations, maintenance and renewals expenditure. This measure compares actual expenditure in 2015-16 with expenditure in 2013-14 (the last year of control period 4) adjusted for the level of activity undertaken and other issues. After the adjustments, expenditure in 2013-14 was £4,792m. Actual expenditure in 2015-16 was £5,177m. This includes (as shown in Table 1.1) operations (£538m), support (£394m), maintenance (£1,248m) and renewals (£3,077m)

assumption of a 10.1% efficiency improvement. In other words, costs have risen but we expected them to fall. By the end of CP5 it is currently forecasting efficiency of 3.5% (i.e. it will exit CP5 3.5% more efficient than it started CP5) compared to our PR13 assumption of 19.4%. We estimate that the cost of Network Rail not delivering as much efficiency as we expected is around £3.9bn and is largely driven by higher renewal costs.

(b) The financial underperformance of the whole business (excluding certain types of income and expenditure that are not controllable, e.g. the cost of traction electricity), was £679m (see Table 1.7) for 2015-16. This is largely due to renewals and the operation of Network Rail's business costing more than expected.

(c) Debt (net of cash balances)[8]. In 2015-16, debt increased by £3,673m from £36,505m to £40,178m as a result of higher investment in the network and higher operating costs. In 2015-16, Network Rail borrowed £7.5bn from DfT in line with its forecast[9].

(d) Regulatory Asset Base (RAB). In 2015-16, Network Rail's RAB in nominal terms increased by £4,148m from £53,029m at the end of 2014-15 to £57,177m largely due to indexation for inflation, expenditure on renewals and enhancements offset by amortisation.

(e) Routes. We have expanded the section on routes this year to include comparisons by route both to our PR13 determination and to income and expenditure in 2014-15. We consider the key expenditure categories (network operations; schedule 8 payments; maintenance; renewals and the major elements of renewals: track, signalling and civils). We also comment on the routes' financial performance. We generally consider percentage changes to avoid exclusive focus on the largest routes such as London North East and London North West which, due to their size will often be the source of the biggest variances in monetary terms.

The implications of Network Rail's financial performance to date include:

(a) There is pressure on its borrowing facility with DfT. As we mentioned in the Monitors, Network Rail's latest business plan for Great Britain includes financial headroom of

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and includes a deduction of £80m for CP4 rollover costs and other issues. Expenditure has therefore risen by £385m (£5,177m - £4,792m). As an efficiency percentage this is -8.0% (-£385m/£4,792m).

[8] Network Rail raises debt to fund those business activities not funded by government grant or access charges. Since September 2014, Network Rail no longer raises new debt on the capital markets and instead raises new borrowing from the Department for Transport (DfT).

[9] Network Rail's borrowing also includes money raised to re-finance historic debt that has matured, so is higher than the change in net debt. Generally, when we refer to debt in this document we mean net debt, i.e. debt less cash balances.

£0.5bn. By headroom, we mean Network Rail is forecasting that it will not need to use that amount of the borrowing facility. The main financial risks to this forecast include the costs of renewals and enhancements; the delivery of efficiency initiatives; interest rate movements and Network Rail not achieving suitable strategies for generating additional cash flows through disposing of non-core assets and encouraging alternative funding arrangements.

(b) The deferral of renewals work may affect the sustainability of the network in the medium and long term and increase costs in the medium and long term.

(c) Network Rail will be in a worse position financially at the start of the next control period than we expected, increasing the financial pressure on CP6.

Introduction

1. In our 2013 periodic review (PR13) we determined the outputs Network Rail was required to deliver and the funding that we assumed the company needed for the five year period from April 2014 to March 2019 (control period 5 - CP5).

2. This 2016 publication of our annual efficiency and finance assessment of Network Rail reports on the main aspects of the company's finances over the second year of CP5, from 1 April 2015 to 31 March 2016, and provides detailed support for our high-level Network Rail Monitors. It covers income and expenditure; financial performance; efficiency; the borrowing; net debt; Regulatory Asset Base (RAB); financing costs and financial indicators.

3. We consider Network Rail's financial performance compared to our PR13 determination in several ways, starting with a straightforward comparison of income and expenditure in 2015-16 and for the control period to date (i.e. the first two years of CP5 – 2014-15 and 2015-16). We also compare actual income and expenditure in 2015-16 to 2014-15.

4. We also carry out a more detailed analysis of regulatory financial performance which covers most areas of Network Rail's expenditure and we make adjustments for work not done (deferrals of work) and missed outputs to give an overview of how much it is costing to deliver its outputs compared to our PR13 determination. This means that we identify the volumes actually delivered in 2015-16, and so far in the control period, and measure how much Network Rail has spent in delivering these volumes against the money we had expected would be spent on these volumes in our determination.

5. We additionally look at the progress Network Rail is making against the efficiency assumptions that we set in our determination and the forecast for the end of the control period. This analysis covers Network Rail's expenditure on operations, support, maintenance and renewals.

6. In our 2015-16 Monitors the main comparisons of Network Rail's financial performance were against Network Rail's latest budget for 2015-16 not against our PR13 determination.

7. In our analysis we frequently refer to "under/over spends" and "out/under performance". By "under/over spends" we mean a simple variance between two numbers, so that if Network Rail has spent more than our PR13 assumption that would be described as an overspend. We then analyse that overspend and decide how much of it is made up of neutral issues, such as when there is a timing difference where Network Rail has moved work (and hence expenditure) from one year to another. Adjusting for these neutral issues, we understand how much of the under or overspend is because it has not

performed at the level of efficiency that we expected – in simple terms this is called “out or under performance”[10].

8. This report covers Network Rail's financial performance across Great Britain as a whole. It also looks separately at Scotland and, for the first time, Wales. Our requirement that Network Rail publishes information at a route level also allows us to develop a more informed view of Network Rail's financial performance, so we have expanded our route-level analysis as shown in Chapter 4[11].

9. In this document we also report on some of the challenges Network Rail is facing. These issues have implications for Network Rail's plan for CP5, particularly as it is spending more money in CP5 than it originally expected and it has constraints on its borrowing with separate fixed nominal borrowing limits in England & Wales and Scotland. In view of those challenges, Network Rail has updated its plans for CP5.

10. We will comment on Network Rail’s financial performance under the route level efficiency benefit sharing (REBS) mechanism in a letter to be published in Autumn 2016.

11. All financial information in this document is shown in 2015-16 prices, with the exception of the debt and borrowing numbers, which we present in nominal (cash) prices.

[10] Renewals and enhancements expenditure is added to the Regulatory Asset Base (RAB), which is used to calculate the level of revenue that Network Rail receives. If Network Rail underspends we allow it to retain the benefit of that outperformance by adding 25% of the value of the underspend to the RAB. Where Network Rail overspends, it will be allowed to add 75% of this to the RAB, unless such overspend can be shown to be ‘manifestly inefficient’ in which case none of it is allowed as a RAB addition. For further explanation see the CP5 Regulatory accounting guidelines (RAGs)

[11] This greater emphasis on route-level regulation was strongly supported by the Shaw report.

1. Great Britain

Expenditure

1.1 Expenditure for Great Britain in 2015-16 compared to our PR13 assumptions and for the first two years of the control period is summarised in Table 1.1 and Figure 1.1 and the key variances are explained below.

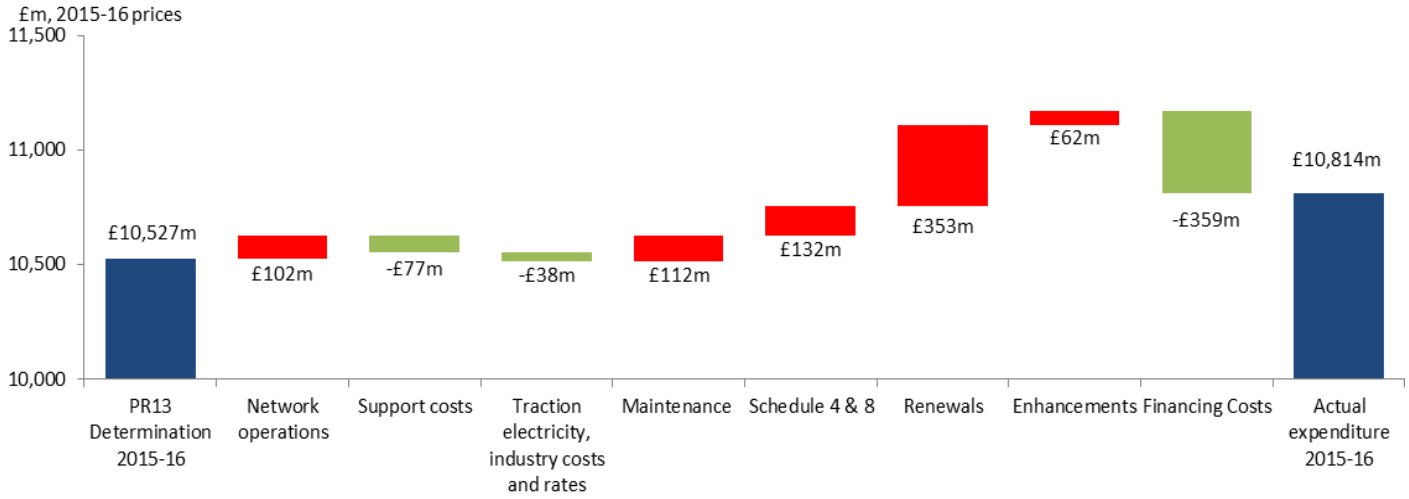
Table 1.1: Summary of key financial information for Great Britain

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
Operating Expenditure							
Signaller expenditure	345	304	-41	685	616	-69	340
Other Network Operations expenditure	193	132	-61	347	270	-77	154
Total Network Operations expenditure	**538**	**436**	**-102**	**1,032**	**886**	**-146**	**494**
Support costs (Table 1.2)	394	471	77	815	965	150	421
Traction electricity, industry costs and rates (Table 1.3)	581	619	38	1,148	1,144	-4	567
Network maintenance	1,248	1,136	-112	2,446	2,290	-156	1,198
Total Schedule 4 & Schedule 8 compensation payments	363	231	-132	674	450	-224	311
Total Operating Expenditure	**3,124**	**2,893**	**-231**	**6,115**	**5,735**	**-380**	**2,991**
Capital Expenditure							
Renewals (Table 1.4)	3,077	2,724	-353	6,057	5,377	-680	2,980
PR13 Enhancements	2,990	3,151	161	5,795	6,165	370	2,805
Non-PR13 Enhancements	223	0	-223	368	0	-368	145
Total Enhancements	**3,213**	**3,151**	**-62**	**6,163**	**6,165**	**2**	**2,950**
Total Capital Expenditure	**6,290**	**5,875**	**-415**	**12,220**	**11,542**	**-678**	**5,930**
Other Expenditure							
Financing costs (Figure 1.11)	1,400	1,759	359	2,818	3,413	595	1,418
Corporation Tax (received)/paid	0	0	0	-4	4	8	-4
Total Other Expenditure	**1,400**	**1,759**	**359**	**2,814**	**3,417**	**603**	**1,414**
Total Expenditure	**10,814**	**10,527**	**-287**	**21,149**	**20,694**	**-455**	**10,335**
Income							
	(A)	(B)	(A-B)	(D)	(E)	(D-E)	
Franchised track access income	1,471	1,486	-15	2,993	2,950	43	1,522
Other single till income	829	860	-31	1,613	1,668	-55	784
Government grant income	4,282	4,216	66	8,490	8,396	94	4,208
Total Income	**6,582**	**6,562**	**20**	**13,096**	**13,014**	**82**	**6,514**
Finance							
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
RAB	57,177	55,737	-1,440	n/a	n/a	n/a	53,586
Net debt	40,178	39,722	-456	n/a	n/a	n/a	36,505
Adjusted interest cover ratio	0.89	1.03	0.14	n/a	n/a	n/a	0.93
Gearing (net debt/RAB)[12]	70.3%	69.4%	-0.9%	n/a	n/a	n/a	68.8%

Source: Network Rail's regulatory financial statements and our own analysis

[12] The PR13 numbers in Table 1.1 have been updated for actual inflation including, for consistency, net debt and RAB. But adjusting the PR13 gearing ratio for actual inflation would not be transparent as our gearing assumptions were in nominal prices (including inflation assumptions), so in this table we have not adjusted our PR13 gearing assumption for actual inflation. This is an issue because actual inflation has been different to our PR13 assumptions.

Figure 1.1: Summary of expenditure variances for Great Britain compared with PR13



Source: Network Rail's regulatory financial statements and our own analysis

1.2 Network Rail's total expenditure in 2015-16 was £10,814m, which was £287m (2.7%) more than the £10,527m we assumed in our PR13 determination. The main reasons for this variance were:

(a) higher network operation costs of £102m largely due to the difficulty of achieving efficiency savings (including higher CP4 closing costs than expected) and extra redevelopment of Birmingham New Street and London Victoria;

(b) higher maintenance costs of £112m due to the difficulty of achieving efficiency savings;

(c) higher schedules 4 & 8 compensation payments to train operators for cancelled and late running trains (£132m);

(d) higher renewals costs of £353m. Lower volumes have been delivered than expected (the value of the renewals that have not been delivered is £579m) and this work will be delivered at a later date. Taking this into account the cost of the work Network Rail has done was £932m higher than expected (for the purposes of the calculation of financial performance this is adjusted to £233m in line with the 25% sharing mechanism[13]). This is largely due to supply chain issues, delays in programmes, contractor performance, more work than expected to keep its assets in an appropriate condition, in some areas lower volumes of work than expected

[13] 25% of a renewals overspend is treated as financial underperformance and 75% is eligible for addition to the RAB under the RAB roll forward policy/sharing mechanism, as explained in chapter 4 of our CP5 Regulatory Accounting Guidelines.

so higher unit rates, and the effect of severe weather. It has also not delivered the majority of its planned efficiency initiatives; and

(e) lower finance costs of £359m largely due to lower inflation than expected.

Network operations expenditure

1.3 In 2015-16, Network Rail spent £102m (23.4%) more on operating the network than we assumed in our PR13 determination and £44m (8.9%) more than in 2014-15. This was largely because:

(a) signaller costs started CP5 approximately **£32m** (7%) higher than we assumed in our PR13 determination as the efficiency initiatives that Network Rail had been planning to carry out at the end of CP4 were delayed. By the end of 2015-16, these efficiencies had still not been achieved;

(b) some Network Operating Strategy[14] (NOS) schemes that were planned for 2014-15 have been delayed to a later date. This has meant that efficiency savings of **£22m** have not been delivered in 2015-16;

(c) pay awards were higher than inflation and the planned reductions in overtime and rest day pay were not fully achieved. These pressures were to an extent offset by a reduction in staff costs due to higher operational signaller vacancies resulting in a net cost increase of **£10m**;

(d) increased agency, consultancy and training costs to deliver the following projects: LEAN, visualisation, change management and performance improvement schemes of **£11m**;

(e) increased capacity planning programmes of **£7m** (Industry Access Planning & Timetables Route Improvement Programme) not originally in Network Rail's plan for CP5;

(f) there were **£7m** of additional costs operating Bristol and Reading stations that were not included in our PR13 determination. This reflected the transfer of the management of Bristol Temple Meads and Reading stations from First Great Western to Network Rail. The additional cost is offset by increased managed stations income included within other single till income; and

(g) other stations such as Birmingham New Street and London Euston have been redeveloped with additional transitional and running costs of **£8m** (but this has

[14] The Network Operating Strategy consolidates local signalling boxes into a small number of regional operating centres.

also generated more property income included within other single till income of £4m).

Maintenance expenditure

1.4 These costs include activities that sustain the condition and capability of Network Rail's existing infrastructure. In 2015-16, Network Rail spent £112m (9.9%) more on maintaining the network than we assumed in our PR13 determination and £50m (4.2%) more than in 2014-15.

1.5 There were higher track maintenance costs than assumed in our PR13 determination and also in signalling where delays to renewals programmes led to higher maintenance costs. In particular, the main reasons for the variances were:

(a) **£42m** of efficiency savings not made in the previous year resulting in a higher starting point for 2015-16 than expected;

(b) **£39m** further shortfalls in efficiency at both local and national level in 2015-16 including higher than inflation pay-awards;

(c) **£10m** performance improvement scheme in Wessex;

(d) **£6m** higher specialist sub-contractor costs;

(e) **£8m** higher reactive maintenance costs than our determination due to the impact of external events; and

(f) **£7m** additional expenditure on Tidy Railway and vegetation management.

1.6 Maintenance expenditure for the control period to-date was £156m (6.8%) higher than our determination and has been affected by Network Rail's decision in 2014-15 to increase expenditure on initiatives to remove vegetation near the railway and to tidy the lineside areas.

1.7 Expenditure is £50m (4.2%) higher than in 2014-15 due to higher reactive maintenance, additional structures inspection costs, increases in network traffic, offset by lower expenditure in 2015-16 for Tidy Railway and vegetation management projects.

1.8 Reactive maintenance expenditure is heavily influenced by external events which can vary significantly from year to year as well as between routes. For example, reactive maintenance costs in 2015-16 were £47m higher than in 2014-15. To further illustrate this, at route level, in 2015-16 they were £25m in London North East but were £2m in 2014-15 and were £15m in Scotland in 2015-16 but £4m in 2014-15. Also, in 2014-15 reactive maintenance costs had been £36m lower than we assumed in our

determination. Therefore, it is difficult to assess the efficiency of this expenditure for one year in isolation, so we will comment in more detail on reactive maintenance at the end of the control period.

Support costs

1.9 The table below summarises Network Rail's expenditure on support costs in 2015-16 compared to our PR13 determination and 2014-15.

Table 1.2: Support Costs, Great Britain

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
Human resources	36	62	26	77	125	48	41
Safety and sustainable development	24	9	-15	48	19	-29	24
Other corporate functions	38	3	-35	74	7	-67	36
Information management	62	62	0	130	127	-3	68
Finance	19	28	9	37	58	21	18
Accommodation	81	76	-5	164	152	-12	83
Utilities	40	44	4	83	87	4	43
Insurance	57	49	-8	106	100	-6	49
Other core[15] support costs	49	64	15	104	129	25	55
Asset management services	39	43	4	74	87	13	35
Network Rail telecoms	44	38	-6	94	86	-8	50
National delivery service	0	4	4	0	9	9	0
Infrastructure Projects	-28	0	28	-47	0	47	-19
Commercial property	-10	-3	7	-14	-7	7	-4
Group costs	-57	-8	49	-115	-14	101	-58
Total support costs	**394**	**471**	**77**	**815**	**965**	**150**	**421**

Source: Network Rail's regulatory financial statements

1.10 In 2015-16, Network Rail spent £77m (16.3%) less on support costs than we assumed in our PR13 determination and for the control period to date £150m (15.5%) less. This is largely due to the impact of one-off events and the decision to allocate (i.e. recharge) more support costs to capital projects than we expected in PR13. This means more of this expenditure is reported as renewal or enhancement costs.

1.11 Some of the individual variances by line item in the above table reflect changes to the way Network Rail has structured its business following the further devolution of activities to the routes. For example, Network Rail has included more of the Human resources and Finance support costs incurred at a route level in the costs of Other corporate

[15] Other core support costs consist of: Govt & corp affairs; group strategy; business services; legal & inquiry; strategic sourcing and business change.

functions and some costs have been moved from Asset management services to Safety and sustainable development.

1.12 For 2015-16, the main variances compared to our PR13 determination include:

(a) Lower group costs of £49m, including:

(i) a one-off benefit from the favourable settlement of commercial claims of £30m;

(ii) £15m lower re-organisation costs. This is because actual costs were around £11m, compared to the PR13 assumption of £26m as a result of fewer structural changes taking place than expected; and

(iii) £7m reduction in senior management incentives.

(b) £28m lower Infrastructure Projects costs due to the recharge of more support costs to capital expenditure projects than we expected in PR13.

Partly offset by £8m higher insurance costs reflecting changes in the market since PR13.

1.13 For the control period to date, the lower expenditure of £150m compared to our PR13 determination is largely due to:

(a) a one-off benefit from the favourable settlement of commercial claims of £30m;

(b) lower re-organisation costs of £25m, due to fewer structural changes taking place than expected;

(c) £47m lower Infrastructure projects costs due to the recharge of more expenditure to capital expenditure projects than we expected in PR13;

(d) release of an accrual from 2013-14 of £25m for staff incentive payments; and

(e) release of an accrual from 2013-14 of £23m for penalties for under-delivery of outputs.

1.14 The total variance on support costs compared to 2014-15 was £27m. This is largely due to:

(a) Network Rail spent £28m (5.8%) less on core support costs, largely due to:

(i) more successful contract negotiations and lower prices paid in information management and telecoms (£12m);

(ii) there was more income generated from car parks and stations (£6m); and

(iii) increased third party receipts after the achievement of some major project milestones (£9m).

Offsetting these savings were increases in insurance costs as a result of increased premiums.

(b) There was also a negative £1m variance in group costs, which included various different one-offs in 2015-16 compared to 2014-15.

Traction electricity, industry costs and rates

1.15 The table below summarises Network Rail's expenditure on Traction electricity, industry costs and rates in 2015-16 compared to our PR13 determination and 2014-15.

Table 1.3: Traction electricity, industry costs and rates, Great Britain

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
Traction electricity	308	359	51	603	620	17	295
Business rates	160	157	-3	318	314	-4	158
British transport police costs	82	72	-10	166	147	-19	84
RSSB costs	8	9	1	19	18	-1	11
ORR licence fee and railway safety levy	17	17	0	34	35	1	17
Reporters fees	1	3	2	2	6	4	1
Other industry costs	5	2	-3	6	4	-2	1
Total traction electricity, industry costs and rates	**581**	**619**	**38**	**1,148**	**1,144**	**-4**	**567**

Source: Network Rail's regulatory financial statements

1.16 In 2015-16, Network Rail spent £38m (6.1%) less on traction electricity, industry costs and rates than we assumed in our PR13 determination. This is largely due to:

(a) lower electricity charges, which were passed on to the train operators[16]; and

(b) the costs of British Transport Police increasing whereas we assumed in our PR13 determination that the costs would reduce each year. Partly this is because Network Rail's share of policing costs that are allocated across the industry has increased relative to our expectation.

[16] Most of the lower electricity charges Network Rail paid to providers was passed onto the operators. See the offsetting negative variance (£52m) in Franchised Track Access Income, paragraph 1.37 (b) (i).

1.17 Compared to 2014-15, Network Rail spent £14m (2.5%) more on Traction electricity, industry costs and rates largely due to an increase in electricity market rates[17].

Schedule 4 & 8 payments

1.18 Schedule 4 and schedule 8 are compensation regimes by which train operators are compensated for planned line possessions (schedule 4) and unplanned service delays and cancellations (schedule 8).

1.19 In 2015-16, Network Rail spent £132m (57.1%) more on schedule 4 and 8 payments to train operators than we assumed in our PR13 determination[18] and £52m (16.7%) more than in 2014-15. The schedule 4 costs were £257m, £30m higher than our PR13 determination, due to adverse weather, the non-achievement of the efficiencies assumed in PR13 and higher costs due to changed insurance arrangements. Schedule 8 costs were £106m, £102m higher than our PR13 determination, due to infrastructure failures, and also adverse weather. Compared to 2014-15, Schedule 4 & 8 costs were £52m higher. This is mainly caused by £56m higher Schedule 4 costs, paid as a result of more possessions in 2015-16 compared to 2014-15, largely caused by the effect of severe weather in 2015-16 compared to 2014-15.

1.20 For the purposes of assessing financial performance, we adjust schedule 4 costs for the effect of deferred renewals (£34m) as explained below in the renewals section. The underperformance compared to our PR13 determination on schedule 8 was £102m and on schedule 4 was £64m (£30m + £34m). The total underperformance on schedule 4 and 8 was £166m (£102m + £64m).

Renewals

1.21 Renewals expenditure relates to activities where an existing infrastructure asset has deteriorated so that it can no longer be maintained economically but has to be replaced in whole or in part. Such expenditure does not result in any change or enhancement of the performance of the original asset.

