12. Financial framework

Key messages in this chapter

- We have allocated to Network Rail the risks that it is best placed to manage, e.g. input price changes. This will help incentivise Network Rail to deliver continuous improvements in value for money and operate commercially where appropriate.
- The revenue that we allow Network Rail for CP5 should be sufficient for it to deliver the outputs that it is required to deliver if it operates economically and efficiently, taking into account normal fluctuations in costs and revenues.
- In our financial framework, we have not provided funding for risks in advance of them occurring. But Network Rail's balance sheet buffer is fully available for it to use to manage risk and hence fund unexpected increases in costs. In addition, other material exceptional risks can be dealt with through the re-opener provisions.
- We have engaged collaboratively with Network Rail to improve the incentives on spend to save schemes, e.g. information management and property income.
- We will only allow Network Rail to recover our forecast of its efficient financing costs, as it is not expected to issue unsupported debt in CP5. This approach is called the adjusted WACC approach and everything else being equal, significantly reduces Network Rail's revenue compared to our approach in CP4. This reduction in revenue could cause financial sustainability issues. We have therefore increased the amortisation charge by £2bn for Great Britain.
- This chapter sets out how we will roll forward Network Rail's RAB in CP5. We have decided to largely keep the overall approach the same as in PR08 but in some areas, e.g. the treatment of unit costs, we have simplified our approach to the addition of expenditure to the RAB, to more effectively incentivise Network Rail. Our detailed approach will be set out in our updated regulatory accounting guidelines for CP5, which will be published prior to the start of CP5.
- The amortisation charge is largely based on long-run renewal expenditure and financial sustainability considerations. Enhancement expenditure is not amortised.
- In order to improve transparency we have also published in Annex F what our determination of Network Rail's revenue requirement and access charges would be if we had used its cost of capital without making the adjusted WACC adjustments or using the PR08 ring-fenced approach. We also show what access charges would have been without network grants.

Key messages in this chapter (continued)

Main changes since our draft determination

- We have allowed Network Rail to use outperformance to fund schemes that add value to the network.
- We will not introduce separate limits on financial indebtedness for England & Wales and Scotland.

Introduction and context

12.1 This chapter sets out our determination of the financial framework for Network Rail in CP5. The decisions set out in this chapter are important as they can have a significant impact on Network Rail, e.g. on the level of its revenue requirement and how we treat risk as well as the policies associated with calculating the RAB and the related amortisation charge. In the impact of financial framework on financial parameters chapter (chapter 13), we set out how our decisions on the financial framework impact on Network Rail's revenue requirement.

12.2 It is essential that customers and funders get the best value from the money that they put into the industry. To achieve this, it is important that our financial framework policies deliver an appropriate allocation of risks to Network Rail, i.e. those risks that it is best placed to manage efficiently. If Network Rail manages those risks efficiently then it can expect to earn an appropriate return.

12.3 The revenue that we allow Network Rail for CP5 should be sufficient for it to deliver its required outputs on the basis that it operates economically and efficiently, taking into account normal fluctuations in costs and revenues. However, providing Network Rail with a surplus within allowed revenues, i.e. an in-year risk buffer that is sufficient to compensate it for all possible risk, is unlikely to represent value for money as Network Rail is unlikely to be best placed to manage all risks[223].

12.4 Therefore, in this chapter we also consider how Network Rail can deal with the financial consequences of unexpected increases in costs[224]. We have decided that this can be best achieved through the use of balance sheet buffers[225] and re-opener provisions[226].

[223] When considering risk buffers, it is also necessary to consider how the underlying income and expenditure allowances have been derived, i.e. whether our assumptions are too cautious or too aggressive.

[224] These cost increases could have arisen from material events that are beyond reasonable management control or could not have reasonably been foreseen.