1.22 In 2015-16, Network Rail spent £353m (13.0%) more on renewing the network compared to our determination. In addition, lower volumes have been delivered than expected (this work has been valued at £579m) and will be delivered at a later date. Therefore, the cost of the work that Network Rail has delivered was £932m higher than

[17] Although electricity market prices have risen from 2014-15 to 2015-16, they rose to a level that was still lower than assumed in our PR13 determination.

[18] Our determination had a benchmarked level of delays.

we assumed in our PR13 determination. For the control period to date, the cost of the work it has delivered was £1.7bn higher. Renewals expenditure was £680m (12.6%) higher than our determination for the control period to date and £97m higher than in 2014-15 (3.3%).The total overspend in 2015-16, adjusting for the volumes of work not delivered, is shown in Table 1.4 below.

Table 1.4: Renewals expenditure by asset category, Great Britain

£m, 2015-16 prices	Actual	Allocated CP4 rollover	Adjusted actuals	PR13	Over-spend before adjusting for deferrals	Deferral/ (acceleration) of work	Gross financial out/(under performance)
	(A)	(B)	C = (A+B)	(D)	E = (D-C)	(F)	G = (E-F)
Track	984	-	984	710	-274	42	-316
Signaling	647	-	647	792	145	425	-280
Civils	622	-	622	476	-146	70	-216
Buildings	221	10	231	188	-43	13	-56
Electrical power and fixed plant	144	43	187	224	37	85	-48
Telecoms	53	13	66	96	30	38	-8
Wheeled plant and machinery	90	-	90	118	28	28	0
Information technology	127	-	127	86	-41	-41	0
Property	15	-	15	30	15	15	0
Other renewals	174	-66	108	4[19]	-104	-96	-8
Total renewals expenditure	**3,077**	**0**	**3,077**	**2,724**	**-353**	**579**	**-932**

Source: Network Rail's regulatory financial statements

1.23 The significant gross underperformance of £932m in 2015-16 (see Table 1.4 above), was largely due to supply chain issues, delays in programmes[20], contractor performance, more work than expected to keep its assets in an appropriate condition, in some areas lower volumes of work than expected so higher unit rates, and the effect of severe weather. It has also not delivered all of its planned efficiency initiatives. The net underperformance on renewals in 2015-16 was £233m (i.e. £932m x 25%). This is in line with the 25% sharing mechanism whereby Network Rail generally retains 25% of any renewals and enhancement out/underperformance[21].

1.24 The main renewals expenditure variances were:

[19] The PR13 Other renewals assumption consists of £115m expenditure on the asset information strategy; intelligent infrastructure; faster isolations etc. less £111m of unspecified reductions across all renewals. This £111m PR13 adjustment was a 're-phasing overlay' that nets to zero for CP5 in total.

[20] Delays in programmes can lead to cost increases, e.g. if there are costs incurred to set up a job that is then cancelled and the costs cannot be recovered.

[21] This is consistent with our RAB roll forward policy, as explained in chapter 4 of our CP5 Regulatory Accounting Guidelines.

(a) a track overspend of £274m, there was an increase in plain line unit costs at the end of CP4, which meant that the starting unit rates in CP5 were around 25% above the rates assumed in our PR13 determination. This was one of the main reasons that the gross underperformance was £316m. There were also deferrals of £42m, largely because fewer volumes of switches and crossings were delivered than planned;

(b) a signalling underspend of £145m due to the deferral of several key projects to later periods (£425m) offset by higher expenditure on the volumes delivered in 2015-16, which was due mainly to cost overruns on large signalling projects such as Swindon and East Kent, and cost increases from the need to restage work. There was also additional expenditure as a result of contractor delays. On a gross basis £280m has been recognised as underperformance;

(c) a civils overspend of £146m due to several severe weather incidents that led to landslips and other damage across the network. Additionally the efficiencies expected in our determination have not materialised leading to a total gross underperformance of £216m. There was also £70m of deferrals due to the diversion of resources in dealing with the severe weather incidents;

(d) a net overspend of £104m on other renewals. This is largely because our PR13 determination assumed that £111m less would need to be spent on as yet unspecified renewals during 2015-16 compared to Network Rail's PR13 strategic business plan (SBP) and that reduction of £111m was included in Other renewals instead of being allocated across the asset categories. In later years this variance will reverse;

(e) a buildings overspend of £43m, due to additional work at some stations and not making expected efficiency savings resulting in a gross underperformance of £56m. There was also £13m of deferrals; and

(f) an overspend in Information Technology (£41m), due to Network Rail's increased expenditure this year on "spend to save" schemes. These schemes are not included in the 2015-16 financial performance calculation to improve the incentives on Network Rail to generate efficiency savings.

1.25 There is some variation across the asset portfolio between the planned and actual asset residual life at the end of 2015-16, reflecting the combined effects of under-delivery of renewals in some areas as well as updated information on asset condition, but overall sustainability is broadly in line with expectation. However we are concerned that the cumulative effect of the reductions in renewals planned for the remaining years of CP5

due to funding constraints will adversely affect sustainability and increase costs in the medium and long term.

Enhancements

1.26 During 2015-16 the Secretary of State commissioned Sir Peter Hendy to conduct a comprehensive review of Network Rail's CP5 enhancements portfolio in England and Wales, addressing affordability and deliverability. Sir Peter made his report ('the Hendy report') to the Secretary of State in November 2015. As part of this review, Network Rail produced a re-profiled expenditure forecast for the portfolio to understand whether it was affordable within the funding available. This has now been agreed as a not to be exceeded overall funding baseline.

1.27 We have adopted this funding baseline as the adjusted PR13 baseline for England and Wales CP5 enhancement projects. This new baseline is what Network Rail is now being measured against in England and Wales (except those projects governed by bespoke protocol schemes, i.e. Thameslink and Crossrail). Incorporating the Hendy funding baseline into the regulatory financial statements for 2015-16 has meant adjustments have been made to our 2015-16 baselines. In many cases this means that the in-year 'difference' for 2015-16 largely reflects this adjustment rather than the actual variance to the original baseline (see Appendix).

1.28 In Scotland the Enhancements Cost Adjustment Mechanism (ECAM) remains in place to adjust the PR13 assumptions when projects reach a sufficiently mature stage of development. However, Transport Scotland has commissioned a review of governance structures for the delivery of major rail enhancement projects in Scotland, which is expected to report in September 2016. This is in response to its concern over increasing cost estimates and heightened risks of not meeting previously committed delivery milestones.

1.29 Network Rail spent £2,990m[22] on enhancements to the network in 2015-16, which was £161m less than we assumed in our adjusted[23] PR13 determination (£3,151m).

1.30 As shown in the table below, the £161m underspend is due to the £340m of deferrals (this represents work delayed less work brought forward) and the adjustments for the Hendy review offset by £179m of gross financial underperformance. This means that although Network Rail has spent less than the adjusted determination, it has also delivered less than expected.

[22] We have not included £314m of expenditure on projects paid for directly by third parties, as these projects are not added to the RAB or included in our assessment of financial performance.

[23] This includes the adjustments for the Hendy review.

Table 1.5: Calculation of gross enhancements underperformance in Great Britain for 2015-16

£m, 2015-16 prices		Variance
Hendy & ECAM adjusted PR13 determination	3,151	
Actual expenditure 2015-16	2,990	
Underspend before adjusting for net deferrals and the effect of the Hendy review		**161**
Adjust for net deferrals to a later date and the effect of the Hendy review		-340
Total gross underperformance[24]		**-179**

Source: Network Rail's regulatory financial statements and our own analysis

1.31 The £179m of gross underperformance (£44m net underperformance) in the above table includes the following key elements:

(a) **£95m on Crossrail**[25]. This is because of extra station works, signalling contractor works, and impact of delays planning the installation of West Outer Overhead Line Equipment; and

(b) **£64m on the Thameslink programme**. This was largely due to the works associated with London Bridge. There are still two years of work remaining on the Thameslink programme and Network Rail does not expect that this overspend can be recovered by the end of the Control Period. A final assessment of its performance will be made once the project is finished in line with the programme's bespoke arrangements.

1.32 The £340m of adjustments for net deferrals and the effect of the Hendy review are primarily due to the effect of the Hendy baseline adjustments as explained in the appendix but also due to a £114m deferral of work on the Crossrail programme largely as a result of delays in the installation of the West Outer Overhead Line equipment.

1.33 As well as the expenditure on PR13 enhancements, Network Rail has spent £223m on non-PR13 enhancement projects funded through the Investment Framework or as discretionary investment[26]. As these schemes were not included in PR13, there is no

[24] The net underperformance in 2015-16 was £44m, in line with the 25% / 75% sharing mechanism used in the RAB roll forward policy, as explained in chapter 4 of our CP5 Regulatory Accounting Guidelines.

[25] Schemes with bespoke arrangements are funded by direct agreement between DfT and Network Rail and have a separate regulatory treatment. These are sometimes referred to as "tailored protocols" or "fixed price agreements". Both the Crossrail and Thameslink programmes have separate protocols and so are regulated outside of the normal periodic review provisions and were not affected by the Hendy review. Under the terms of the bespoke arrangements, Network Rail retains a certain percentage of the over/under spend up to a certain value, at which stage the percentage changes. Therefore the FPM impact for both the Thameslink and Crossrail overspend is not the usual regulatory 25% for enhancement overspends.

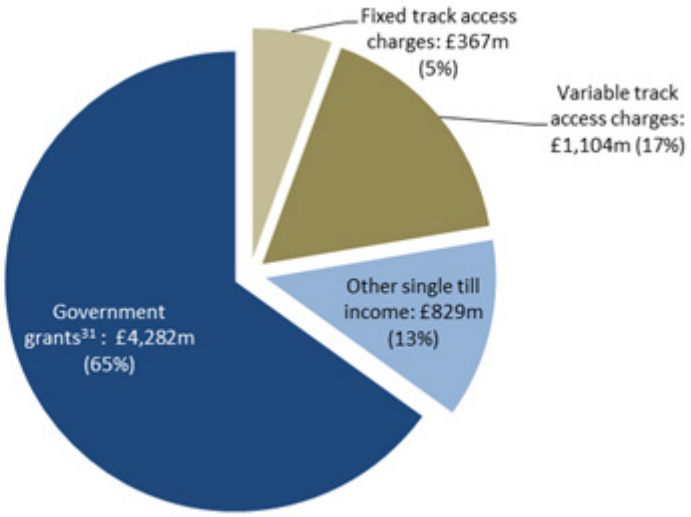
[26] Discretionary investments relate to work funded from Network Rail's financial outperformance in the early part of CP4. In 2015-16, the discretionary investment was £10m and mainly relates to the Manchester Victoria redevelopment. Expenditure on this programme was funded through the Investment Framework but the project

PR13 baseline to compare them to. Instead they are approved for RAB addition based on the criteria set out in the Investment Framework guidelines[27]. Within this total, £131m is third party funding for East West Rail and £79m has been spent on the North West electrification government sponsored scheme.

Income

1.34 Network Rail receives income from four primary sources; government grants, fixed and variable track access charges, and other single till income (OSTI) as shown in Figure 1.2. As shown in Table 1.1 Network Rail's total income was £6,582m in 2015-16. This was £20m (0.3%) higher than our PR13 determination.

Figure 1.2: Sources of Network Rail's income 2015-16



Source: Network Rail's regulatory financial statements

1.35 Total government grant income was £66m (1.6%) more than our determination due to the difference between the between the inflation rate assumptions used to calculate the actual government grants paid by the governments and those used to adjust our PR13 assumptions in Network Rail's regulatory financial statements.

1.36 Compared to 2014-15, government grant income was £74m (1.76%) higher, largely offset by lower fixed charges (£78m) as explained below and broadly as anticipated in our PR13 determination[28].

costs exceeded the amount eligible for RAB addition. Consequently expenditure on this programme over and above the regulatory assumption is treated as financial underperformance.

[27] ORR, Investment Framework Guidelines

[28] The year-to-year split between the government grant income and the fixed charge income was determined by ORR in PR13.

1.37 Franchised track access income was £15m (1%) lower than our determination. This is due to the following reasons:

(a) fixed charge income is paid by the train operators and was £22m (6.4%) higher due to the difference between the inflation rate assumptions used to calculate the actual fixed charges and those used to adjust our PR13 assumptions in Network Rail's regulatory financial statements and there was also additional income from further train services provided to operators; and

(b) variable charges were £37m (3.3%) lower than our determination mainly due to:

(i) traction electricity charges were £52m (15.6%) lower than our determination, due to the reduction in the market price of electricity. For Network Rail as a whole this is offset by a variance in traction electricity costs (see Table 1.3); and

(ii) capacity charges were £11m (2.7%) higher than our determination due to charges for additional train services.

1.38 Compared to 2014-15, franchised track access income was £51m lower. This is because:

(a) fixed charge income was £78m lower. These charges are fixed by ORR and are different in 2015-16 compared to 2014-15 because of the way we profiled the balance of government grants and fixed charges in our PR13 determination; and

(b) variable charges were £27m higher. This is partly due to an increase in schedule 4 access charge supplement income in line with our determination (£14m), and partly due to increased capacity charges (£8m) because of increased train services offered compared to our determination and due to an increase in traction electricity charges from an increase in market electricity prices (£4m). For Network Rail as a whole this is offset by an increase to the traction electricity costs, see paragraph 1.17.

Table 1.6: Other Single Till Income, Great Britain

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	(B)	(A-B)	(D)	(E)	(D-E)	
Property Income	348	313	35	634	606	28	286
Freight Income	61	83	-22	136	160	-24	75
Open Access Income	29	28	1	56	54	2	27
Stations Income	259	252	7	519	503	16	260
Facility and financing charges	51	107	-56	105	189	-84	54
Depot Income	66	63	3	132	127	5	66
Other Income	15	14	1	31	29	2	16
Total Other Single Till Income	**829**	**860**	**-31**	**1,613**	**1,668**	**-55**	**784**

Source: Network Rail's regulatory financial statements

1.39 Other Single Till Income was lower than our PR13 determination for 2015-16 by £31m (3.6%) and lower for the control period to date by £55m (3.3%). Other Single Till Income was £45m (5.7%) higher than in 2014-15.

1.40 The largest variance compared to our determination for 2015-16 is in Facility and financing charges. This is because in our PR13 determination for 2015-16 we assumed that Crossrail Ltd would pay £50m financing charges to Network Rail in relation to capital expenditure on the Crossrail programme. However, as Crossrail funded this work, it only paid Network Rail for the total cost of the work and did not pay any finance charges. This is also the reason for the variance for the control period to date.

1.41 This negative variance in Crossrail income is offset by a saving in interest charges as no interest charges were incurred by Network Rail on this project. There was no overall impact on Network Rail's total financial performance as both variances are excluded from the calculation of financial performance.

1.42 Freight income was £22m lower than our determination in 2015-16 due to a significant drop in the demand for coal[29]. This is also the reason for the variance to the previous year and for the control period to date.

1.43 The above variances, compared to our determination, are partly offset by higher overall property income of £35m partly as a result of the sale of commercial opportunities (£50m) offset by lower property sales. These factors are also the main reason for the increase in property income compared to 2014-15 and for the higher property income than we assumed in our determination for the control period to date.

[29] Coal demand reduced approximately a third on 2014-5, and is 78% lower than we assumed in our determination.

1.44 The positive variance in managed stations income following the transfer of Bristol and Reading franchised stations into managed stations (£13m), offsets the increase in the operating costs of managed stations included in other network operations expenditure.

Opex memorandum account

1.45 The movement in the Opex memorandum account of £18m in 2015-16, records under/overspends on items for which Network Rail receive the money in CP6 instead of CP5[30]. This consists largely of the volume incentive (£11m), which aims to incentivise Network Rail to respond to higher than anticipated demand from passengers and freight. Also included in the Opex memorandum account is the difference between the income we assumed it would receive from Network Rail High Speed 1 and what it earned (£4m)[31].

Financial performance and efficiency

1.46 Our assessment of financial performance[32] compares Network Rail's income and expenditure to the PR13 determination. If Network Rail can demonstrate that it has spent less whilst delivering its outputs then it has financially outperformed. Network Rail needs to show that it has not spent less by non-delivery of outputs or by simply deferring work or working in an unsafe or unsustainable way. If it spends more it is underperforming unless it has brought forward work.

Financial performance

1.47 Financial performance before adjusting for the under-delivery of outputs is calculated by totalling Network Rail income and expenditure variances against PR13, removing those variances on categories that do not count for financial performance, removing amounts attributable to changes in timing (e.g. deferrals) and 75% of renewals and enhancements variances in accordance with our RAB roll forward policy. Finally, an adjustment is then made to reflect under-delivery of outputs.

[30] ORR, CP5 Regulatory accounting guidelines

[31] High Speed 1 (HS1) income is received for Network Rail's activities on the HS1 network under a management contract. Network Rail does not own the HS1 network but it carries out the asset management, operation (including timetabling), maintenance and renewal of the HS1 network. Network Rail assumed in its SBP that net revenues from HS1 would fall from £10.4m to £6.5m per annum. However, this was uncertain as we did not determine HS1's access charges until 2014. Differences between the amounts earned and our PR13 determination are included in the Opex memorandum account.

[32] The financial performance and efficiency measures are described in more detail at: http://orr.gov.uk/publications/guidance/regulatory-accounts. The financial performance measure encompasses most of Network Rail's activities whilst the efficiency measure focuses on the core activities that Network Rail undertakes to operate, maintain and renew the rail network.

1.48 In 2015-16, financial underperformance before adjusting for the under-delivery of outputs was £549m when compared with our PR13 assumptions (see Table 1.7 below). On a cumulative basis, the financial underperformance before adjusting for the under-delivery of outputs for the control period to date is £942m. After reviewing Network Rail's calculation we have adjusted its values for the under-deliverability of outputs.

Table 1.7: Financial performance for Great Britain

£m 2015-16 prices	Actual	Adjusted PR13	Var b/(w)	FPM neutral/ Timing b/(w)	(Under)/ out performance	Cumulative (under) / out performance
Income	6,318	6,228	90	-39	**51**	75
Schedule 4	-257	-227	-30	-34	**-64**	-58
Schedule 8	-106	-4	-102	-	**-102**	-208
Operations	-538	-436	-102	-	**-102**	-146
Support[33]	-693	-756	63	-14	**49**	91
Maintenance	-1,248	-1,136	-112	8	**-104**	-184
Capex - Renewals	-3,077	-2,724	-353	-579	**-932**	-1,684
Capex adjustment - Renewals					**699**	1,263
Renewals net of Adjustment					**-233**	-421
Capex - Enhancements	-2,990	-3,151	161	-340	**-179**	-314
Capex- Non-PR13 Enhancements	-223	-	-223	223	**-**	-19
Capex adjustment - Enhancements					**135**	242
Enhancements net of Adjustment					**-44**	-91
Capex - Net Total					**-277**	-512
Financial performance before adjustment for under-delivery of outputs[34]					**-549**	**-942**
Less: Under-delivery of train performance requirements (PPM)					**-101**	-172
Less: Under-delivery of train performance requirements (CaSL)					**-28**	-49
Less: Missed Enhancement milestones					**-**	-6
ORR adjustments to Network Rail's reported values for the under-deliverability of outputs					**-1**	-2
Total financial performance (FPM)					**-679**	**-1,171**

Source: Network Rail's regulatory financial statements
Note: Rows and columns may not sum due to rounding

1.49 The financial underperformance before adjusting for under-delivery of outputs was largely due to:

[33] Includes Traction electricity, industry costs, business rates and reporter's fees.

[34] Prior to the Hendy review baseline changes, the financial underperformance before adjusting for under-delivery of outputs was higher than £549m.

(a) £233m underperformance on renewals (£932m less £699m for the 25% sharing mechanism adjustment[35]); £44m enhancements (£179m less £135m for the 25% sharing mechanism adjustment). See paragraphs 1.24 & 1.31 above for an explanation of the gross variances before adjustment; and

(b) underperformance of £102m on schedule 8 costs, £64m on schedule 4 costs, £102m on operations and £104m on maintenance. Offset by outperformance of £49m on support costs and £51m on income.

1.50 Some of the overspends and underspends discussed earlier in the document are treated as neutral for financial performance purposes (see Table 1.7 above). The reasons for part of the renewals and enhancements variances being treated as neutral are explained above and the reasons for the other amounts to be treated as neutral are:

(a) £39m of income due to variances on government grant income and fixed track access income that are not included in financial performance and the change to Crossrail funding arrangements as discussed earlier;

(b) £34m of schedule 4 costs for deferred renewals[36];

(c) £14m of support costs. In 2015-16, Network Rail received income from agreeing to a restructuring of some financing arrangements. However, as this change in financing results in higher interest expenses (which are excluded from the scope of FPM) this benefit has also been excluded. Additionally, the variance in reporters' fees is considered by Network Rail to be a timing difference which is expected to reverse by the end of the control period. Therefore, none of this variance has been included as FPM in 2015-16; and

(d) £8m of maintenance costs. This is due to work deferred from 2014-15 as part of a re-profiling of work.

Efficiency

1.51 For the control period to date Network Rail's operations, support, maintenance and renewals ("OSMR") efficiency[37] has declined by -8.0% (there was a decline in efficiency

[35] This adjustment is for 75% (£699m) of the overspend (£932m) so that the net underperformance (£233m) is 25% of the overspend.

[36] Where renewals activity that results in possessions have been deferred (or accelerated), a corresponding adjustment has been made to the schedule 4 baseline.

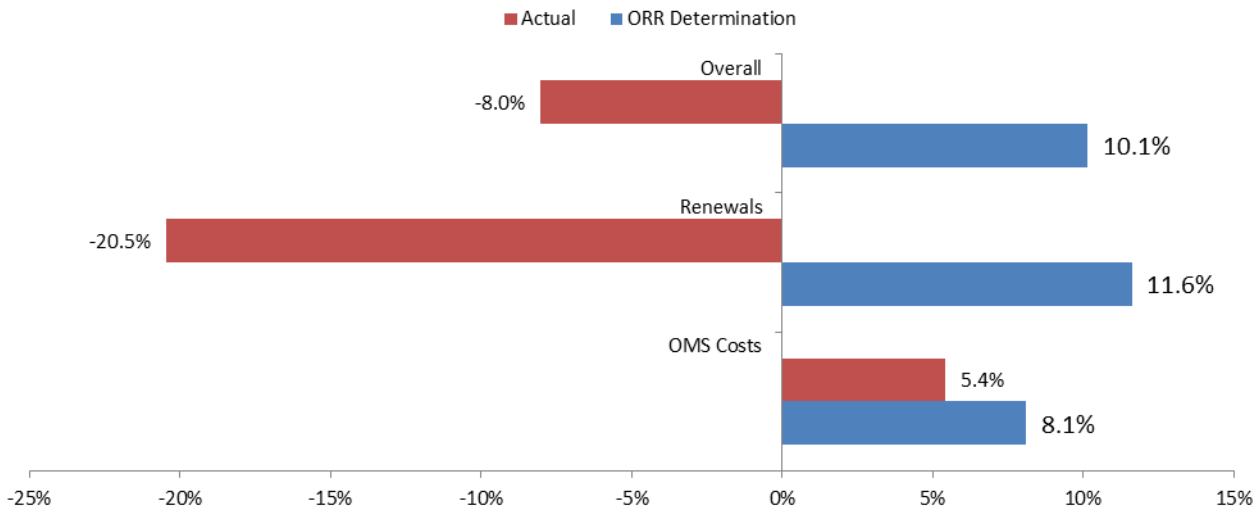
[37] Our measure of efficiency is a simple measure of the reduction over time in support, operations, maintenance and renewals expenditure. This measure compares actual expenditure in 2015-16 with expenditure in 2013-14 (the last year of control period 4) adjusted for the level of activity undertaken and other issues. After the adjustments, expenditure in 2013-14 was £4,792m. Actual expenditure in 2015-16 was £5,177m. This includes

of -2.9% in 2014-15 and 2015-16) compared to our PR13 determination assumption of 10.1% efficiency savings. By the end of CP5 it is currently forecasting efficiency of 3.5% (i.e. it will exit CP5 3.5% more efficient than it started CP5) compared to our PR13 assumption of 19.4%.

1.52 This lower efficiency is largely driven by the rising cost of renewals, which for the control period to date has negative efficiency of -20.5%, compared to our PR13 determination assumption of a 11.6% efficiency improvement. Excluding renewals, the operations, support and maintenance costs ("OSM") efficiencies achieved for the control period to date are 5.4% compared to our PR13 determination of 8.1%.

1.53 The figure below shows Network Rail's efficiency for renewals and OSM compared to our determination. Our PR13 determination set Network Rail an efficiency improvement target of 19.4% for CP5. Network Rail is currently expecting to achieve a 3.5% efficiency improvement by the end of year 5.

Figure 1.3: Network Rail's CP5 efficiencies for the control period to date compared to our PR13 determination



Source: ORR PR13 determination, Network Rail's plans and submissions

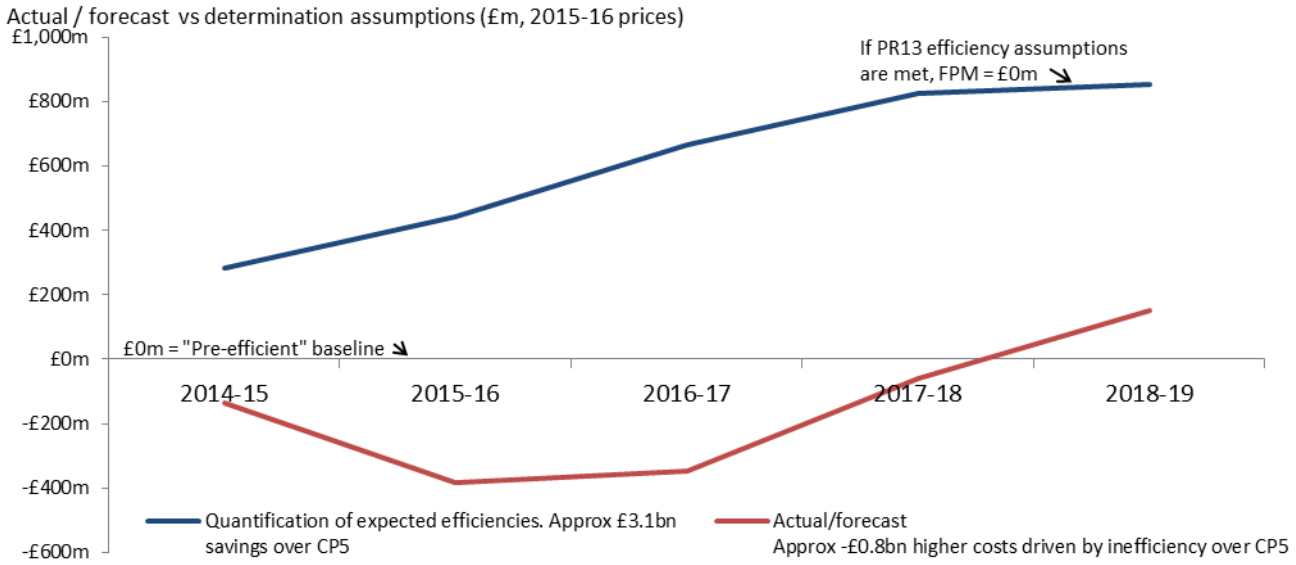
1.54 Together with Network Rail, we have tried to quantify the efficiency variances but this is difficult as, for example, we need to consider different baselines, so the estimated numbers we provide below are indicative and we will work with Network Rail to refine this analysis. In monetary terms, and taking into account expected changes in volumes since the determination, Network Rail's forecast implies approximately £0.8bn of negative efficiency for the whole of CP5 compared to approximately £3.1bn of savings

(as shown in Table 1.1) operations (£538m), support (£394m), maintenance (£1,248m) and renewals (£3,077m) and includes a deduction of £77m for CP4 rollover costs. Expenditure has therefore risen by £385m (£5,177m - £4,792m). As an efficiency percentage this is -8.0% (-£385m/£4,792m).

assumed in our determination, as shown in Figure 1.4 below. We estimate the total shortfall between our PR13 assumptions and Network Rail's latest forecasts is around £3.9bn.

1.55 For the majority of items, the calculations are based on the same baselines and actual expenditure that is used in the FPM calculation (some use CP4 exit rates as baselines). In FPM we show the difference between what has happened (i.e. actual expenditure) and what we assumed would happen (i.e. the baseline after our efficiency assumption), so if FPM were zero that would mean Network Rail has delivered its efficiency assumption[38]. But in these figures we show both the quantification of the efficiency trajectory that Network Rail is forecasting to deliver (i.e. the difference between its forecast and the pre-efficient baseline) and the quantification of the efficiency trajectory that we assumed in our PR13 determination (i.e. the difference between what we assumed would happen and the pre-efficient baseline)[39].

Figure 1.4: Total quantified efficiency comparison for Great Britain in CP5



1.56 In the following figures we show the monetary impact of Network Rail's forecast efficiency separately for operations, maintenance and support; and renewals. The monetary values that we have shown in these figures represent the estimated value of the efficiency shortfalls that Network Rail is now forecasting to make compared to the savings we expected it to make in our PR13 determination.

[38] The calculations exclude CP4 rollover items.

[39] An example of the difference between FPM and efficiency would be, if we thought in our PR13 determination that Network Rail would reduce support costs by £6 from £100 to £94. But it actually reduced support costs by £4 to £96. Then the expected efficiency would be £6 (6%) and the actual efficiency would be £4 (4%). For FPM purposes the under-performance would be £6 - £4 = £2.

1.57 Efficiency savings of £0.8bn are expected to be made for the whole of CP5 in operations, maintenance and support costs, compared to the £1.3bn in our determination (Figure 1.5). This means that Network Rail is forecasting to underperform by £0.5bn.

1.58 The largest shortfall is in renewals where Network Rail is experiencing negative efficiency for the control period to date and is forecasting negative efficiency of £1.6bn by the end of CP5, compared to positive efficiency of £1.8bn in our determination. This means Network Rail is forecasting to underperform in CP5 by £3.4bn (Figure 1.6).

Figure 1.5: Quantified efficiency comparison for Operations, Support, Maintenance (OSM) for Great Britain in CP5

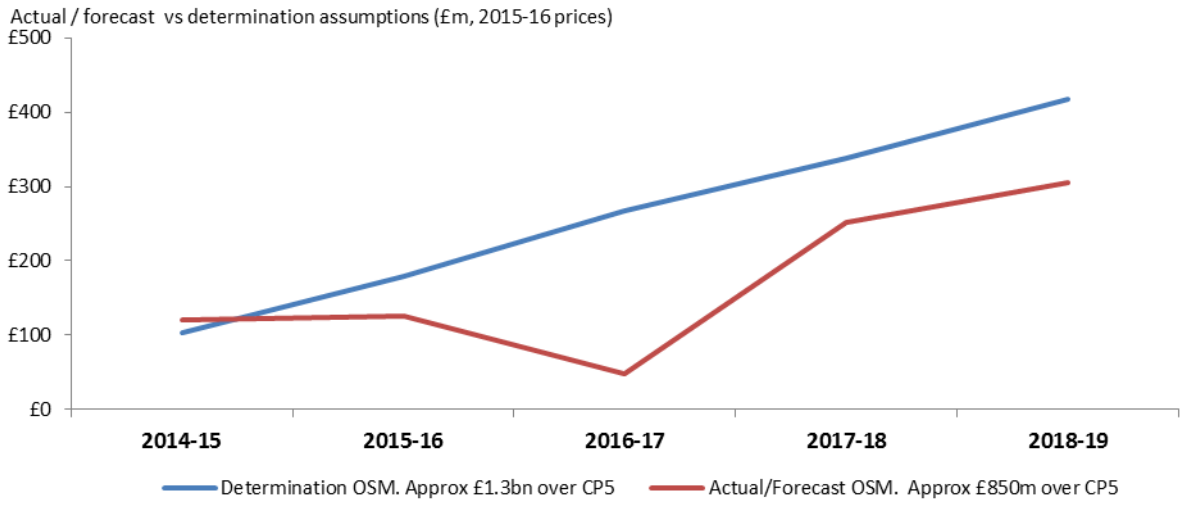
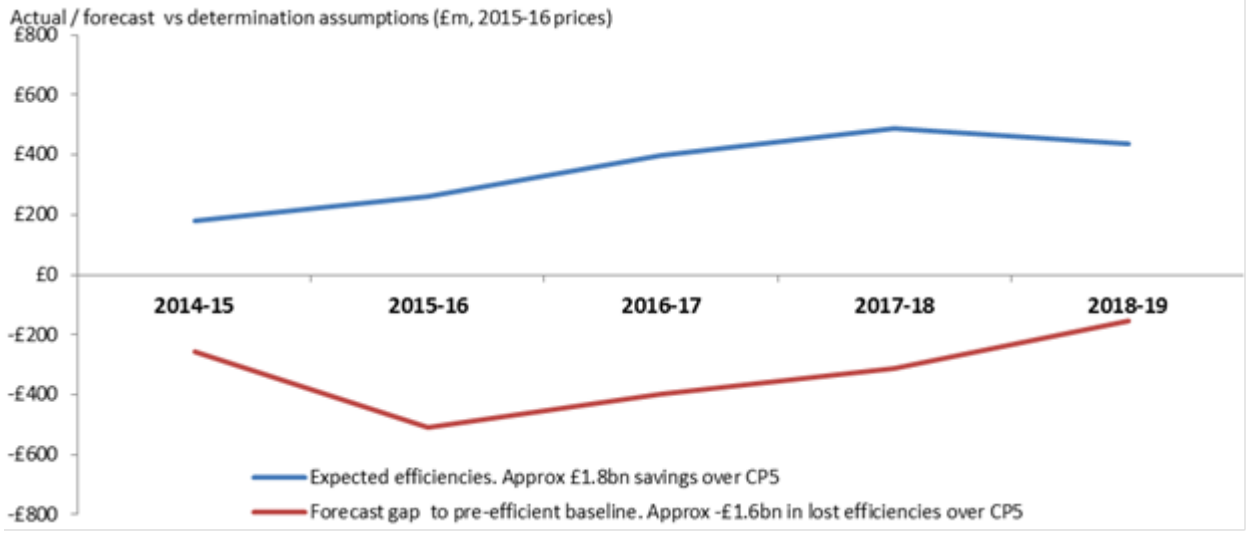


Figure 1.6: Quantified efficiency comparison for Renewals for Great Britain in CP5



Borrowing

1.59 Reclassification as a public sector body from September 2014 changed the way Network Rail raises debt to fund its business activities. It no longer raises new debt from capital markets and instead borrows from DfT under a loan agreement that will run until the end of CP5. This change was not included in PR13 as it came into force after PR13 was concluded. The loan agreement with the DfT specified a fixed, nominal borrowing limit of £30,300m that Network Rail must not exceed, of which £3,300m related to Scotland. DfT subsequently provided some cash funding to Network Rail, which reduced the limit to £30,175m[40]. As a result of the Hendy report the limit for England & Wales was increased by £700m to £30,875m. The borrowing limit in Scotland remained unchanged.

1.60 Compared to its forecast at the start of CP5, Network Rail has spent more on the renewals and enhancements work it delivered in 2014-15 and 2015-16 than it originally expected. It is also planning to spend more than it originally expected in the remainder of CP5. This means there is pressure on its borrowing facility with DfT.

1.61 Network Rail's latest business plan for Great Britain includes financial headroom of £0.5bn. By headroom we mean that Network Rail is forecasting that it will not need to use that amount of the borrowing facility. The main financial risks to this forecast include the costs of renewals and enhancements; the delivery of efficiency initiatives; interest rate movements and Network Rail not achieving suitable strategies for generating additional cash flows through disposing of non-core assets and encouraging alternative funding arrangements.

1.62 As well as agreeing the maximum amount of borrowing across CP5 for Great Britain with DfT, Network Rail also agrees an annual amount of borrowing for each year. For 2015-16, Network Rail borrowed £7.5bn from DfT in line with its forecast[41].

1.63 Network Rail is investigating the possibility of disposing of a number of property related assets (freight sites, light maintenance depots and the commercial estate portfolio) with the objective of raising £1.8bn in funds to support the railway enhancement programme in line with the Hendy report. The current focus is on reviewing potential disposal structures for each portfolio to achieve the objectives of:

(a) protecting the safe and efficient operation of the railway;

[40] £155.5m was provided by the DfT to fund £125m of work on the Great Western electrification and £30.5m to cover Network Rail's contribution toward the new station at Gatwick Airport (which was not included in our PR13 determination). In order that the funding of £125m should not have any impact on the overall capital spending plans for CP5, the loan facility total was reduced by £125m to £30,175m in February 2015.

[41] Annual notified borrowing was originally forecast by Network Rail to be £8.0bn, Network Rail reduced it to £7.6bn in December 2015 and reduced it again in January 2016 to £7.5bn as the profile of the capital expenditure for the year became clearer and collateral payments to counterparties were reduced compared to 2014-15.

(b) meeting UK Government accounting requirements;

(c) satisfying UK Government policy; and

(d) delivering value for money.

1.64 At this point, there has been no decision by Network Rail to dispose of any specific assets under this programme. The review being undertaken includes continuing Network Rail ownership as well as various sale options.

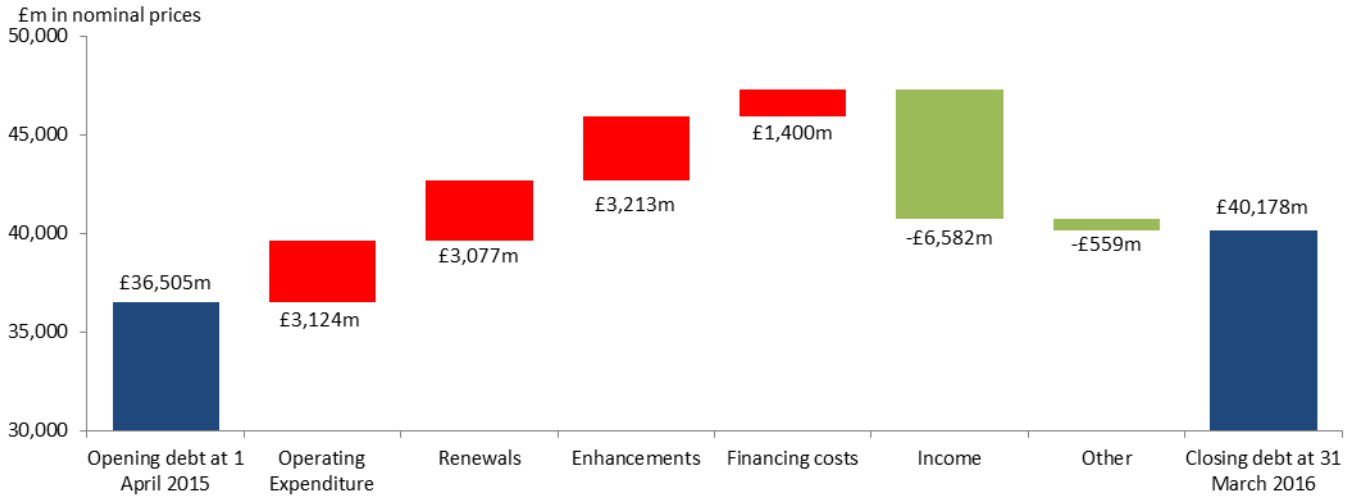
1.65 Between September and December 2016, the Network Rail Board and DfT will be considering whether or not to move into the next phase of work in terms of progressing any potential disposals. Network Rail is also strengthening its stakeholder engagement with TOCs, FOCs and with other industry parties as well as potential interested investors.

1.66 Network Rail is also, along with DfT, looking at better management options for stations and specifically options for its Managed Stations. Again, Network Rail has made no decision to sell these assets. Network Rail is currently in the design phase looking at the optimum long term ownership models for stations with the key objectives of improving the passenger experience, unlocking capacity and supporting regeneration of local station neighbourhoods and localities and this may include the introduction of third party capital. Network Rail is aiming to complete this work and present it to its Board in December 2016. The company has also been looking at options for disposing of some or all of its electrical distribution and traction power assets, but again no decision to sell these assets has been made.

Net debt

1.67 In 2015-16, debt (net of cash balances) increased by £3,673m from £36,505m to £40,178m (nominal prices). The reasons for this increase are summarised in Figure 1.7. The main variances driving this increase are discussed elsewhere in our assessment.

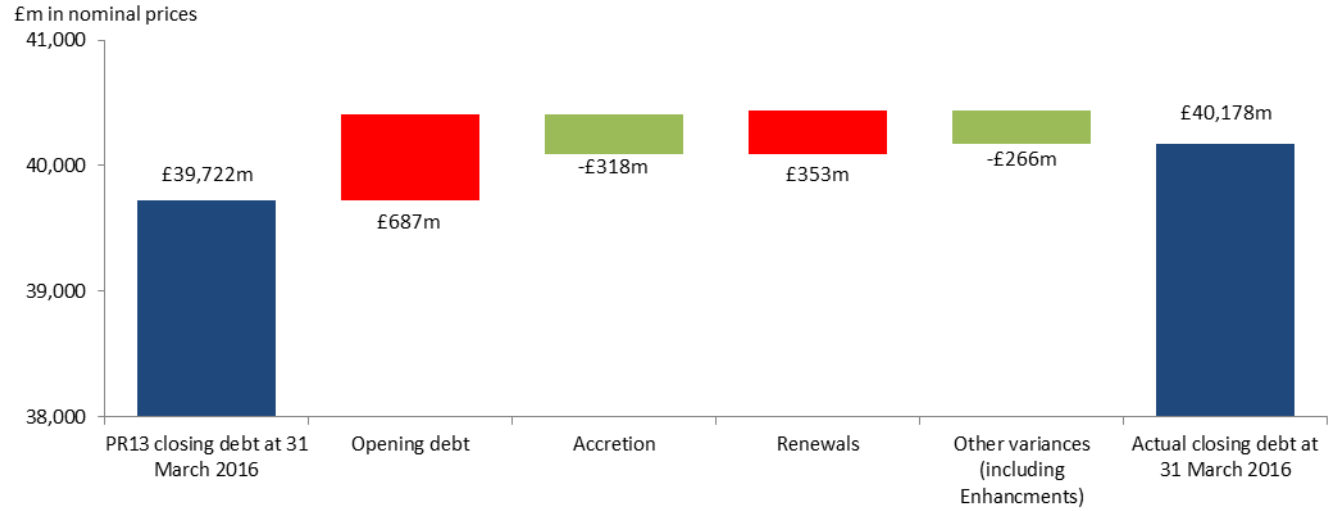
Figure 1.7: Movements in debt in 2015-16



Source: Network Rail's regulatory financial statements

1.68 Closing debt at 31 March 2016 was £456m (£40,178m less £39,722m) higher than we assumed in our PR13 determination, largely because the opening debt at 1 April 2015 was £687m higher (largely due to additional investment undertaken towards the end of CP4) and inflation accretion[42] on index-linked debt was £318m lower (see Figure 1.8 below). Renewals expenditure is also £353m higher than we assumed. The variance on enhancements is calculated from the baseline in our determination and has not been adjusted for agreed changes in funding, e.g. for the Hendy review or rollovers from CP4.

Figure 1.8: Closing debt in 2015-16, compared to our PR13 assumption



Source: Network Rail's regulatory financial statements

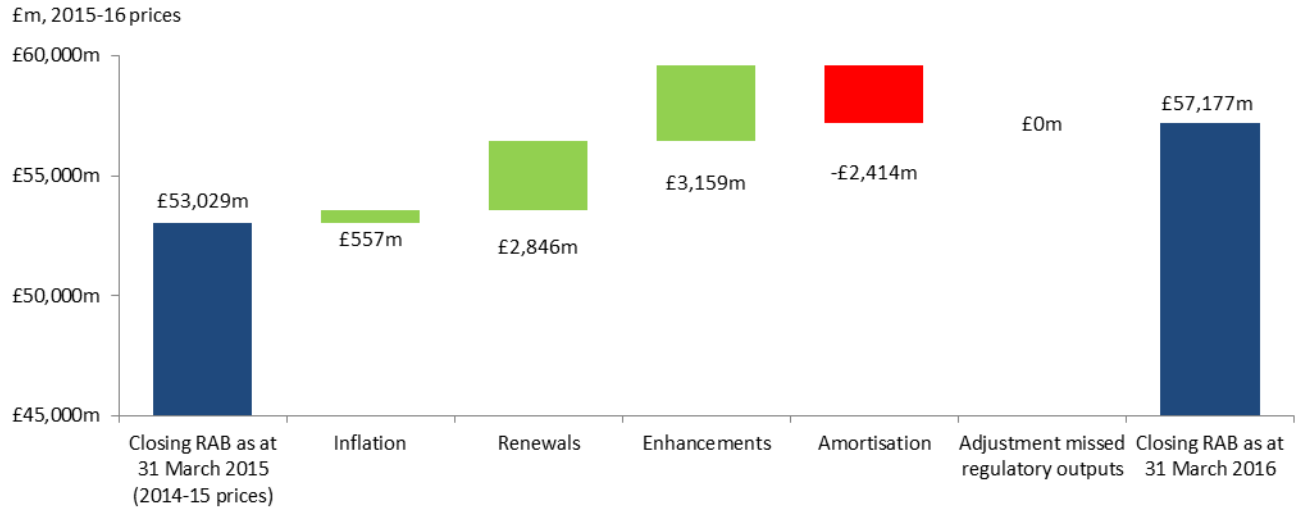
[42] Accretion of index-linked debt occurs when the principal amount borrowed increases in line with inflation each year and is paid in cash to debt-holders at the end of a loan period. Network Rail's bonds were linked to RPI, so if RPI is lower than expected, accretion will be lower than expected.

Regulatory Asset Base (RAB)

1.69 The Regulatory Asset Base is our view of the value of Network Rail's assets and is a key building block in our methodology for determining access charges as it forms the basis for calculating the level of allowed return and affects the allowance for amortisation within Network Rail's revenue requirement.

1.70 In 2015-16, Network Rail's RAB in 2015-16 terms increased by £4,148m from £53,029m[43] at the end of 2014-15 to £57,177m largely due to inflation, expenditure on renewals and enhancements offset by amortisation (as illustrated in Figure 1.9).

Figure 1.9: RAB movement in 2015-16[44]



Source: Network Rail's regulatory financial statements

1.71 This movement of £4,148m is £273m higher than we assumed in our PR13 determination due to overspends on renewals and investments in non-PR13 enhancements added to the RAB but by definition not included in our PR13 determination. These variances have been offset by lower expenditure on enhancements that were included in our determination, which is largely due to changes to the profile of expenditure on these projects.

1.72 The reasons for the difference of £1,440m between the actual closing RAB at 31 March 2016 of £57,177m and our determination assumption of £55,737m, is due to the following reasons (as illustrated in Fig 1.10):

[43] The number for the value of the RAB at the end of 2014-15 included in Table 1.1 includes the inflation adjustment shown in Figure 1.9, i.e. it is £53,029m + £557m = £53,586m.

[44] The addition to the RAB will not equal actual capital expenditure in Table 1.1, as it is our PR13 determination assumption that is added to the RAB and it is then adjusted in accordance with our regulatory accounting guidelines, as shown in statement 2b in Network Rail's regulatory financial statements.

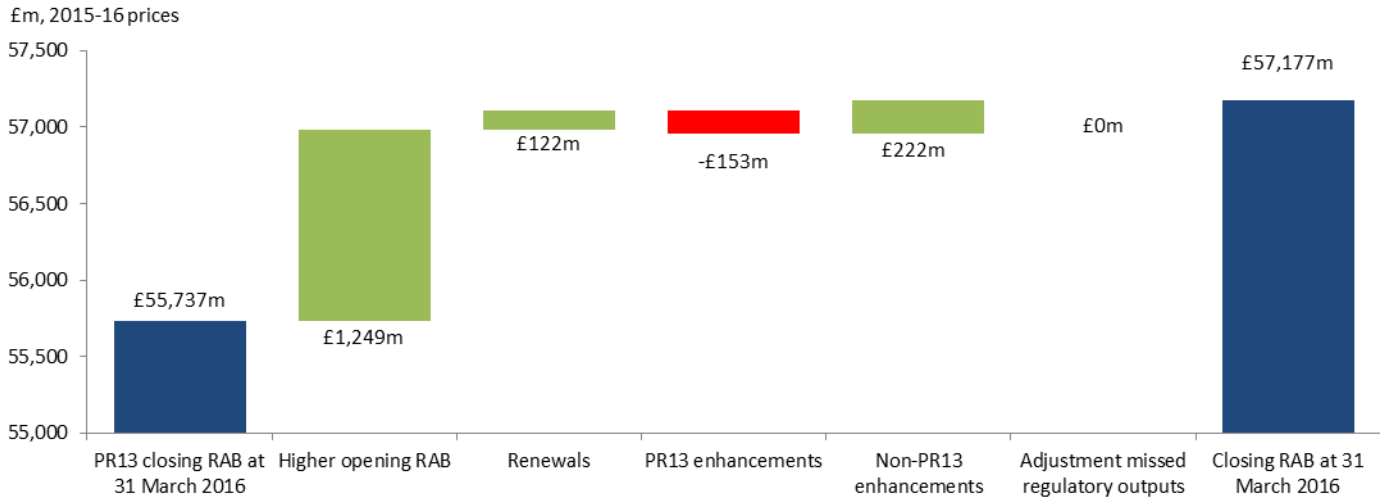
(a) the opening RAB at 1 April 2015 was £1,249m higher as a result of additional capital expenditure in the last year of CP4, which we had not included in our PR13 determination;

(b) there was £122m higher expenditure on renewals than we assumed;

(c) £222m was spent on non-PR13 enhancements, for which there was not a PR13 assumption; and

(d) there was also £153m less spent on PR13 enhancements than we assumed in our determination.

Figure 1.10: Actual RAB at the end of 2015-16 compared to PR13



Source: Network Rail regulatory financial statements.

Renewals adjustments to the RAB

1.73 In this section, we explain the £122m variance in Figure 1.10[45]. This variance is largely due to: £699m net overspend (£932m less a £233m RAB roll forward adjustment); plus £34m additional spend to save expenditure; less £619m expenditure deferred to later dates. These variances are explained in more detail below.

1.74 £932m more was spent than assumed in PR13 on the renewals volumes Network Rail undertook in 2015-16 (see Table 1.4). This expenditure was driven by supply chain issues, delays in programmes, contractor performance, more work than expected to keep its assets in an appropriate condition, in some areas lower volumes of work than expected so higher

[45] The explanations above exclude the impact of capitalised financing included in the movements in the RAB.

unit rates, and the effect of severe weather. As this expenditure was not 'manifestly inefficient'[46], 75% of the overspend **(£699m)** has been added to the RAB.

1.75 There was lower expenditure of **£619m** due to a deferral of work to a later date. This is because Network Rail has decided to profile its expenditure in a different manner than assumed in PR13. This deferral is around 23% of the total adjusted PR13 renewals assumption for 2015-16, and is a result of the challenges faced by Network Rail in delivering its renewals programme. Wherever it takes decisions on the profile of its expenditure, Network Rail must satisfy us that it will not impact the long-term sustainability of the network, and the decisions have been subject to a suitable and sufficient assessment of risk that clearly demonstrates there will be no reduction in current levels of safety. Whilst we are satisfied that the 2015-16 deferrals on their own do not impact sustainability, we are concerned that the scale of these deferrals, combined with the cumulative effect of the reductions in renewals planned for the remaining years of CP5 due to funding constraints, will adversely affect sustainability and increase costs in the medium and long term. The deferrals lead to an increased reliance on maintenance activities and dependence on the knowledge, competence, and expertise of (often individual) staff members to effectively manage track geometry risks. This reliance could amplify the vulnerability of assets to future risk control weakness.

1.76 An additional **£34m** in renewals expenditure was added to the RAB to account for additional spend to save expenditure. This was where Network Rail spent more than we assumed in our determination in order to provide benefits at a later date. This approach was set out in our PR13 determination, and for 2015-16 Network Rail is able to add 85% of the expenditure on spend to save schemes to the RAB.

Enhancement adjustments to the RAB

1.77 In this section we explain the £153m lower expenditure on PR13 enhancements and the £222m higher expenditure on non-PR13 enhancements shown in Figure 1.10. The variance of £153m is largely due to:

(a) a reduction in expenditure of **£322m** for the deferral of expenditure to a later date and the effect of the adjustments for the Hendy review;

(b) an increase in expenditure of **£179m** (see Table 1.5) as a result of financial underperformance; and

[46] 'Manifestly inefficient' expenditure is expenditure that should not be added to the RAB and is defined in the CP5 Regulatory accounting guidelines as expenditure that is not: (a) within the scope of Condition 4.1 of the licence; (b) within the scope of the HLOS requirements (if relevant); (c) meeting a customer reasonable requirement; or (d) adding economic value to the railway.

(c) a net addition of **£48m** as we increased the original PR13 baseline by a net £23m following the Hendy review[47] and by £25m for accelerated renewals delivered in association with the Crossrail programme.

1.78 The underperformance of £179m largely consists of:

(a) £20m on schemes subject to a 25% pain-gain mechanism (£15m was added to the RAB); and

(b) £159m on the Crossrail (**£95m**) and Thameslink (**£64m**) programmes, which have bespoke arrangements. When adjusted for the bespoke pain-gain mechanisms, £120m was added to the RAB.

1.79 There was an additional £223m expenditure added to the RAB to account for enhancements which Network Rail has undertaken in the year that were not funded in PR13, but have been approved for RAB addition under the Investment Framework. This addition excludes the overspend on the Manchester-Victoria station redevelopment project. This project had been funded out of previous outperformance and DfT funding had not been sought. Consequently the £10m overspend in 2015-16 did not meet the criteria for RAB addition.

Financing costs

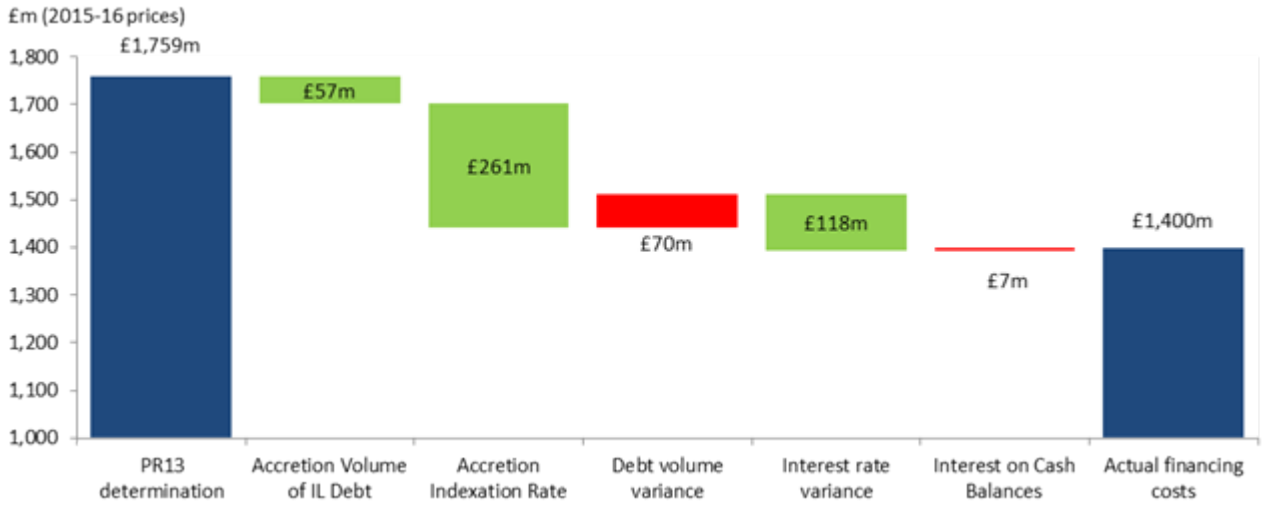
1.80 Network Rail incurs financing costs on its debt, which includes both cash interest costs paid to debt holders and accretion[48] on index-linked debt.

1.81 In 2015-16, Network Rail's financing costs were £1,400m, compared to £1,759m assumed in the determination, a favourable variance of £359m (20%). The main reasons for this variance are shown in Figure 1.11.

[47] The gross adjustment of £221m for the Hendy review in 2015-16 is offset by the reversal of a £198m adjustment of funding from CP4 to CP5 for a number of schemes in England & Wales that were previously included in Network Rail's 2014-15 regulatory accounts as the effect was already taken into account in the Hendy review.

[48] Accretion of index-linked debt occurs when the principal amount borrowed increases in line with inflation each year and is paid in cash to debt-holders at the end of a loan period. Network Rail's bonds were linked to RPI, so if RPI is lower than expected, accretion will be lower than expected.

Figure 1.11: Actual financing costs compared to our PR13 assumptions in 2015-16



Source: Network Rail's regulatory financial statements

1.82 The £359m variance between the PR13 assumption of £1,759m and the actual financing costs of £1,400m is mainly due to:

(a) £57m lower accretion as a result of less index linked debt being issued in CP5 than we assumed in PR13;

(b) £261m lower due to a lower accretion indexation rate than we assumed in PR13, as a result of lower inflation;

(c) £70m higher finance costs due to more debt than we assumed in PR13;

(d) £118m lower finance costs due to lower average interest rates than we assumed in PR13; and

(e) £7m lower interest received on cash balances than we assumed in PR13.

Financial indicators

1.83 Monitoring and reporting Network Rail's financial indicators helps ORR meet its statutory duty, as set out under section 4 of the Railways Act 1993, to ensure it is not unduly difficult for Network Rail to finance railway activities.

1.84 Our PR13 determination included forecasts of a number of financial indicators, including the net debt/RAB ratio[49] and the adjusted interest cover ratio (AICR), which we monitor against to help ensure Network Rail is able to maintain an appropriate financial position. These ratios are included in Table 1.1.

[49] The net debt/RAB ratio is a key measure of financial sustainability for companies economically regulated. It is similar to gearing, which is used by other companies to help assess financial sustainability.

1.85 The AICR ratio in 2015-16 is 0.14 lower (i.e. worse) than our PR13 determination assumption. This is because there were lower interest costs partly offset by an overspend on operating expenditure. In 2015-16, the AICR ratio decreased by 0.04 compared to 2014-15 largely due to higher operating expenditure.

1.86 The net debt/RAB ratio of 70.3% in 2015-16 is 0.9 percentage points higher (i.e. worse) than our PR13 assumption of 69.4%. This is because Network Rail has spent more than we assumed in PR13 on support, operations and maintenance and capital expenditure. This was partially offset by lower financing costs.

1.87 The net debt/RAB ratio increased by 1.5 percentage points from 68.8% in 2014-15 to 70.3% in 2015-16. The material drivers of this increase are the £2,990m of enhancements in 2014-15 that are debt-funded as well overspends elsewhere in the business, which were not funded in our PR13 determination.

2. Scotland

Introduction

2.1 This chapter summarises Network Rail's actual expenditure, income, financial performance and efficiency in Scotland[50], including comparisons to our PR13 determination and to 2014-15. The chapter also covers the borrowing, net debt, Regulatory Asset Base and financial indicators. Also, we do not cover financing costs in this chapter because Network Rail's interest rates on its debt are the same in Great Britain and Scotland.

2.2 We consider Network Rail's financial performance compared to our PR13 determination in several ways, starting with a straightforward comparison of income and expenditure in 2015-16 and for the control period to date (i.e. the first two years of CP5 – 2014-15 and 2015-16). We also compare actual income and expenditure in 2015-16 to 2014-15.

2.3 We also carry out a more detailed analysis of regulatory financial performance which covers most areas of Network Rail's expenditure and we make adjustments for work not done (deferrals of work) and missed outputs to give an overview of how much it is costing to deliver its outputs compared to our PR13 determination. This means that we identify the volumes actually delivered in 2015-16, and so far in the control period, and measure how much Network Rail has spent in delivering these volumes against the money we had expected would be spent on these volumes in our determination.

2.4 We additionally look at the progress Network Rail is making against the efficiency assumptions that we set in our determination and the forecast for the end of the control period. This analysis covers Network Rail's expenditure on operations, support, maintenance and renewals.

2.5 In our 2015-16 Monitor the main comparisons of Network Rail's financial performance were against Network Rail's latest budget for 2015-16 not against our PR13 determination.

2.6 In our analysis we frequently refer to "under/over spends" and "out/under performance". By "under/over spends" we mean a simple variance between two numbers, so that if Network Rail has spent more than our PR13 assumption that would be described as an overspend. We then analyse that overspend and decide how much of it is made up of neutral issues, such as when there is a timing difference where Network Rail has moved work (and hence expenditure) from one year to another. Adjusting for these neutral issues, we understand how much of the under or overspend is because it has not performed at the level of efficiency that we expected – in simple terms this is called "out or under performance".

[50] This section of our assessment covers Network Rail's Scotland Route, which does not exactly reflect the border between England and Scotland.

2.7 In this section we also report on some of the challenges Network Rail is facing. These issues have implications for Network Rail's plan for CP5, particularly as it is spending more money in CP5 than it originally expected and it has constraints on its borrowing with a fixed nominal borrowing limit. In view of these challenges, Network Rail has updated its plans for CP5.

2.8 Network Rail's Scotland route joined with Abellio ScotRail to form the ScotRail Alliance in May 2015. They are still separate companies but there is a single leadership team to manage the railway in Scotland. Network Rail thinks that this new joined-up way of working will lead to safety, delivery, performance and financial benefits for both companies.

2.9 In Scotland, the Enhancements Cost Adjustment Mechanism (ECAM) remains in place to adjust the PR13 assumptions when projects reach a sufficiently mature stage of development. However, Transport Scotland has commissioned a review of governance structures for the delivery of major rail enhancement projects in Scotland, which is expected to report in September 2016. This is in response to its concern over increasing cost estimates and heightened risks of not meeting previously committed delivery milestones.

2.10 We will comment on Network Rail's financial performance under the route level efficiency benefit sharing (REBS) mechanism in a letter to be published in Autumn 2016.

Expenditure

2.11 Expenditure for Scotland in 2015-16 compared to our PR13 assumptions and for the first two years of the control period is summarised in Table 2.1 and Figure 2.1 and the key variances are explained below. Network Rail's total expenditure in Scotland in 2015-16 was £987m. This was £180m (15.4%) lower than we assumed in our PR13 determination.

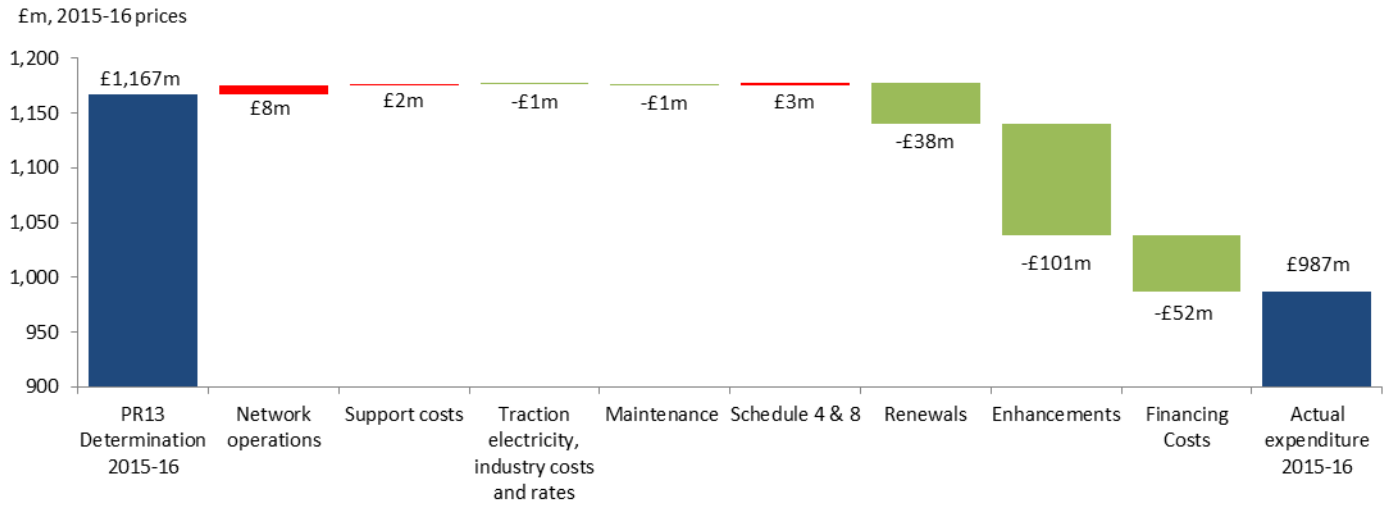
Table 2.1: Summary of key financial information for Scotland

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
Operating Expenditure							
Signaller expenditure	31	28	-3	61	56	-5	30
Other Network Operations expenditure	18	13	-5	33	26	-7	15
Total Network Operations expenditure	**49**	**41**	**-8**	**94**	**82**	**-12**	**45**
Support costs	49	47	-2	93	96	3	44
Traction electricity, industry costs and rates	49	50	1	95	94	-1	46
Network maintenance	114	115	1	221	226	5	107
Total Schedule 4 & Schedule 8 compensation payments	29	26	-3	43	48	5	14
Total Operating Expenditure	**290**	**279**	**-11**	**546**	**546**	**0**	**256**
Capital Expenditure							
Renewals	308	346	38	580	627	47	272
PR13 Enhancements	254	364	110	573	860	287	319
Non-PR13 Enhancements	9	0	-9	16	0	-16	7
Total Enhancements	**263**	**364**	**101**	**589**	**860**	**271**	**326**
Total Capital Expenditure	**571**	**710**	**139**	**1,169**	**1,487**	**318**	**598**
Financing costs	**126**	**178**	**52**	**256**	**339**	**83**	**130**
Total Expenditure	**987**	**1,167**	**180**	**1,971**	**2,372**	**401**	**984**
Income							
	(A)	(B)	(A-B)	(D)	(E)	(D-E)	
Franchised track access income	169	169	0	334	329	5	165
Other single till income	50	57	-7	104	112	-8	54
Government grant income	447	440	7	877	868	9	430
Total Income	**666**	**666**	**0**	**1,315**	**1,309**	**6**	**649**
Finance							
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
RAB	5,644	6,119	475	n/a	n/a	n/a	5,373
Net debt	3,606	4,131	525	n/a	n/a	n/a	3,336
Adjusted interest cover ratio	1.09	1.02	-0.07	n/a	n/a	n/a	1.23
Gearing (net debt/RAB)[51]	63.9%	65.8%	1.9%	n/a	n/a	n/a	62.7%

Source: Network Rail's regulatory financial statements

[51] The PR13 numbers in Table 2.1 have been updated for actual inflation including, for consistency, net debt and RAB. But adjusting the PR13 gearing ratio for actual inflation would not be transparent as our gearing assumptions were in nominal prices (including inflation assumptions), so in this table we have not adjusted our PR13 gearing assumption for actual inflation. This is an issue because actual inflation has been different to our PR13 assumptions.

Figure 2.1: Summary of expenditure variances for Scotland compared with PR13



Note: A negative sign in the graph above denotes reduced expenditure compared to our determination

Source: Network Rail's regulatory financial statements and our own analysis

Network operations expenditure

2.12 Our assessment shows that compared to the assumptions that we made in our PR13 determination, Network Rail spent £8m (19.5%) more on network operations. This compares to the 23.4% increase across Great Britain and is broadly for the same reasons: higher signaller staffing costs because of higher expenditure at the end of CP4 than we assumed, that continued into CP5 and delays in implementing efficiency initiatives such as the NOS[52] schemes. Expenditure is £4m (8.9%) higher than in 2014-15, due to pay awards being above inflation and additional expenditure on projects aimed at improving performance and efficiency in the long-run (e.g. the LEAN project).

Maintenance expenditure

2.13 Maintenance expenditure in Scotland in 2015-16 was £1m (1%) less than our PR13 determination. This is due to efficiencies partly offsetting higher levels of expenditure on reactive maintenance due to the impact of external events, building inspections, vegetation management and Tidy Railway than was assumed in our PR13 determination.

2.14 Expenditure was £7m (6.5%) higher than in 2014-15 largely because reactive maintenance expenditure was higher (£11m), offset by lower expenditure on the Tidy Railway and vegetation clearance programmes.

[52] The Network Operating Strategy consolidates local signalling boxes into a small number of regional operating centres.

Support costs

2.15 Expenditure on support costs was £2m (4.3%) more than our PR13 determination due to extra accommodation charges relating to the relocation of the route head office not foreseen at the time of the determination (£4m), offset by £2m more support costs recharged to capital expenditure projects than expected in PR13. Expenditure is £5m (11.4%) more than in 2014-15 largely due to increased accommodation charges (£2m) and because there were some one-off reductions in expenditure in 2014-15.

Traction electricity, industry costs and rates

2.16 Expenditure on traction electricity, industry costs and rates was £1m (2.0%) lower than our PR13 determination. This is because of lower Traction electricity costs due to lower market rates (£3m) partly offset by the increased cost of British Transport Police (see more detail in paragraph 1.16b in the Great Britain section)[53]. Expenditure is £3m (6.5%) higher than in 2014-15 because, although the market rates for Traction electricity costs were lower in 2015-16 than expected in the determination, they were higher than in 2014-15, which meant expenditure was £3m higher.

Schedule 4 & 8 payments

2.17 Total schedule 4 and 8 payments of £29m were £3m higher than our PR13 determination of £26m and £15m higher than in 2014-15 (£14m). These variances are explained below.

2.18 In 2015-16, Network Rail spent £2m (7.7%) more on schedule 4 payments to train operators than we assumed in our PR13 determination. The expenditure of £28m in 2015-16 was more than double the amount spent in 2014-15, reflecting the impact of the disruption caused by severe weather and, in particular, the incident at Lamington Viaduct and Network Rail's changed insurance arrangements, which led to higher schedule 4 costs.

2.19 Schedule 8 costs for unplanned delays and cancellations were £1m but our determination had a benchmarked level of delays that overall were cost neutral (i.e. no overall cost). This was due to delays caused by congestion and infrastructure failings. This was £2m lower than in 2014-15 which had been particularly affected by the additional traffic generated by the Commonwealth Games in Glasgow in 2014.

Renewals

2.20 In 2015-16, Network Rail spent £38m (11.0%) less on renewing the network compared to our PR13 determination. However, lower volumes have been delivered than expected (this work has been valued at £90m) and will be delivered at a later date. Therefore, the cost of the

[53] For Network Rail as a whole in Scotland, the lower traction electricity costs were largely offset by lower traction electricity income received from operators (see paragraph 2.28).

work that Network Rail has delivered was £52m higher than we assumed in our PR13 determination. For the control period to date, the cost of the work it has delivered was £96m higher.

2.21 Network Rail's renewals expenditure was £36m (13.2%) higher than in 2014-15 due mainly to extra delivery of track volumes across plain line refurbishment; switches and crossings; and additional slab track activity this year. For the control period to date it has underspent by £47m (7.5%) compared to our determination largely due to deferrals in signalling – see paragraph 2.23 below.

2.22 The gross underperformance of £52m in 2015-16 as shown in Table 2.2 below, was largely due to supply chain issues, delays in programmes, contractor performance and more work than expected to keep its assets in an appropriate condition. It has also not delivered its planned efficiency initiatives.

Table 2.2: Calculation of gross renewals underperformance in Scotland for 2015-16

£m, 2015-16 prices		Variance
PR13 determination	346	
Actual expenditure 2015-16	308	
Underspend before adjusting for net deferrals and other adjustments		**38**
Adjust for net deferrals to later periods and other adjustments		-90
Total gross underperformance[54]		**-52**

Source: Network Rail's regulatory financial statements

2.23 The main renewals expenditure variances were:

(a) a signalling underspend £72m, which was nearly all due to a £80m deferral of activity e.g. most of the NOS programme has been rescheduled to a later date. Underperformance of **£8m** has been recognised for efficiencies not achieved in 2015-16;

(b) a track overspend of £8m, there was an increase in plain line unit costs at the end of CP4, which meant that the starting unit rates in CP5 were above the rates assumed in our PR13 determination. This is one of the main reasons the underperformance was **£28m,** and there were also deferrals of £20m, largely because fewer volumes of switches and crossings were delivered than planned (although more than in 2014-15, see 2.21 above);

[54] The net underperformance on renewals in 2015-16 was £13m, in line with the 25% sharing mechanism. This is because in our calculation financial performance, Network Rail generally retains 25% of any out/underperformance of the renewals and enhancement costs. This is consistent with our RAB roll forward policy, as explained in chapter 4 of our CP5 Regulatory Accounting Guidelines

(c) a civils overspend £14m, this was mainly due to the damage to Lamington viaduct as a result of severe weather. This was recognised as financial underperformance. Additionally there were difficulties achieving the efficiency targets in the determination. Total underperformance was **£12m.** There was also £2m of work brought forward to 2015-16 in line with Network Rail's delivery plan; and

(d) there was a net overspend of £11m on other renewals. This is largely because our PR13 determination assumed that £11m less would need to be spent on as yet unspecified renewals during 2015-16 compared to Network Rail's PR13 strategic business plan (SBP) and that reduction of £11m has been included in other renewals instead of being allocated across the asset categories. In later years, this variance will reverse.

Enhancements

2.24 Total enhancements expenditure in Scotland in 2015-16 was £263m[55]. This included £254m of PR13 enhancement expenditure and £9m of non-PR13 enhancement expenditure.

2.25 Actual expenditure on PR13 enhancements in 2015-16 was £110m (30.2%) lower than our adjusted PR13 determination[56]. This was mainly due to deferrals and other adjustments of £158m offset by financial underperformance of £48m as explained below. The deferrals and other adjustments mainly related to the following projects:

(a) slower-than-expected progress on the Aberdeen to Inverness journey time improvement project **(£62m)** and the Highland Mainline project **(£34m)**. These projects are currently still in development due to complications regarding their scope whereas they were originally forecast to be under construction by now;

(b) **£18m** (58.1%) of lower expenditure on projects funded from the Scottish Ringfenced Funds. The bulk of the 2015-16 underspend has been on the Scottish Stations Fund and the Scottish Strategic Rail Freight Investment Fund. There has also been relatively low expenditure across all the ring-fenced funds in the control period to date (£23m of expenditure for the control period to date compared to the baseline of £64m) and we have some concerns regarding the slow start Network Rail has made in developing and delivering schemes that have been approved for these funds;

[55] We have not included £18m of expenditure on projects paid for directly by third parties as these projects are not added to the RAB or included in our assessment of financial performance.

[56] We have adjusted our assumptions for the changes made by the PR13 Enhancement Cost Adjustment Mechanism (ECAM) process.

(c) lower expenditure on the rolling programme of electrification (£11m). This comprises deferrals and other adjustments[57] of **£27m** and underperformance of £16m. For the control period to date there is an overspend of £6m (comprising £16m of financial underperformance partly offset by £10m of deferrals and other adjustments); and

(d) higher expenditure of £23m on the Edinburgh Glasgow Improvement Plan (EGIP) programme. This comprises deferrals and other adjustments of **£9m** because the forecast expenditure profile is different to that of the determination and underperformance of £32m. For the control period to date there is an £86m underspend on the EGIP programme (comprising £118m of deferrals and other adjustments as the profile of expenditure to date is different to that of the determination partly offset by £32m of gross financial underperformance).

Income

2.26 As shown in Table 2.1, total income in 2015-16 for Scotland was £666m, the same as we assumed in our PR13 determination and £17m (2.6%) higher than in 2014-15.

2.27 Government grant income was £7m (1.6%) higher than our determination and £17m (4.0%) higher than 2014-15. These are similar relative variances to Great Britain as a whole and for the same reasons (see paragraphs 1.35 and 1.36).

2.28 In 2015-16, total franchised track access income was in line with our determination. Income from traction electricity charges was lower due to lower market electricity prices (£4m) (relative to PR13), but this was offset by higher capacity charges of £2m due to more train services than we assumed in our determination, higher fixed charge income (£1m) and variable usage charges (£1m).

2.29 Compared to 2014-15, Network Rail recovered £4m more franchised track access income in 2015-16. This is mainly due to £4m more traction electricity income as a result of higher market prices (relative to 2014-15) and £2m more capacity charge income due to more train services, partially offset by £1m lower variable usage charges, due to a different pattern of train movement than initially assumed.

2.30 In 2015-16 as shown in Table 2.3 below, Other Single Till Income was lower than our PR13 determination by £7m (12.3%) and lower for the control period to date by £8m (7.1%). It was also £4m (7.4%) lower than in 2014-15.

[57] This includes the adjustment for the ECAM adjusted baseline. The way this adjustment affects the numbers in principle is described in the Appendix.

Table 2.3: Other Single Till Income, Scotland

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	Actual	PR13	Variance	Actual	PR13	Variance	Actual
	(A)	(B)	(A-B)	(D)	(E)	(D-E)	
Property Income	15	18	-3	31	37	-6	16
Freight Income	4	9	-5	12	17	-5	8
Stations Income	22	22	0	43	41	2	21
Facility and financing charges	1	1	0	2	2	0	1
Depot Income	8	7	1	16	14	2	8
Other Income	0	0	0	0	1	-1	0
Total Other Single Till Income	**50**	**57**	**-7**	**104**	**112**	**-8**	**54**

Source: Network Rail's regulatory financial statements

2.31 This is mainly because freight income was £5m lower than our PR13 assumption and was £4m lower than in 2014-15. This is mostly due to the fall in demand for coal freight trains (see paragraph 1.42).

2.32 Property income was £3m lower than our determination for 2015-16 and £6m lower for the control period to date because market demand was lower than anticipated and lower property rental income was received. Property income was also slightly lower than in 2014-15.

Financial performance and efficiency

2.33 In Scotland the financial underperformance in 2015-16 was £51m as shown in Table 2.4. This was mostly due to:

(a) £52m gross underperformance in renewals as explained in paragraphs 2.22 and 2.23. Net underperformance was **£13m** (£52m less £39m for the 25% sharing mechanism adjustment);

(b) £48m gross underperformance in enhancements, net underperformance was **£12m** (£48m less £36m in line with the 25% sharing mechanism). The gross underperformance was £32m on the EGIP programme and £16m for the rolling programme of electrification as explained below;

(c) **£8m** underperformance in operations, partly due to higher CP4 exit rates and lower savings from the NOS scheme, as costs have risen when Network Rail's forecast was that they would drop;

(d) **£7m** higher schedule 4 (planned disruption) costs relating to the closure of the Lamington viaduct;

(e) **£5m** in support costs, partly due to higher than expected costs for the British Transport Police; and

(f) **£2m** in maintenance due to additional expenditure on Tidy Railway, vegetation management and higher than inflation pay awards.

Financial performance

Table 2.4: Financial performance for Scotland[58]

£m 2015-16 prices	Actual	Adjusted PR13	Var b/(w)	FPM neutral/ Timing b/(w)	(Under) / out perfor-mance	Cumulative (under)/out perfor-mance
Income	647	642	5	8	**-3**	-
Schedule 4	-28	-26	-2	-5	**-7**	-
Schedule 8	-1	-	-1	-	**-1**	-3
Operations	-49	-41	-8	-	**-8**	-12
Support[59]	-78	-73	-5	-	**-5**	-3
Maintenance	-114	-115	1	-3	**-2**	-5
Capex - Renewals	-308	-346	38	-90	**-52**	-96
Capex adjustment - Renewals					**39**	72
Renewals net of Adjustment					**-13**	-24
Capex - Enhancements	-254	-364	110	-158	**-48**	-48
Capex- Non-PR13 Enhancements	-9	-	-9	-9	**-**	-
Capex adjustment - Enhancements					**36**	36
Enhancements net of Adjustment					**-12**	-12
Capex - Net Total					**-25**	-36
Financial performance before adjustment for under-delivery of outputs					**-51**	**-59**
Less: Under-delivery of train performance requirements (PPM)					**-**	-4
Less: Under-delivery of train performance requirements (CaSL)					**-**	-
Less: Missed Enhancement milestones					**-**	-1
ORR adjustments to Network Rail's reported values for the under-deliverability of outputs					0	0
Total financial performance (FPM)					**-51**	**-64**

Source: Network Rail's regulatory financial statements

Note: Rows and columns may not sum due to rounding

2.34 Whilst the financial underperformance in Scotland was broadly for the same reasons as in Great Britain, in relative terms, the level of financial underperformance in Scotland was not as

[58] The financial performance and efficiency measures are described in more detail at: http://orr.gov.uk/publications/guidance/regulatory-accounts. The financial performance measure encompasses most of Network Rail's activities whilst the efficiency measure focuses on the core activities that Network Rail undertakes to operate, maintain and renew the rail network.

[59] Includes Traction electricity, industry costs, business rates and reporter's fees.

significant as for Great Britain as a whole. This was because the underperformance on maintenance, renewals and enhancements was proportionately smaller.

Efficiency

2.35 In Scotland, Network Rail reported an efficiency improvement[60] of 1.7% on OSMR for the control period to date compared to our PR13 determination of 10.0%. This combines 3.5% efficiency gains for operations, support and maintenance and 0.4% for renewals.

2.36 By the end of CP5 Network Rail expects to achieve efficiency of 6.7% on OSMR (i.e. it will exit CP5 6.7% more efficient than it started CP5). This compares favourably to the position for Great Britain overall but is lower than our 19.5% assumption.

Borrowing

2.37 Following the company's classification to the public sector by the Office of National Statistics (ONS), Network Rail agreed to borrow from the Department for Transport (DfT) instead of issuing bonds. The amount of new borrowing available from DfT is limited to £3.3bn across CP5 for Scotland[61].

2.38 It is planning to spend more in CP5 than it expected at the time it agreed the borrowing limit for Scotland. This means there is pressure on its borrowing facility with DfT.

2.39 Network Rail's latest business plan for Scotland as at 31 March 2016, includes financial headroom of £0.3bn. By headroom we mean that Network Rail is forecasting that it will not need to use that amount of the borrowing facility. The main financial risks to this forecast include the costs of renewals and enhancements (as noted above), delivery of efficiency initiatives and interest rate movements.

2.40 We do not cover annual borrowing in this section because there is not a separate annual notified borrowing limit for Scotland in 2015-16.

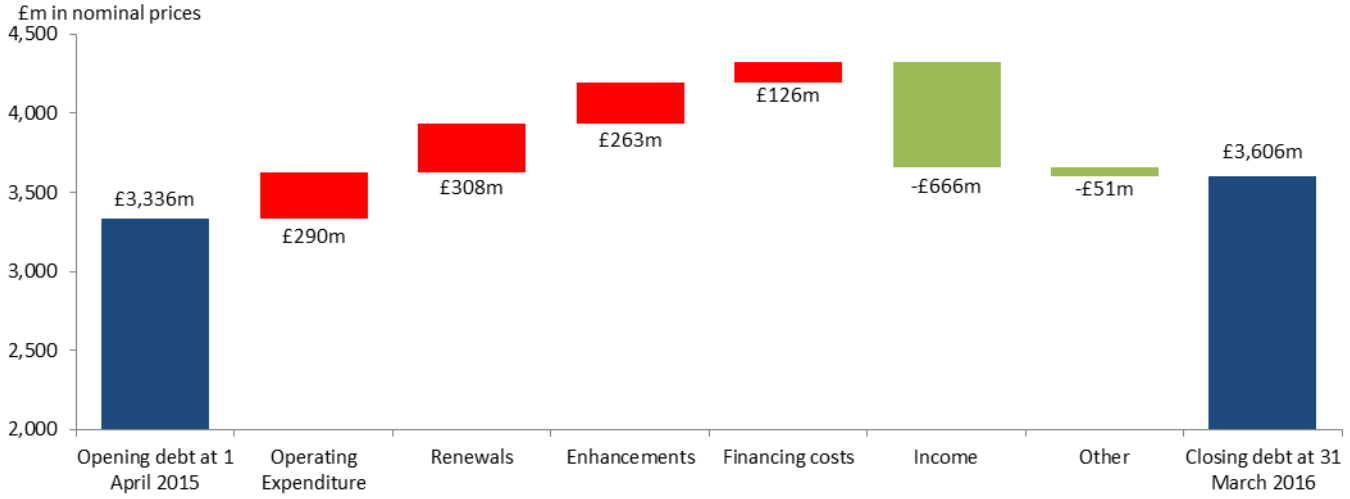
Net debt

2.41 Network Rail's debt for Scotland increased by £270m from £3,336m to £3,606m in 2015-16 (debt is net of cash balances). The reasons for this are summarised in Figure 2.2 and the variances are for the same reasons as discussed in the income and expenditure section.

[60] Our measure of efficiency is a simple measure of the change over time in support, operations, maintenance and renewals expenditure. This measure compares actual expenditure in 2015-16 with actual expenditure in 2013-14 (the last year of control period 4) adjusted for the level of activity undertaken and other issues.

[61] Note the borrowing limit includes the borrowing for refinancing existing bonds.

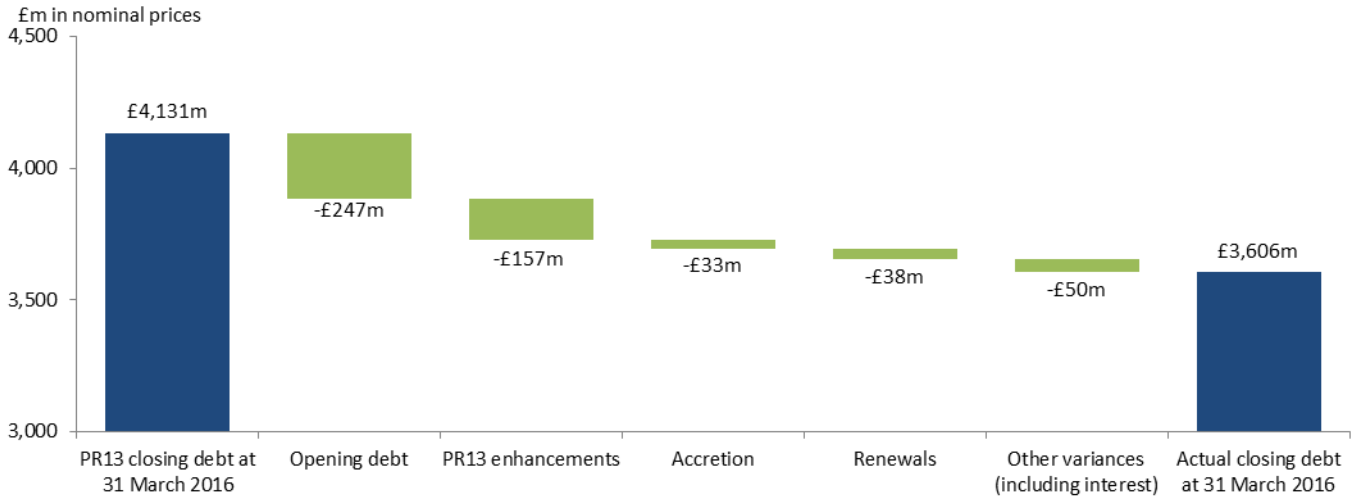
Figure 2.2: Movement in debt in Scotland in 2015-16



Source: Network Rail's regulatory financial statements

2.42 Compared to our PR13 determination of £4,131m, Network Rail's actual closing debt in Scotland was £3,606m, £525m lower than we assumed. The reasons for this are summarised in Figure 2.3.

Figure 2.3: Closing debt in Scotland in 2015-16 compared to PR13



Source: Network Rail's regulatory financial statements

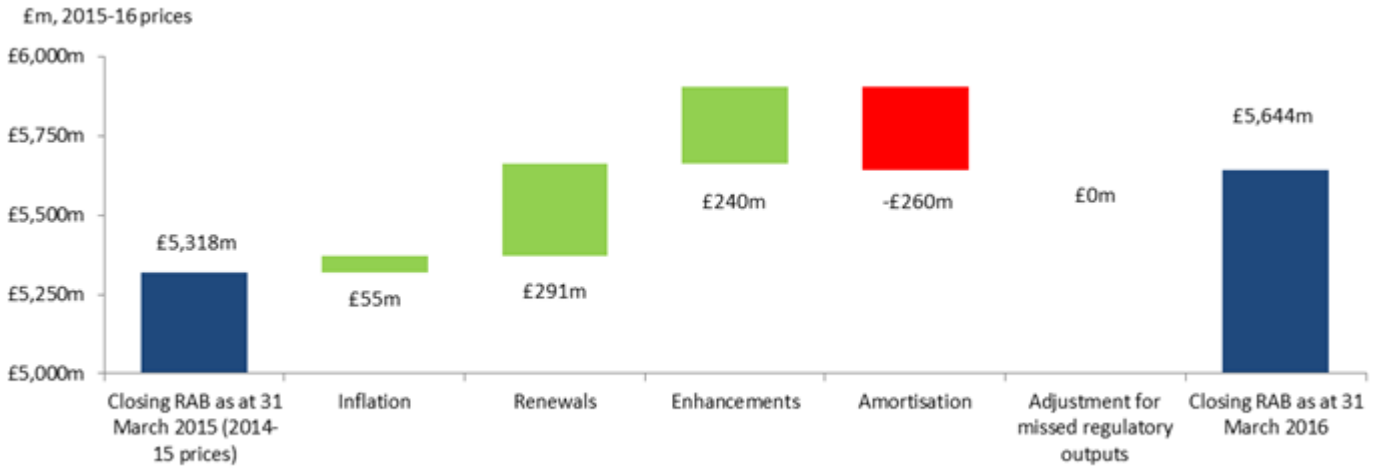
2.43 The variances in Figure 2.3 are mainly due to a £247m lower than expected opening debt for the year largely due to lower enhancements in 2014-15 than we assumed in our determination and £157m lower enhancement expenditure in 2015-16 as explained above. The £157m variance on enhancements is calculated from the baseline in our determination and has not been adjusted for agreed changes in funding, e.g. through ECAM or rollovers from CP4, so is different to the variance in Table 2.1[62].

[62] We have not adjusted the debt baselines for these changes as Network Rail is generally not receiving any additional cash for them in CP5.

Regulatory Asset Base

2.44 As shown in Figure 2.4, the Regulatory Asset Base (RAB) for Scotland increased by £326m from £5,318m[63] to £5,644m in 2015-16. This was made up of an increase of £55m due to inflation indexation, RAB additions of £291m for renewals and £240m for enhancements, and a reduction of £260m for the amortisation charge.

Figure 2.4: RAB movement in 2015-16 in Scotland



Source: Network Rail's regulatory financial statements

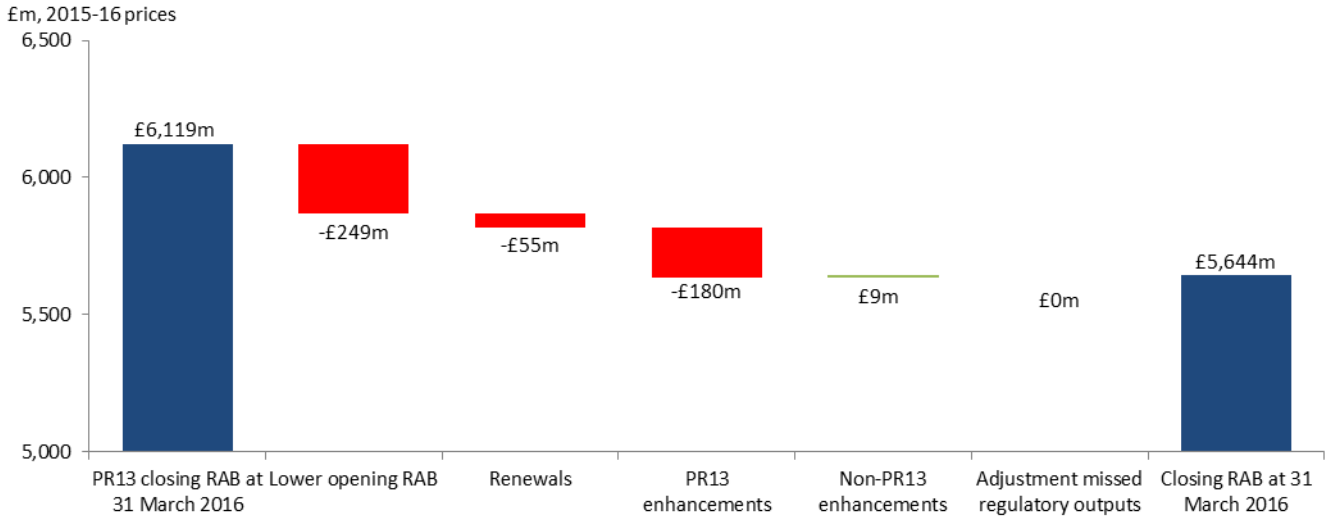
2.45 The reasons for the difference of £475m between the actual closing RAB at 31 March 2016 of £5,644m and our determination assumption of £6,119m are shown in Figure 2.5.

2.46 The main reason for the difference between the actual RAB and our PR13 assumption is that in PR13 we assumed that by the beginning of 2015-16 the RAB would have increased by £569m, £249m more than the actual increase of £320m. This is mostly due to lower enhancement expenditure in 2014-15 than we assumed, notably in the EGIP programme. We had also assumed higher capital investment towards the end of CP4.

2.47 The difference is also due to £55m lower additions to the RAB for renewals expenditure and £180m lower additions to the RAB for PR13 enhancements expenditure. These variances are explained below.

[63] The number for the value of the RAB at the end of 2014-15 included in Table 2.1 includes the inflation adjustment shown in Figure 2.4, i.e. it is £5,318m + £55m = £5,373m.

Figure 2.5: Actual RAB at the end of 2015-16 compared to PR13 in Scotland



Source: Network Rail's regulatory financial statements

Renewals adjustments to the RAB

2.48 The largest reason for the lower renewals RAB addition of £55m was a £94m deferral of expenditure to later in the control period because Network Rail has profiled its expenditure in a different way to that assumed in PR13.

2.49 This was partly offset by Network Rail spending £52m more than assumed in PR13 on the renewals volumes it undertook in 2015-16, largely driven by £28m of additional expenditure on track renewals with significantly higher costs (e.g. as a result of higher CP4 exit rates) and lower efficiencies than expected and £12m more expenditure on civils to repair the damage to the Lamington viaduct. As the overspend of £52m was not 'manifestly inefficient', 75% of it (£39m) was added to the RAB.

Enhancement adjustments to the RAB

2.50 The main reason for the enhancements expenditure being £180m below our PR13 assumption is that Network Rail has re-profiled expenditure on projects including EGIP, and the rolling programme of electrification. The adjustment for deferrals of PR13 enhancements was £157m.

2.51 The deferral was partly offset by £48m of gross financial underperformance on EGIP (£32m) and the rolling programme of electrification (£16m) that has been recognised by Network Rail in 2015-16 as the total project costs over the whole life of the project have increased. In total £36m (75%) of this overspend has been added to the RAB in accordance with the RAB roll forward policy.

2.52 The main reason for the higher costs on these projects is that on both projects there was a late identification of additional electrification scope required to be compliant with safety

legislation; in particular increases to the height of bridge parapets and wire heights through stations relative to the specification Network Rail used, as well as additional screening for lineside infrastructure. In some cases, this has required both re-design and re-work to completed structures. In addition for EGIP the underperformance has been impacted by a reassessment of contractor costs and higher than expected tenders from suppliers.

2.53 There was also a £48m reduction to the PR13 baseline as a result of ECAM adjustments.

2.54 There was also £9m of expenditure on non-PR13 enhancements.

Financial indicators

2.55 The AICR ratio for 2015-16 is 0.07 higher (i.e. better) than the assumption in our determination because of lower financing costs partly due to underspends on renewals and enhancements. It also decreased by 0.14 compared to 2014-15. This is mainly because Network Rail incurred additional Operating expenditure.

2.56 The net debt/RAB ratio in 2015-16 is 1.9 percentage points lower than our PR13 assumption. This is mainly because Network Rail has spent less on finance costs for Scotland than we assumed in our determination in CP5.

2.57 The net debt/RAB ratio increased by 1.2 percentage points between 2014-15 and 2015-16 to 63.9%. This is mainly due to £254m of enhancements in 2014-15 that are debt-funded as well as overspends elsewhere in the business not funded in our PR13 determination.

3. Wales

Introduction

3.1 This chapter summarises Network Rail's actual expenditure, income, financial performance and efficiency in Wales[64], including variances compared to our PR13 determination and to 2014-15. The chapter also covers the Regulatory Asset Base, net debt and financial indicators. We do not cover borrowing because there is no separate borrowing limit for Wales. Also, we do not cover financing costs in this chapter because Network Rail's interest rates on its debt are the same in Great Britain and Wales.

3.2 We consider Network Rail's financial performance compared to our PR13 determination in several ways, starting with a straightforward comparison of income and expenditure in 2015-16 and for the control period to date (i.e. the first two years of CP5 – 2014-15 and 2015-16). We also compare actual income and expenditure in 2015-16 to 2014-15.

3.3 We also carry out a more detailed analysis of regulatory financial performance which covers most areas of Network Rail's expenditure and we make adjustments for work not done (deferrals of work) and missed outputs to give an overview of how much it is costing to deliver its outputs compared to our PR13 determination. This means that we identify the volumes actually delivered in 2015-16, and so far in the control period, and measure how much Network Rail has spent in delivering these volumes against the money we had expected would be spent on these volumes in our determination.

3.4 We additionally look at the progress Network Rail is making against the efficiency assumptions that we set in our determination and the forecast for the end of the control period. This efficiency analysis covers Network Rail's expenditure on operations, support, maintenance and renewals.

3.5 In our 2015-16 Monitor the main comparisons of Network Rail's financial performance were against Network Rail's latest budget for 2015-16 not against our PR13 determination.

3.6 In our analysis, we frequently refer to "under/over spends" and "out/under performance". By "under/over spends" we mean a simple variance between two numbers, so that if Network Rail has spent more than our PR13 assumption that would be described as an overspend. We then analyse that overspend and decide how much of it is made up of neutral issues, such as when there is a timing difference where Network Rail has moved work (and hence expenditure) from one year to another. Adjusting for these neutral issues, we understand how

[64] This section of our assessment covers Network Rail's Wales Route, which does not exactly reflect the border between England and Wales.

much of the under or overspend is because it has not performed at the level of efficiency that we expected – in simple terms this is called “out or under performance”.

3.7 In this document, we also report on some of the challenges Network Rail is facing. These issues have implications for Network Rail's plan for CP5, particularly as it is spending more money in CP5 than it originally expected at the time it agreed the borrowing limit and it has constraints on its borrowing with a fixed nominal borrowing limit. In view of these challenges, Network Rail has updated its plans for CP5.

3.8 We will comment on Network Rail’s financial performance under the route level efficiency benefit sharing (REBS) mechanism in a letter to be published in Autumn 2016.

Expenditure

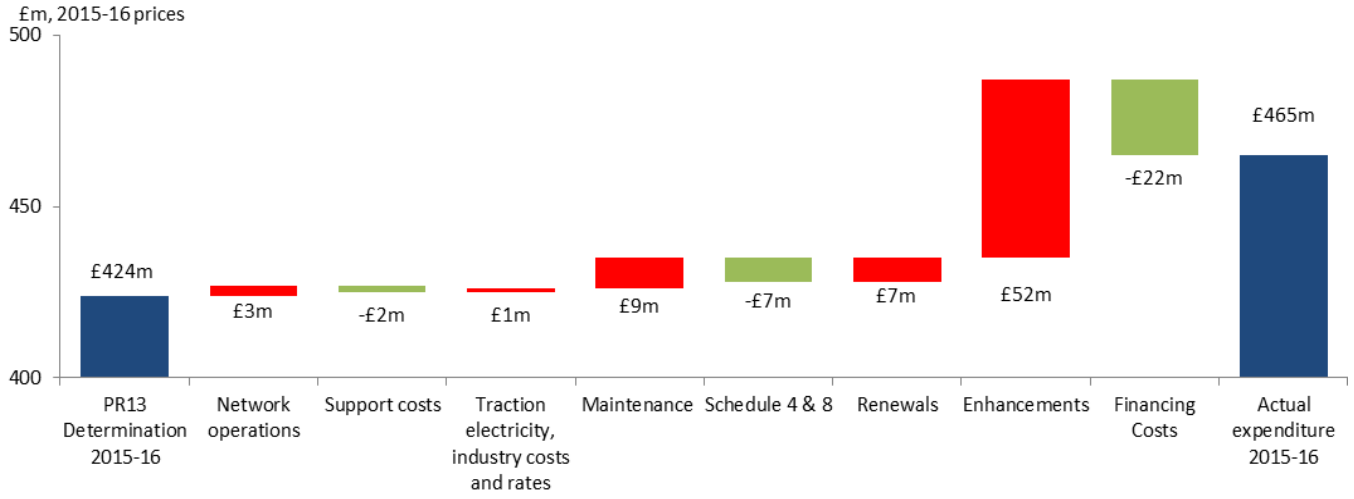
3.9 Expenditure in Wales in 2015-16 compared to our PR13 assumptions and for the first two years of the control period is summarised in Table 3.1 and Figure 3.1 and the key variances are explained below. Network Rail's total expenditure in Wales in 2015-16 was £465m. This was £41m (9.7%) higher than we assumed in our PR13 determination.

Table 3.1: Summary of key financial information for Wales

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	**(B)**	**(B-A)**	**(D)**	**(E)**	**(E-D)**	
Operating Expenditure							
Signaller expenditure	22	19	-3	43	37	-6	21
Other Network Operations expenditure	8	8	0	15	16	1	7
Total Network Operations expenditure	**30**	**27**	**-3**	**58**	**53**	**-5**	**28**
Support costs	18	20	2	38	47	9	20
Traction electricity, industry costs and rates	13	12	-1	26	21	-5	13
Network maintenance	72	63	-9	139	128	-11	67
Total Schedule 4 & Schedule 8 compensation payments	7	14	7	9	31	22	2
Total Operating Expenditure	**140**	**136**	**-4**	**270**	**280**	**10**	**130**
Capital Expenditure							
Renewals	172	165	-7	307	303	-4	135
PR13 Enhancements	82	31	-51	122	131	9	40
Non-PR13 Enhancements	1	0	-1	5	0	-5	4
Total Enhancements	**83**	**31**	**-52**	**127**	**131**	**4**	**44**
Total Capital Expenditure	**255**	**196**	**-59**	**434**	**434**	**0**	**179**
Financing costs	**70**	**92**	**22**	**146**	**182**	**36**	**76**
Total Expenditure	**465**	**424**	**-41**	**850**	**896**	**46**	**385**
Income							
	(A)	(B)	(A-B)	(D)	(E)	(D-E)	
Franchised track access income	42	41	1	97	94	3	55
Other single till income	20	18	2	38	38	0	18
Government grant income	268	264	4	532	527	5	264
Total Income	**330**	**323**	**7**	**667**	**659**	**8**	**337**
Finance							
	(A)	(B)	(B-A)	(D)	(E)	(E-D)	
RAB	2,872	2,929	57	n/a	n/a	n/a	2,772
Net debt	1,954	2,088	134	n/a	n/a	n/a	1,847
Adjusted interest cover ratio	1.07	1.03	-0.04	n/a	n/a	n/a	1.24
Gearing (net debt/RAB)[65]	68.1%	69.4%	1.3%	n/a	n/a	n/a	67.3%

[65] The PR13 numbers in Table 3.1 have been updated for actual inflation including, for consistency, net debt and RAB. But adjusting the PR13 gearing ratio for actual inflation would not be transparent as our gearing assumptions were in nominal prices (including inflation assumptions), so in this table we have not adjusted our PR13 gearing assumption for actual inflation. This is an issue because actual inflation has been different to our PR13 assumptions.

Figure 3.1: Summary of expenditure variances for Wales compared with PR13



Source: Network Rail's regulatory financial statements and our own analysis

Note: A negative sign in the graph above denotes reduced expenditure compared to our determination

Network operations expenditure

3.10 Our assessment shows that compared to the assumptions that we made in our PR13 determination, Network Rail spent £3m (11.1%) more on network operations. This compares to the 23.4% increase across Great Britain but is broadly for the same reasons: higher signaller staffing costs because of higher expenditure at the end of CP4 than we assumed, that continued into CP5, and delays in implementing efficiency initiatives such as the NOS scheme. Expenditure is £2m (7.1%) higher than in 2014-15, due to pay awards being above inflation and additional expenditure on projects aimed at improving performance and efficiency in the long-run (e.g. LEAN).

Maintenance expenditure

3.11 Maintenance expenditure in Wales in 2015-16 was £9m (14.3%) more than our PR13 determination. This is due to higher levels of expenditure in reactive maintenance as a result of the impact of external events, building inspections, vegetation management and Tidy Railway than was assumed in PR13. In track there were additional costs following Network Rail's decision to charge the activities of the National Delivery Services to the routes.

3.12 Expenditure was £5m (7.5%) higher than in 2014-15 largely because reactive maintenance expenditure was higher and there was additional expenditure on building inspections to ensure asset condition was maintained and to cover changes in commercial arrangements.

Support costs

3.13 Expenditure on support costs of £18m was £2m (10.0%) lower than our PR13 determination partly due to more support expenditure being allocated/recharged to capital expenditure projects and lower reorganisation costs as explained in the Great Britain section (paragraphs 1.10 and 1.12). Support costs were £2m (10.0%) lower than in 2014-15 because of improved efficiency.

Traction electricity, industry costs and rates

3.14 In Wales, expenditure was £1m (8.3%) more than our PR13 determination. This is due to the increased cost of British Transport Police (see more detail in paragraph 1.16 in the Great Britain section). Expenditure is approximately the same as in 2014-15.

Schedule 4 & 8 payments

3.15 Total schedule 4 and 8 payments of £7m were £7m lower than our PR13 determination of £14m but £5m higher than in 2014-15 (£2m). These variances are explained below.

3.16 In 2015-16, Network Rail spent £8m (57.1%) less on schedule 4 payments to train operators than we assumed in our PR13 determination due to more efficient planning of possessions and from deferring renewal activity to later in the control period. This expenditure of £6m in 2015-16 was similar to the amount spent in 2014-15.

3.17 Schedule 8 costs, for unplanned delays and cancellations, was £1m but our determination had a benchmarked level of delays that overall were cost neutral (i.e. no overall cost). This compares to net income of £4m in 2014-15 when there were fewer delays and cancellations than in our determination. The better than expected train performance in 2014-15, especially on the long-distance routes, did not continue into 2015-16.

Renewals

3.18 In 2015-16, Network Rail spent £7m (4.2%) more on renewing the network compared to our determination. However, lower volumes have been delivered than expected (this work has been valued at £89m) and will be delivered at a later date. Therefore, the cost of the work that Network Rail has delivered was £96m higher than we assumed in our PR13 determination. For the control period to date, the cost of the work it has delivered was £152m higher.

3.19 Network Rail's renewals expenditure was £37m (27.4%) higher than in 2014-15 due mainly to extra delivery of track volumes. This includes a partial catch up on 2014-15 when Network Rail's expenditure was lower than our PR13 determination. For the control period to date there was an overspend of £4m (1.3%).

Table 3.2: Calculation of gross renewals underperformance in Wales for 2015-16

£m, 2015-16 prices		Variance
PR13 determination	165	
Actual expenditure 2015-16	172	
Overspend before adjusting for net deferrals and other adjustments		**- 7**
Adjust for net deferrals to later periods and other adjustments		-89
Total gross underperformance[66]		**-96**

Source: Network Rail's regulatory financial statements

3.20 The significant gross underperformance of £96m in 2015-16, was as with Great Britain as a whole, largely due to supply chain issues, delays in programmes, contractor performance and more work than expected to keep its assets in an appropriate condition. It has also not delivered its planned efficiency initiatives. The increase in the cost of track work at the end of CP4 has meant that starting costs in CP5 were already higher than assumed in our determination.

3.21 The main renewals expenditure variances were:

(a) a track overspend of £24m. There was an increase in the cost of track renewals at the end of CP4, which meant that the starting unit rates in CP5 were above the rates assumed in our PR13 determination. In addition, the unit rates for fencing were higher than in our determination. These were the main reasons the total underperformance was **£44m**. There were also deferrals of £20m, largely due to delays and design changes on the Cardiff area re-signalling project which has now been delayed by two years;

(b) a signalling underspend of £15m. The total underperformance was **£40m** because of additional costs arising from programme delays. There were also deferrals of £55m, also largely due to delays and design changes on the Cardiff area re-signalling project;

(c) a civils underspend of £2m. The total underperformance was £16m as the efficiency assumptions in our PR13 determination have not been met and there were additional costs of repairing structures and earthworks arising from storm damage. There were also continuing additional underbridge costs on River Teme and Severn viaduct jobs. There were also deferrals of £18m; and

(d) a buildings underspend of **£4m** due to a more effective implementation of intervention strategies and outperformance has been recognised for this amount.

[66] The net underperformance on renewals in 2015-16 was £24m, in line with the 25% sharing mechanism. This is because in our calculation financial performance, Network Rail generally retains 25% of any out/underperformance of the renewals and enhancement costs. This is consistent with our RAB roll forward policy, as explained in chapter 4 of our CP5 Regulatory Accounting Guidelines

Enhancements

3.22 Total enhancements expenditure for Wales in 2015-16 was £83m[67]. This includes £82m of PR13 enhancement expenditure and £1m of non-PR13 enhancement expenditure.

3.23 Actual expenditure on PR13 enhancements in 2015-16 was £51m (164.5%) higher than our adjusted PR13 determination. This was mainly due to £89m of adjustments following the Hendy review (see example in the Appendix), and £9m of deferrals. The £9m cumulative underspend against the adjusted determination is made up of timing differences, mostly an £8m underspend on the Great Western electrification project.

Income

3.24 As shown in Table 3.1, total income in 2015-16 for Wales was £330m, £7m (2.2%) higher than we assumed in our PR13 determination but £7m (2.1%) lower than in 2014-15.

3.25 Government grant income was £4m (1.5%) higher than our determination and £4m (1.5%) higher than in 2014-15. This is similar to Great Britain as a whole, and for the same reasons (see paragraphs 1.35 and 1.36).

3.26 Franchised track access income was £42m in 2015-16, £1m higher than our PR13 assumption of £41m, and a decrease of £13m compared to 2014-15. Compared to our PR13 assumptions, fixed track access income was £1m higher because of £1m additional Capacity Charge income, driven by more train movements than anticipated in PR13.

3.27 The £13m decrease in fixed track access income compared to 2014-15 was caused by a £6m reduction in Fixed Charge income, and a £7m reduction in Schedule 4 net income. The £6m reduction in Fixed Charge income was caused by changes in the balance between government grant and fixed charge. The £7m reduction in Schedule 4 net income is caused by different expected patterns of track possessions in 2015-16 compared to 2014-15.

[67] We have not included £52m of expenditure on projects paid for directly by third parties including by the Welsh Government as these projects are not added to the RAB or included in our assessment of financial performance.

Table 3.3: Other Single Till Income, Wales

	2015-16			CP5 Cumulative			2014-15
£m, 2015-16 prices	**Actual**	**PR13**	**Variance**	**Actual**	**PR13**	**Variance**	**Actual**
	(A)	(B)	(A-B)	(D)	(E)	(D-E)	
Property Income	2	0	2	3	0	3	1
Freight Income	5	4	1	10	7	3	5
Open Access Income	0	0	0	0	0	0	0
Stations Income	10	10	0	20	20	0	10
Facility and financing charges	1	1	0	1	3	-2	0
Depot Income	2	2	0	4	5	-1	2
Other Income	0	1	-1	0	3	-3	0
Total Other Single Till Income	**20**	**18**	**2**	**38**	**38**	**0**	**18**

Source: Network Rail's regulatory financial statements

3.28 Other Single Till Income was higher than our PR13 determination for 2015-16 by £2m (11.1%) and the same as our PR13 determination for the control period to date. Other Single Till Income was £2m (11.1%) higher than in 2014-15.

3.29 The largest variance compared to our determination for 2015-16 is in property income, which is (£2m) higher and also £1m higher than in 2014-15. This is due to additional rental income.

Financial performance

3.30 In Wales the financial underperformance in 2015-16 was £18m as shown in Table 3.4. This was mostly due to net underperformance on renewals of **£24m** (£96m less £72m for the 25% sharing mechanism - as explained in paragraphs 3.18 and 3.19.). This was offset by **£5m** lower schedule 4 (planned disruption) costs due to the efficient planning of possession activities.

Financial performance

Table 3.4: Financial performance measure for Wales[68]

£m 2015-16 prices	Actual	Adjusted PR13	Var b/(w)	FPM neutral/ Timing b/(w)	(Under)/ out perfor-mance	Cumulative (under)/out perfor mance
Income	329	323	6	-3	**3**	4
Schedule 4	-6	-14	8	-3	**5**	10
Schedule 8	-1	-	-1	-	**-1**	3
Operations	-30	-27	-3	-	**-3**	-5
Support[69]	-31	-32	1	-	**1**	4
Maintenance	-72	-63	-9	11	**2**	-2
Capex – Renewals	-172	-165	-7	-89	**-96**	-152
Capex adjustment - Renewals					**72**	114
Renewals net of Adjustment					**-24**	-38
Capex - Enhancements	-82	-31	-51	-51	**-**	-
Capex- Non-PR13 Enhancements	-1	-	-1	-1	**-**	-
Capex adjustment - Enhancements					**-**	-
Enhancements net of Adjustment					**-**	-
Capex - Net Total					**-24**	-38
Financial performance measure before adjustment for under-delivery of outputs					**-17**	**-24**
Less: Under-delivery of train performance requirements (PPM)					**-1**	-2
Less: Under-delivery of train performance requirements (CaSL)					**-**	-
Less: Missed Enhancement milestones					**-**	-1
ORR adjustments to Network Rail's reported values for the under-deliverability of outputs					-	2
Total financial performance measure (FPM)					**-18**	**-25**

Source: Network Rail's regulatory financial statements

Note: Rows and columns may not sum due to rounding

3.31 Financial underperformance in Wales is mainly due to underperformance on renewals, which is proportionately higher than that of Great Britain as a whole. This reflected the significant delays to the Cardiff area re-signalling project, which increased programme expenditure. Overall, financial underperformance is proportionately less than for Great Britain as a whole mainly because there is no underperformance on enhancements following the Hendy review.

[68] The financial performance and efficiency measures are described in more detail at: http://orr.gov.uk/publications/guidance/regulatory-accounts. The financial performance measure encompasses most of Network Rail's activities whilst the efficiency measure focuses on the core activities that Network Rail undertakes to operate, maintain and renew the rail network.

[69] Includes Traction electricity, industry costs, business rates and reporter's fees.

Efficiency

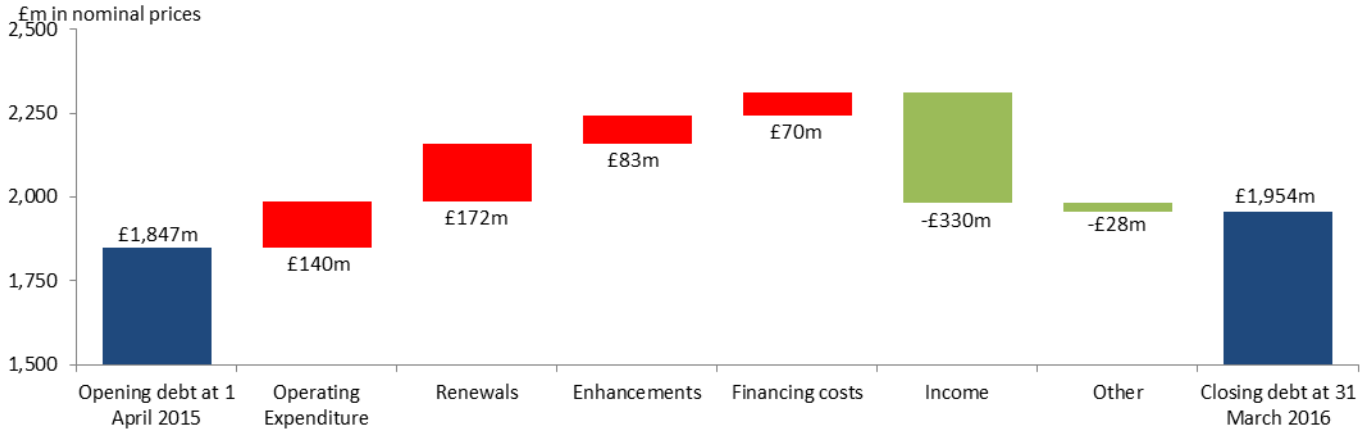
3.32 In Wales, Network Rail has reported a decline in efficiency[70] of -28.9% on OSMR (Great Britain -8.0%) for the control period to date compared to our PR13 determination of 10.1% for Great Britain as a whole[71]. This combines 9.5% efficiency gains for operations, support and maintenance (Great Britain 5.4%) but -84.2% decline in efficiency for renewals (Great Britain -20.5%) due mainly to the Cardiff area re-signalling issues described above.

3.33 By the end of CP5 Network Rail expects to achieve efficiency of 2.5% on OSMR (i.e. it will exit CP5 2.5% more efficient than it started CP5). This is lower than our 19.5% assumption.

Net debt

3.34 Network Rail's debt for Wales increased by £107m from £1,847m to £1,954m in 2015-16 (debt is net of cash balances). The reasons for this are summarised in Figure 3.2 and the variances are for the same reasons as discussed in the income and expenditure sections.

Figure 3.2: Movement in debt in Wales in 2015-16



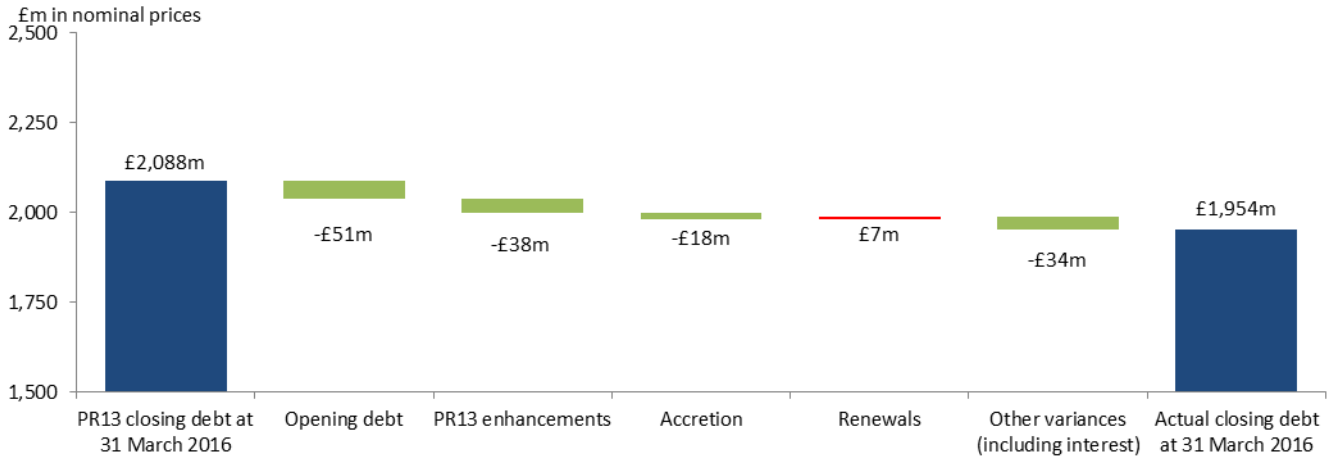
Source: Network Rail's regulatory financial statements

3.35 Compared to our PR13 determination of £2,088m, Network Rail's actual closing debt in Wales was £1,954m, £134m lower than we assumed. The reasons for this difference are summarised in Figure 3.3.

[70] Our measure of efficiency is a simple measure of the change over time in support, operations, maintenance and renewals expenditure. This measure compares actual expenditure in 2015-16 with actual expenditure in 2013-14 (the last year of control period 4) adjusted for the level of activity undertaken and other issues.

[71] In PR13, there was no separate determination of efficiency in Wales.

Figure 3.3: Closing debt in Wales in 2015-16 compared to PR13



Source: Network Rail's regulatory financial statements

3.36 These variances are mainly driven by £51m lower than expected opening debt for the year largely due to lower enhancements in 2014-15 than we assumed in our determination[72], and £38m lower enhancement expenditure in 2015-16. The £38m variance on enhancements is calculated from the baseline in our determination and has not been adjusted for agreed changes in funding, e.g. for the Hendy review or rollovers from CP4, so is different to the variance in Table 3.1[73].

Regulatory Asset Base

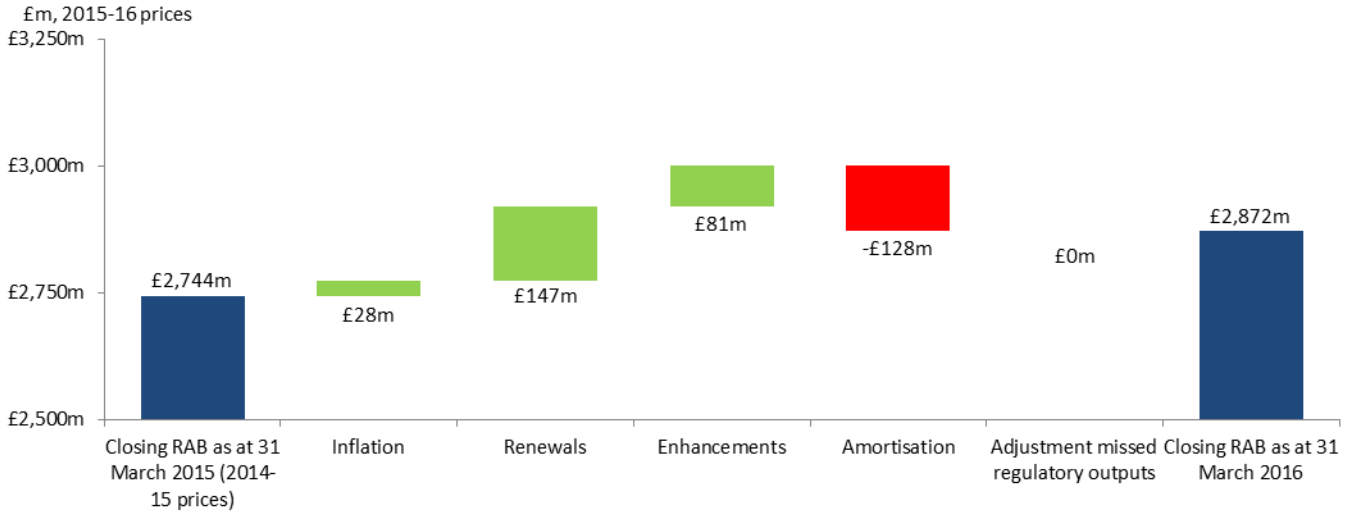
3.37 As shown in Figure 3.4, the regulatory asset base (RAB) for Wales increased by £128m from £2,744m[74] to £2,872m in 2015-16. This was made up of an increase of £28m due to inflation indexation, RAB additions of £147m for renewals and £81m for enhancements and a reduction of £128m for the amortisation charge.

[72] See 2014-15 annual efficiency and finance assessment for further details.

[73] We have not adjusted the net debt baselines for these changes as Network Rail is generally not receiving any additional cash for them in CP5.

[74] The number for the value of the RAB at the end of 2014-15 included in Table 3.1 includes the inflation adjustment shown in Figure 3.4, i.e. it is £2,744m + £28m = £2,772m.

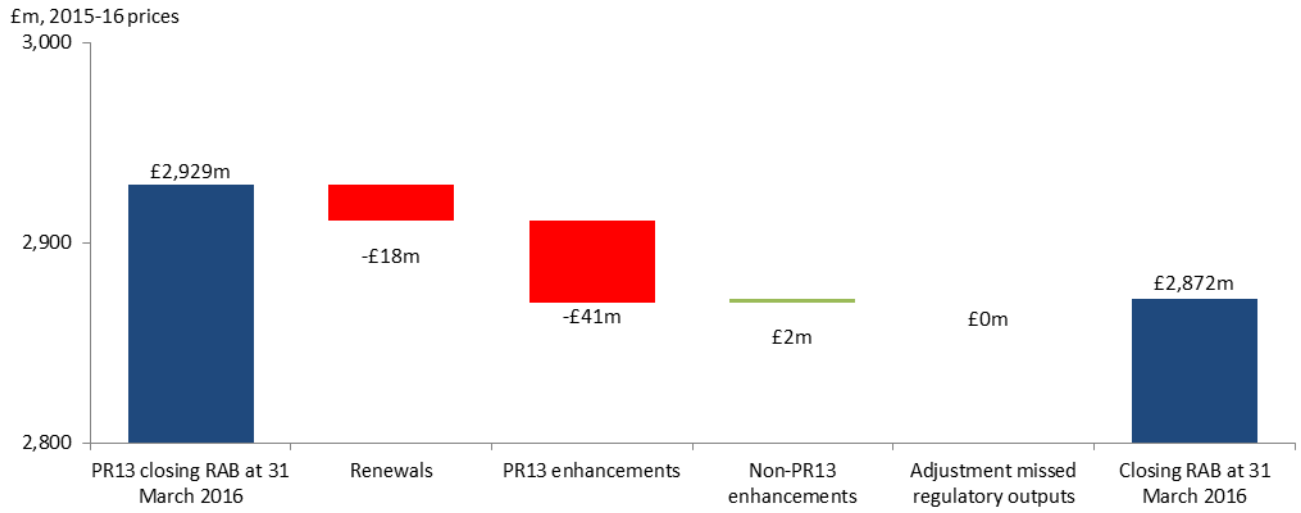
Figure 3.4: RAB movement in 2015-16 in Wales



Source: Network Rail's regulatory financial statements

3.38 The main reasons for the difference of £57m between the actual closing RAB at 31 March 2016 of £2,872m and our PR13 determination assumption of £2,929m is that there has been lower enhancement expenditure in 2014-15 than we assumed (£41m). There was also lower renewals expenditure (£18m) due to deferrals of activity to future years partly offset by some overspends. This is shown in Figure 3.5.

Figure 3.5: Actual RAB at the end of 2015-16 compared to PR13 in Wales



Source: Network Rail's regulatory financial statements

Renewals adjustments to the RAB

3.39 The main reason for the lower renewals RAB addition of £18m was a £89m deferral of expenditure to later in the control period because Network Rail has profiled its expenditure in a different way to that assumed in PR13.

3.40 This was partly offset by Network Rail spending £96m more than assumed in PR13 on the renewals volumes it undertook in 2015-16 as described above. As the overspend of £96m was not 'manifestly inefficient', 75% of it (£72m) was added to the RAB.

Enhancement adjustments to the RAB

3.41 In this section we explain the £41m lower expenditure on PR13 enhancements shown in Figure 3.5. The variance of £41m is largely due to the effects of the changes to the Great Western Electrification baseline following the Hendy review.

Financial indicators

3.42 The AICR ratio is 0.04 higher than our determination assumption largely due to lower finance costs.

3.43 It also decreased by 0.17 compared to 2014-15. This is because Network Rail incurred additional Operating expenditure in 2015-16.

3.44 The net debt/RAB ratio in 2015-16 of 68.1% is 1.3% percentage points lower than our PR13 assumption of 69.4%. This is largely because Network Rail has spent less on finance costs for Wales than we assumed in our determination in CP5[75].

3.45 The net debt/RAB ratio increased by 0.8 percentage points between 2014-15 and 2015-16 to 68.1%. The material drivers of this increase are the £83m of enhancements in 2015-16 that are debt-funded.

[75] The PR13 numbers in Table 1.1 have been updated for actual inflation including, for consistency, net debt and RAB. But adjusting the PR13 gearing ratio for actual inflation would not be transparent as our gearing assumptions were in nominal prices (including inflation assumptions), so in this table we have not adjusted our gearing for actual inflation. This is an issue because actual inflation has been different to our PR13 assumptions.

4. Route analysis

Introduction

4.1 This chapter summarises Network Rail's actual expenditure, income and financial performance at route level including variances to our PR13 determination. We also compare 2015-16 to 2014-15.

4.2 For CP5, Network Rail reports on ten routes (geographical business units):

(a) Anglia;
(b) East Midlands;
(c) Kent;
(d) London North East;
(e) London North West;
(f) Sussex;
(g) Wales;
(h) Wessex;
(i) Western; and
(j) Scotland.

For on-going business management purposes, Network Rail has merged the Sussex and Kent routes into a South East route and merged the London North East and East Midlands routes into a LNE and East Midlands route. However, our assessment covers the ten routes.

Purpose

4.3 In a company as large as Network Rail, it is difficult to fully understand issues at an aggregate level, so some form of disaggregation is essential. Since 2011-12, we have required Network Rail to publish route-based statements as part of its regulatory financial statements. Route-based data allows us to understand Network Rail's performance at a more granular level improves our overall understanding and provides additional information for external stakeholders.

4.4 This year, in accordance with commitments made to the Welsh Government, we have provided disaggregated route data for Wales both in this assessment (Chapter 3), and in our most recent Network Rail Monitor[76].

4.5 This section provides a simple comparison of route expenditure in 2015-16 compared to our PR13 assumptions. The data is not normalised to reflect differences in characteristics of routes, such as length of track, electrification, geography and types of services. Therefore, this analysis cannot be used to draw conclusions about the relative performance of the routes. However, it can highlight particular issues at a route level of the differing impact of

[76] This was published on 5 July 2016 and is available at: http://orr.gov.uk/publications/reports/network-rail-monitor

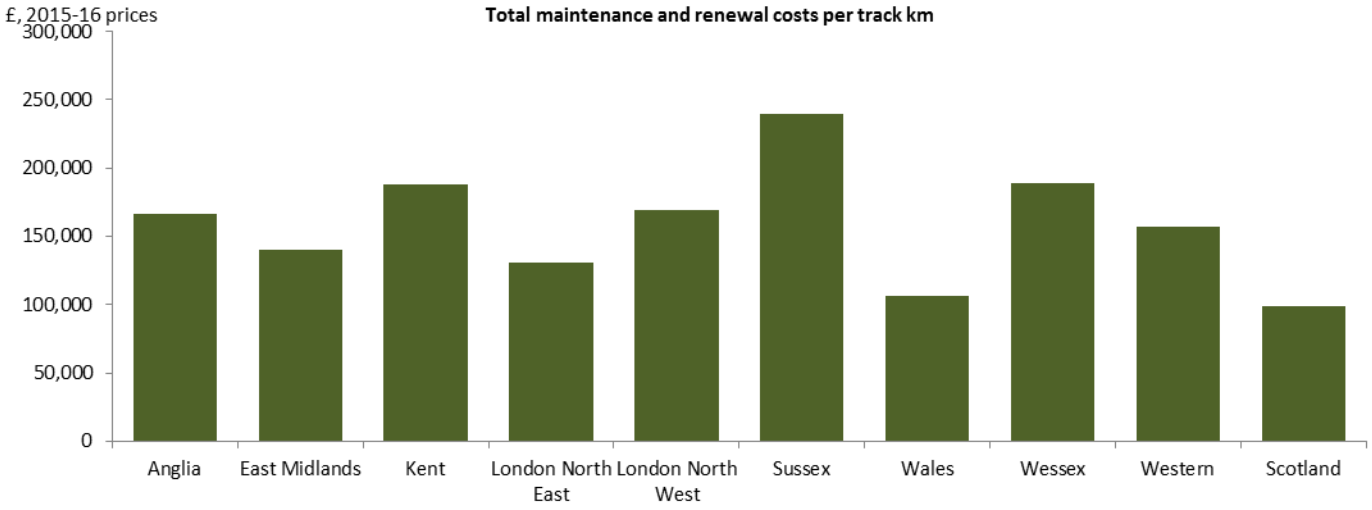
challenges faced by Network Rail. We have focused on variances that differ in scale or nature to Great Britain as a whole. Other route-based analysis has also been included within our most recent Network Rail Monitor publications.

4.6 We generally consider percentage changes to avoid exclusive focus on the largest routes such as London North East and London North West which, due to their size will often be the source of the biggest variances in monetary terms.

4.7 To give an indication of the relative sizes of the routes, Figure 4.1shows the length of track each contains. To highlight the different characteristics of each route, Figure 4.2 shows the maintenance and renewals cost per track km in each route.

Figure 4.1: Track km by Route

Figure 4.2: Cost per km by Route



Internal governance

4.8 Network Rail has increasingly devolved operational responsibility to the operating routes in England & Wales over the past five years to enable quicker and more responsive decision making, reduce costs and improve engagement with customers. Although the centre is still accountable for the performance of the routes, its processes for managing the business continue to evolve.

4.9 We welcome these changes and continue to engage positively with the route management teams. This aligns with the Shaw report recommendation that Network Rail focus on the customer through deeper route devolution, supported by independent regulation[77].

4.10 In our monitoring of Network Rail we have further increased our engagement with the company's route management teams.

Expenditure and income

Network operations

4.11 Figure 4.3 below shows that all routes spent more than our PR13 assumption on network operations. In percentage terms, the largest variances were in Sussex 67% and East Midlands 44%. These two routes showed the highest variances in 2014-15 too. In Sussex, one of the major reasons for the continuing high variance was the delay in implementing efficiency initiatives in CP5 such as the East Sussex re-signalling programme. The migration of signalling control to a new Regional operating centre as part of the NOS programme also led to an increase in costs where a reduction in costs had been assumed. In East Midlands the variance was largely due to the higher CP4 exit rate, i.e. at the end of CP4 its level of efficiency was worse (costs were higher).

[77] https://www.gov.uk/government/publications/shaw-report-final-report-and-recommendations

Figure 4.3 Network operations 2015-16 actual expenditure and our PR13 assumptions

Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentage's represent routes' variance in spend compared to our PR13 assumption

4.12 Costs have increased on most routes compared to 2014-15 mainly due to set-up costs arising from the adoption of LEAN techniques, the implementation of visualisation programmes and other performance improvement schemes. Capacity planning initiatives such as Industry Access Planning (IAP) and Timetable Rules Improvement Programme (TRIP) have also been introduced. Some of these schemes will lead to long-term cost savings, others are expected to increase the number of trains on the network and so reduce schedule 8 compensation payments and increase income via the capacity charge.

4.13 London North West had additional managed stations costs in 2015-16 due to redevelopment (Birmingham New Street and London Euston). Whilst some other routes (Anglia and Wessex for example) had similar additional costs, they were largely offset by efficiency savings.

Figure 4.4 Network operations expenditure 2015-16 v. 2014-15

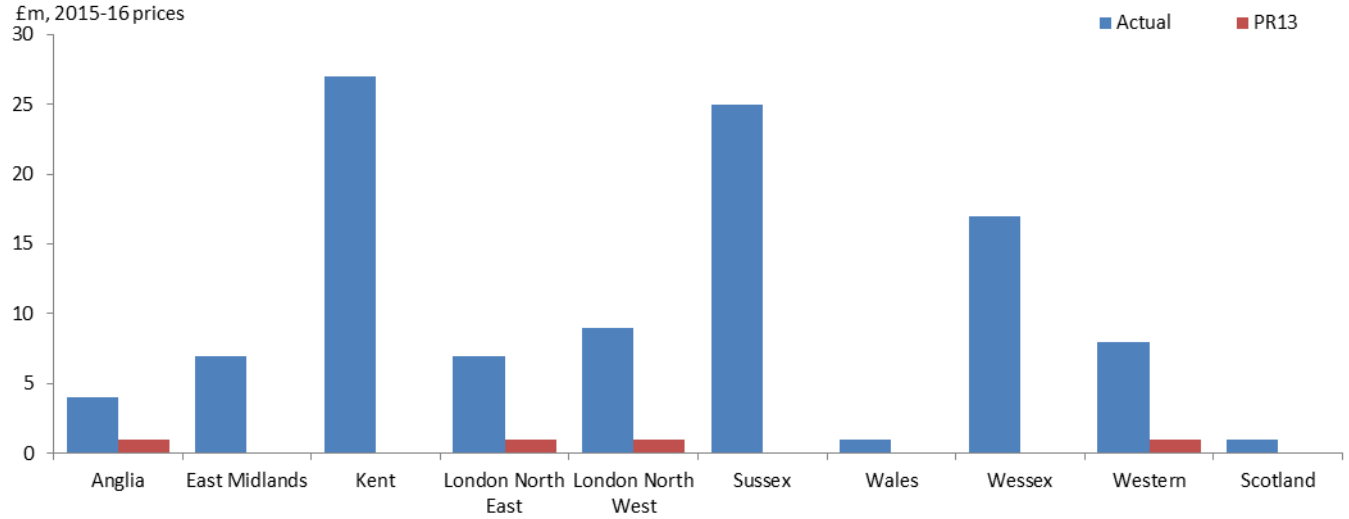
Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentage's represent routes' variance in spend compared to 2014-15

Schedule 8

4.14 All routes underperformed against the PR13 benchmarked level of delays that overall assumed that there would be no significant cost for unplanned train service delays and cancellations. The underperformance in the Kent route was due to the integration of Thameslink services and network congestion. In Sussex, there have been challenges associated with additional traffic, infrastructure failures and trespass. In Wessex trespass and fatalities were higher than expected leading to service delays.

Figure 4.5 Schedule 8 2015-16 actual expenditure and our PR13 assumptions



Source: Network Rail's Regulatory Financial Statements and our own analysis

4.15 Kent and Sussex also have higher Schedule 8 costs compared to 2014-15 (see Figure 4.6). London North East and Wales have high percentage increases but this is from a low base: in 2014-15 they were the two routes that reported income from Schedule 8 due to better performance than expected in our determination. This has not been maintained in 2015-16 although they are still paying out less than most other routes. The variances in London North West and Western are due to some of the performance improvement plans having had an effect on these routes, which meant there was a £10m reduction in costs. The 60% improvement in Anglia was due to a lower level of delay minutes, which had an effect of £6m.

Figure 4.6 Schedule 8 expenditure 2015-16 v. 2014-15

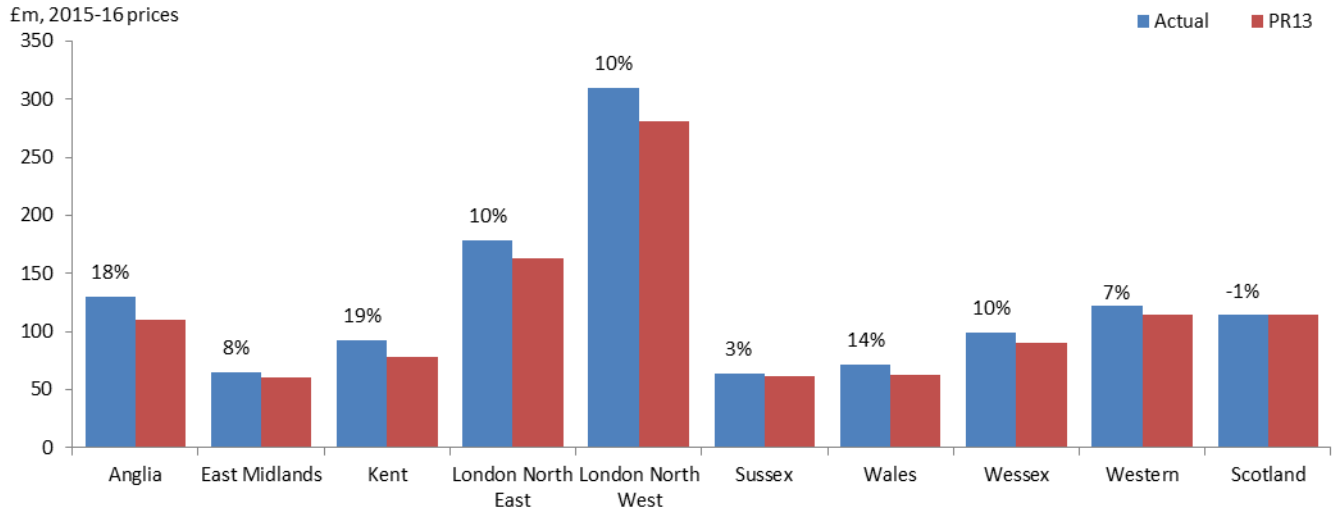
Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to 2014-15

Maintenance

4.16 For the reasons set out in the Great Britain chapter of this report, all routes except Scotland spent more than our PR13 assumption. In percentage, terms the largest overspends were in Anglia and Kent. However as can be seen in Figure 4.8, their costs are the same or lower than in 2014-15. London North East was 10% higher than our determination and also 17% higher than 2014-15. This is due to significantly higher reactive maintenance primarily in relation to civils as a result of the impact of external events. This meant London North East spent £25m in 2015-16 on reactive maintenance compared to our determination assumption of around £16m for that year, and compared to actual expenditure of £2m in 2014-15.

Figure 4.7 Network maintenance 2015-16 actual expenditure and our PR13 assumptions



Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to our PR13 assumption

Figure 4.8 Network maintenance expenditure 2015-16 v. 2014-15

Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to 2014-15

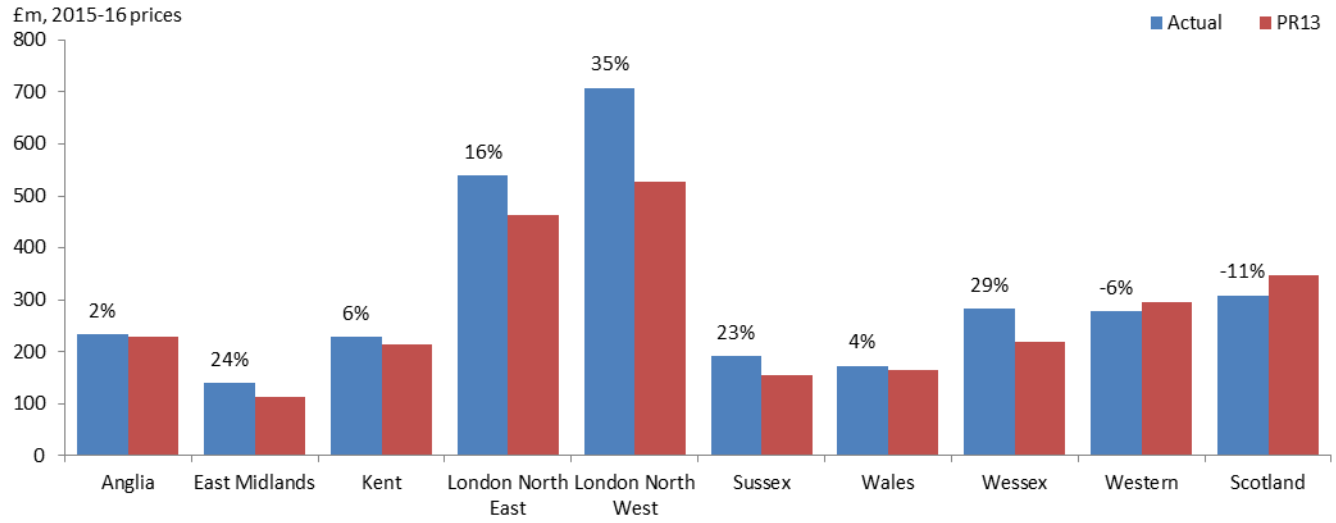
Renewals

4.17 As discussed in paragraphs 1.22 to 1.24 Network Rail as a whole spent more on renewals than our PR13 assumption.

4.18 Five routes spent in excess of 15% more in 2015-16 than we assumed in PR13 and two routes, Scotland and Western, spent less. London North West had the highest variance in the year, with major increases in track, signalling and civils (see the relevant sections below).

4.19 The two key issues that explain the variances on all routes are the amount of deferrals and the amount of financial underperformance. See the next section for more details.

Figure 4.9 Renewals 2015-16 actual expenditure and our PR13 assumptions



Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to our PR13 assumption

4.20 Wessex, East Midlands, Western and Anglia spent less on renewals in 2014-15. This is because in Wessex, in 2014-15, renewals spend had included expenditure on a number of projects rolled over from CP4. Costs were lower in East Midlands due to significant reductions in high output activity relating to track renewals (see Figure 4.12 below). In Western, the main reduction was in civils (see Figure 4.16 below) and in Anglia, the reductions were mainly in Signalling (see Figure 4.14 below).

4.21 The largest increases in renewals spend compared to 2014-15 were in Wales and in Sussex. In Wales this was primarily due to track renewals (see Figure 4.12 below). In Sussex there were large increases in track due to the extra delivery of plain line (conventional and refurbishment) and of switches & crossings, and also in civils due to extra investment undertaken on earthworks and underbridges.

Figure 4.10 Renewals expenditure 2015-16 v. 2014-15

Source: Network Rail's Regulatory Financial Statements and our own analysis

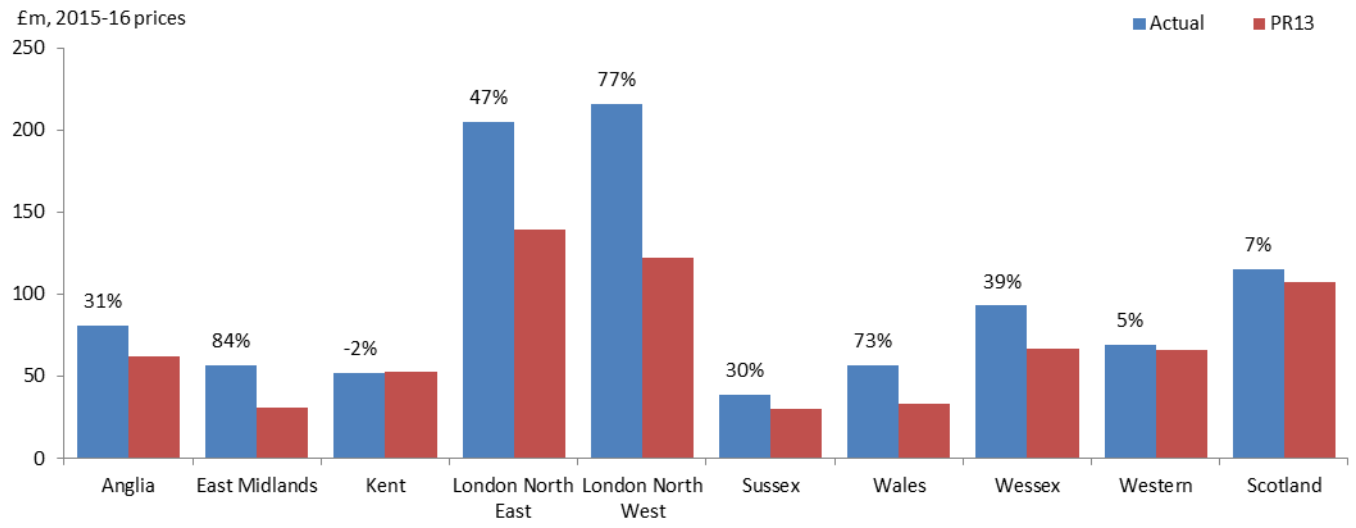
Note: The above percentages represent routes' variance in spend compared to 2014-15

Track

4.22 There were a number of large track renewal variances compared to our PR13 determination and 2014-15. The high negative variances compared to our determination (Figure 4.11), reflect the high CP4 exit rates and lower than expected efficiencies the impact of which will be felt throughout the control period. The main variances compared to 2014-15 shown in Figure 4.12 are largely due to changes to the profile of work.

4.23 The largest variances compared to our determination were in the East Midlands (84%), London North West (77%) and Wales (73%) routes. London North West experienced significantly higher costs on high output renewals as the in-sourcing of this work has not generated the efficiencies Network Rail expected (£33m). Off track costs for London North West were also significantly higher due mainly to extra drainage and fencing costs (£25m). In East Midlands there was also additional cost resulting from issues with high output delivery including rail scrap clearance costs (£10m). In Wales, the highest cost variance was in the renewal of conventional plain line track (£19m) because of the delays to the Cardiff Area re-signalling project.

Figure 4.11 Renewals – Track 2015-16 actual expenditure and our PR13 assumptions



Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to our PR13 assumption

4.24 The largest variances compared to 2014-15 were in Wales (84%), East Midlands (-40%) and Scotland (35%). Expenditure in Wales was significantly higher as more volumes were delivered largely because of the re-profiling of work from 2014-15 to 2015-16. For East Midlands the reduction was largely because a significant amount of high output work was done in 2014-15 as Network Rail had planned. Track renewal costs in Scotland were £30m (35%) higher in 2015-16 than in 2014-15. Network Rail attributes this to extra delivery of volumes across plain line refurbishment (including work on switches and crossings), partly representing a catch up of volumes deferred from 2014-15, and additional slab track activity.

Figure 4.12 Renewals – Track expenditure 2015-16 v. 2014-15

Source: Network Rail's Regulatory Financial Statements and our own analysis

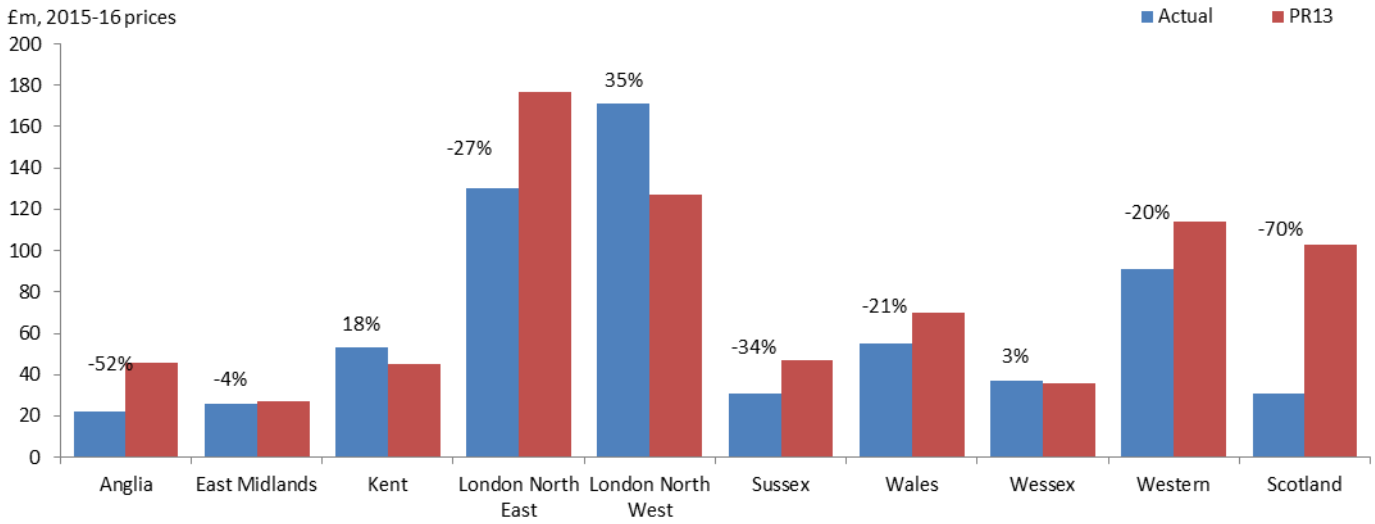
Note: The above percentages represent routes' variance in spend compared to 2014-15

Signalling

4.25 Signalling expenditure for Great Britain was £145m lower than our PR13 determination due largely to significant project deferrals (see paragraph 1.24b). The most significant reductions compared to our determination in percentage terms were Scotland (70%, £72m); Anglia (52%, £24m); Sussex (34%, £16m); and London North East (27%, £47m). These variances were largely due to large deferrals of work to a later date.

4.26 In Scotland, large deferrals of work included the NOS programme which is being rescheduled to future control periods. There was also some underperformance recognised for work delivered in Scotland due to higher than planned rates in national framework contracts. In Anglia there were also additional costs for completing the Romford Rail Operating Centre (ROC), a project rolled over from CP4. In Sussex, there were higher costs for the work delivered leading to recognition of financial underperformance in 2015-16. Extra costs were also incurred in Sussex on delivering a heritage project and there were supply chain issues which increased contractor costs whilst limiting resource. For London North West, there were extra costs on the Bromsgrove project due to a rephasing of work and there were also additional contractor costs for Birmingham New Street and Banbury following some work on these projects being brought forward.

Figure 4.13 Renewals – Signalling 2015-16 actual expenditure and our PR13 assumptions



Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to our PR13 assumption

4.27 Overall, signalling costs were similar to 2014-15, but with largely offsetting variances between the different routes. The highest increase in costs in percentage terms were in East Midlands (44%, £8m) largely due to issues with the East Nottingham modular re-signalling project and Wales (20%, £9m). In absolute terms, the highest variances were on London North West (13%, £20m) and London North East (12%, £14m). In London North West, there was a large increase in minor works required to maintain appropriate asset condition. London North East's increase included an acceleration of activity on the North Lincolnshire

programme. The largest reduction was in Anglia, which had expenditure of less than half the expenditure in 2014-15, largely because most of the work on the Romford ROC took place in 2014-15.

Figure 4.14 Renewals – Signalling expenditure 2015-16 v. 2014-15

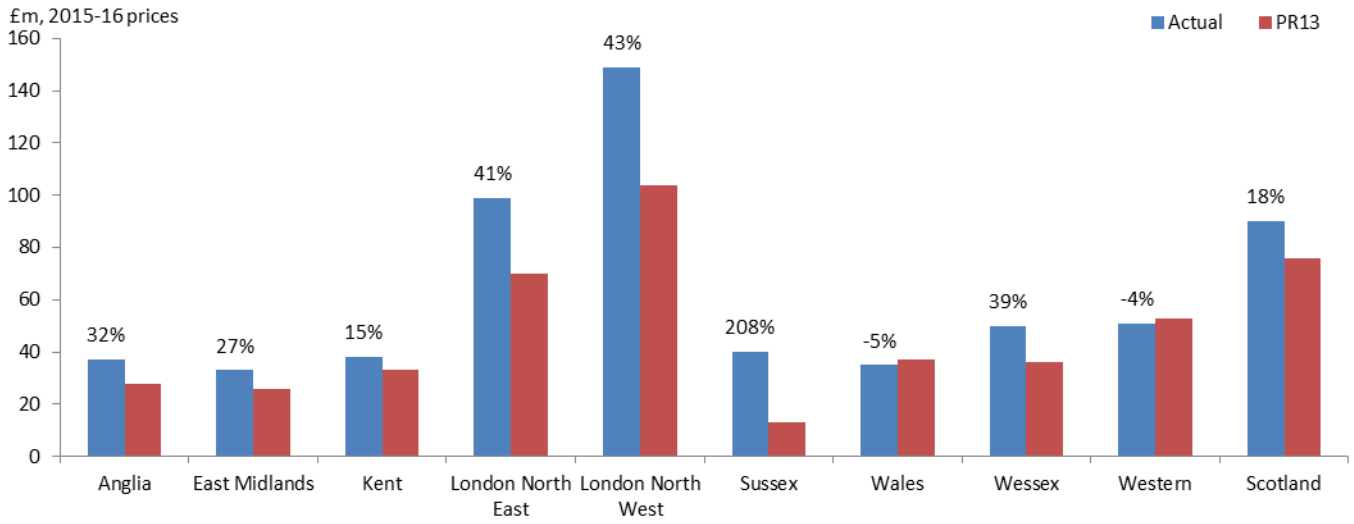
Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to 2014-15

Civils

4.28 Expenditure on civils was £146m higher than our determination due mainly to damage from severe weather conditions and Network Rail not attaining the efficiencies expected. The largest variance was in Sussex (208%, £27m), with extra costs incurred at Chelsea River bridge following access issues as well as contractor claims. There was also a 43% (£45m) variance in London North West and a 41% (£29m) variance in London North East. For London North West, emergency works, following adverse weather and landslips, were needed in Harbury, Harbury West, Carlisle and Milton Keynes. Extra structures work was also required at Chorley, Shirebrook and Bull Ring. For London North East, there was extra investment in overbridges (£22m).

Figure 4.15 Renewals – Civils 2015-16 actual expenditure and our PR13 assumptions



Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to our PR13 assumption

4.29 Civils expenditure was 11.7% (£65m) higher than 2014-15. The largest relative increase was in East Midlands (267%, £24m) due to the deferral of work from 2014-15 to 2015-16 because of delays setting up framework agreements and subsequent contractor mobilisation. Sussex increased its spend on renewals by 54% compared to 2014-15, partly impacted by the delays in 2014-15 in agreeing contractor frameworks introduced for CP5 and partly due to extra investment undertaken on earthworks and underbridges to deliver volumes to conform to asset management strategies. London North West, a large route, has the largest monetary increase, £50m (51%) due to the additional earthworks and underbridges costs arising from the emergency works noted in paragraph 4.28. There was a reduction of 41% (£36m) in Western partly due to high remedial activity required for earthworks in 2014-15.

Figure 4.16 Renewals – Civils expenditure 2015-16 v. 2014-15

Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to 2014-15

Variable income and other single till income

4.30 The main variances in variable income and other single till income compared to our PR13 assumptions were in Anglia, Western and London North West. Variable income and other single till income was 12% lower than our PR13 assumption in Anglia because of lower property income. In the Western route, variable income and other single till income was 13% below our PR13 assumption because in PR13 we assumed Network Rail would receive income from Crossrail. The reason this has not happened is explained in paragraph 1.40.

4.31 London North West in 2015-16, benefited from one-off commercial sales and also an increase in rental income from redeveloped stations at Birmingham New Street, Manchester Victoria and London Euston. This is the reason for variable income and other single till income being 8% higher than our PR13 assumptions and the increase of 14% compared to 2014-15.

4.32 The main variances in variable income and other single till income compared to 2014-15 were in Wales, London North West and Western. The 16% reduction in variable income and other single till income for the Wales route is due to a reduction to the Schedule 4 access charge supplement income, exactly in line with our determination. The 11% increase in variable income and other single till income in Western is largely because of higher property income partly offset by lower facility and financing charges.

Figure 4.17 Variable charge income and other single till income 2015-16 and our PR13 assumptions

Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in spend compared to our PR13 assumption

Figure 4.18 Variable charge income and other single till income 2015-16 v. 2014-15

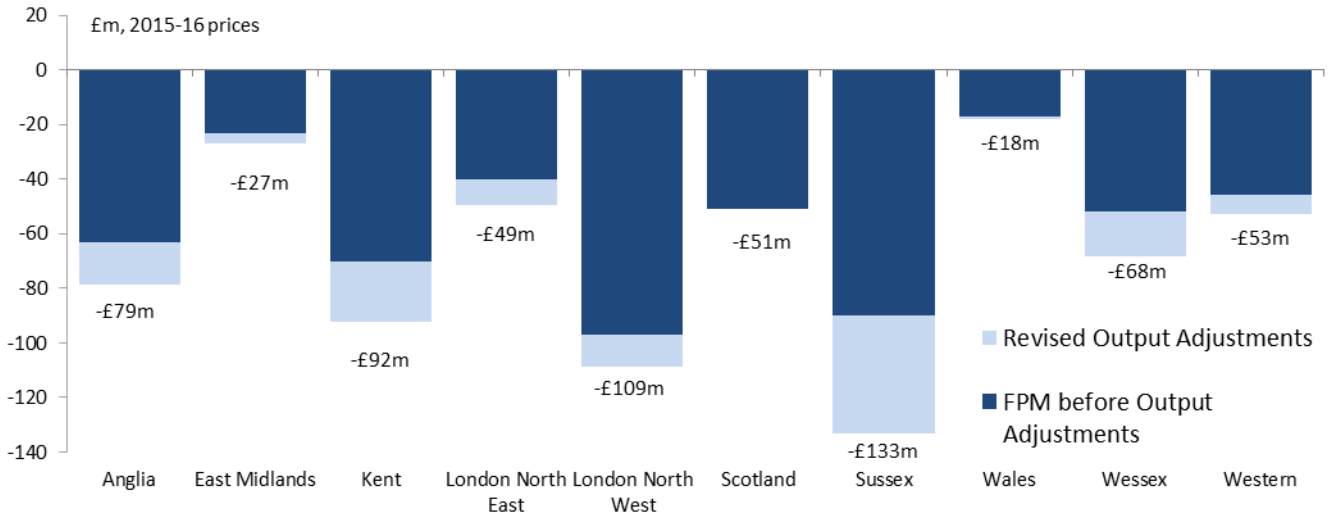
Source: Network Rail's Regulatory Financial Statements and our own analysis

Note: The above percentages represent routes' variance in 2015-16 spend compared to 2014-15

Financial Performance Measure

4.33 As shown in Table 1.7, financial underperformance for Great Britain as a whole was £679m. The route breakdown is shown in Figure 4.19.

Figure 4.19: Financial performance measure (FPM) by route



4.34 All of the routes are underperforming and Sussex and London North West have the largest underperformance.

4.35 The Sussex route underperformance is largely due to: missing its PPM and CaSL targets (£40m)[78]; network operations (see paragraph 4.11); Schedule 8 compensation payments (see paragraph 4.14); and Schedule 4 costs. The Schedule 4 costs are largely due to: more renewals work requiring possessions in the London area, which are more expensive than the average assumption in our PR13 determination; shorter possessions and a more conservative approach to possessions to avoid overruns (both of which reduce passenger disruption); and the effect of additional network traffic.

4.36 The London North West underperformance reflects a number of the issues common to all routes but with a greater impact because it is the busiest route (measured by train km). On maintenance, London North West had the highest financial underperformance of £25m (24% of £104m GB total, the same proportion as in 2014-15).

4.37 As in 2014-15, London North West had the highest financial underperformance on renewals of £64m (27% of GB, 23% in 2014-15).

[78] This is the highest across all the routes (the next highest is Kent, £27m).

4.38 For all routes in England & Wales underperformance for PR13 enhancements is lower following the baseline changes following the Hendy review.

Figure 4.20: Detailed analysis of FPM by route

Financial Performance Measure (FPM) by route	Anglia	East Midlands	Kent	London North East	London North West	Scotland	Sussex	Wales	Wessex	Western	GB	
Income	**2015-16**										**2015-16**	**Cumulative CP5**
Fixed Income	0	0	0	0	0	0	0	0	1	0	1	0
Variable Income	0	4	1	6	-1	3	0	1	-2	3	15	22
Other Single Till Income	-16	-5	-5	0	47	-7	-9	3	4	12	24	32
Opex memorandum account	1	3	-1	2	1	1	2	-1	1	2	11	21
Expenditure												
Network operations	-6	-8	-9	-10	-28	-8	-20	-3	-2	-8	-102	-146
Support costs	7	6	25	3	11	-2	2	2	6	2	62	112
Industry costs and rates	-1	-2	0	-3	-2	-2	0	-1	-2	1	-12	-22
Traction electricity	1	-1	-1	0	1	-1	0	0	0	0	-1	1
Network maintenance	-13	-4	-15	-9	-25	-2	-13	2	-23	-2	-104	-184
Schedule 4 costs	-8	2	-12	8	-19	-7	-16	5	-6	-11	-64	-58
Schedule 8 costs	-3	-7	-27	-6	-8	-1	-25	-1	-17	-7	-102	-208
Renewals	-21	-9	-19	-31	-64	-13	-10	-24	-12	-30	-233	-421
PR13 Enhancements	-4	-2	-7	0	1	-12	-1	0	0	-19	-44	-72
Non PR13 Enhancements	0	0	0	0	-11	0	0	0	0	11	0	-19
Total financial out / (under) performance before adjusting for under-delivery of outputs and adjustments for other matters	**-63**	**-23**	**-70**	**-40**	**-97**	**-51**	**-90**	**-17**	**-52**	**-46**	**-549**	**-942**
Less adjustments for under-delivery of outputs and reduced sustainability												
Under-delivery of train performance (PPM)	-11	-2	-21	-7	-12	0	-30	-1	-11	-7	-101	-172
Under-delivery of train performance (C&SL)	-4	-1	-6	-1	-1	0	-10	0	-4	0	-28	-49
Missed Enhancement milestones	0	0	0	0	0	0	0	0	0	0	0	-6
Total adjustment for under-delivery outputs	**-15**	**-3**	**-27**	**-8**	**-13**	**0**	**-40**	**-1**	**-15**	**-7**	**-129**	**-227**
ORR adjustments to adjustments for under-deliverability of outputs and reduced sustainability	**-1**	**-1**	**5**	**-1**	**1**	**0**	**-3**	**0**	**-1**	**0**	**-1**	**-2**
Financial out / (under) performance recognised	**-79**	**-27**	**-92**	**-49**	**-109**	**-51**	**-133**	**-18**	**-68**	**-53**	**-679**	**-1,171**

5. Appendix: Effect of the changes to baselines

5.1 The effect of changes to baselines set out in this appendix applies to any change to baselines that affect the baseline in a preceding year as well as the current year as described below. So this appendix describes the effect of the ECAM changes to the baselines in Scotland as well as the effect of the Hendy review. We have explained this effect below with reference to the Hendy review as that review has changed a significant number of baselines.

5.2 Adopting the Hendy review baselines required adjustments to both the 2014-15 and 2015-16 baselines. As Network Rail's 2014-15 regulatory accounts are already published, the whole adjustment has been applied to the 2015-16 baseline to give the correct cumulative total over the two-year period. This means that the in-year variances may largely reflect the baseline adjustment rather than the actual over/under spend. For example, on a hypothetical project X, the PR13 determination baseline and the Hendy review cost profile are as follows:

Project X	**2014-15**	**2015-2016**	**Cumulative**
PR13 determination baseline	10	40	50
Hendy review baseline	20	50	70

5.3 So, in this illustration in Network Rail's 2014-15 regulatory accounts the baseline for 2014-15 was £10m. Therefore, to use the Hendy review baselines for the 2015-16 accounts the baseline for 2015-16 needs to be £60m (£70m - £10m) to give the correct cumulative total of £70m, rather than the actual Hendy review baseline for 2015-16 of £50m, i.e. the baseline for 2015-16 includes the £10m (£20m - £10m) correction of 2014-15.

5.4 In the example shown below, we show the effect of this issue when the baseline is compared to actual expenditure. If actual expenditure in 2015-16 is £50m then there is an underspend of £10m (£60m - £50m) in Network Rail's 2015-16 regulatory accounts. However, compared to the actual Hendy baseline of £50m, instead of the baseline included in Network Rail's 2015-16 regulatory accounts, the variance is £0m. The cumulative variance of £0m is correct.

	Published 2014-15 regulatory accounts	**Published 2015-16 regulatory accounts**	**Published 2015-16 regulatory accounts**
	2014-15	**2015-16**	**Cumulative**
Actual	20	50	70
Baseline	10	60	70
Variance	**-10**	**10**	**0**

5.5 A similar impact is included in the calculation of in-year financial performance for enhancements. As this calculation uses the in-year expenditure variance as a starting point, the effect explained above then impacts on the figure listed under the 'Deferral/(acceleration) of work' column to ensure the total under/outperformance is correct. In the example above the apparent £10m 2015-16 variance, which is a consequence of the baseline adjustment rather than the underlying variance, is then initially included in the calculation of financial

performance. This means that if we know there is no under/outperformance to be recognised £10m of expenditure has to be shown as 'deferred' so that financial performance is zero. Again, the cumulative column therefore reflects a clearer picture.

5.6 Most of the impact of the Hendy review changes, compared to the determination, will be in the later years of the control period and do not therefore affect Network Rail's 2015-16 regulatory accounts.