[225] The balance sheet buffer is the difference between Network Rail's actual level of financial indebtedness and the level of financial indebtedness allowed by its network licence at a point in time. In

12.5 Network Rail's balance sheet buffer is fully available for it to use to manage risk in all situations not just in exceptional circumstances, and hence is available to fund unexpected increases in costs. This should allow Network Rail to deliver its required outputs and will also allow Network Rail to be more innovative and to take some risks when developing ways of improving efficiency[227].

12.6 The decisions we have taken on the financial framework are important and in particular our decision to use the adjusted WACC approach affects other parts of our financial framework, e.g. risk buffers and the restriction on the level of financial indebtedness.

12.7 The RAB 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 impacts on the allowance for amortisation within Network Rail's revenue requirement.

12.8 This chapter sets out how we will roll forward Network Rail's RAB in CP5. We have decided to largely keep the overall approach the same as in PR08 but in some areas, e.g. the treatment of unit costs, we have simplified our approach to the addition of expenditure to the RAB, to more effectively incentivise Network Rail. Our detailed approach will be set out in our updated RAGs for CP5, which will be published prior to the start of CP5.

12.9 This chapter covers the following issues:

(a) our approach to risk and uncertainty. This includes:

(i) inflation and input prices;

(ii) traction electricity, industry costs and rates;

(iii) incentive strengths;

(iv) risk buffers;

(v) the financial ring-fence;

(vi) level of financial indebtedness; and

(vii) re-opener provisions;

(b) the investment framework/spend to save;

---

its network licence the restriction on its level of financial indebtedness is presented as a percentage of the RAB (i.e. debt/RAB).

[226] Re-opener provisions are mechanisms that can be used in certain situations to re-open the price control to allow changes to be made to the revenues that Network Rail is allowed to recover, for example, where material events have happened that are beyond reasonable management control or could not have reasonably been foreseen. As a result, the financial consequences of some elements of the risks that Network Rail faces would be transferred to Network Rail's funders and customers.

[227] If Network Rail is using its balance sheet buffer to fund unexpected increases in costs, depending on the reason for the higher costs, we may also take enforcement action against it, e.g. if there were problems delivering an enhancement project.

(c) the cost of capital;

(i) the adjusted WACC approach; and

(ii) other cost of capital considerations,

(d) our approach to financial sustainability;

(e) amortisation and the RAB;

(i) amortisation;

(ii) RAB roll forward;

(iii) Non-capex additions to the RAB and the opex memorandum account;

(iv) reactive maintenance; and

(v) funding of enhancements,

(f) tax;

(g) network grant;

(h) grant dilution;

(i) outperformance; and

(j) use of financial outperformance.

Background

12.10 Network Rail's ultimate parent company is a not-for-dividend company limited by guarantee (CLG) and has members instead of shareholders. As a CLG, Network Rail's ultimate parent company is a private organisation operating a commercial business owned by its members.

12.11 Network Rail's members are appointed largely to perform the role of shareholders in holding Network Rail's Board of Directors to account (e.g. approve/reject major transactions and vote on remuneration arrangements) but there are crucial differences to the role of shareholders. In particular, Network Rail's members have virtually no capital at risk[228], whereas shareholders who provide equity for a business would normally take significantly more risk. This means the members are not directly incentivised to seek to drive the company to improve its financial performance.

12.12 Network Rail's members do not therefore bear the risks or realise the rewards of Network Rail's activities, and therefore the company does not pay them the dividends that shareholders would expect as a return on their risk capital.

12.13 Network Rail is solely financed by debt, therefore all of the profits left after interest has been paid on its debts are retained within Network Rail rather than being distributed to

[228] Network Rail's members each have £1 of capital at risk.

members or, if it had shareholders, as dividends[229]. Network Rail raises debt from private sector investors like a normal company. However, Network Rail's debt is guaranteed by the UK Government through the FIM[230].

12.14 As part of PR13, we have undertaken a thorough review of the financial framework for Network Rail and the incentives that this creates. In May 2012, we set out our high-level decisions on financial framework issues[231]. These decisions included our approach to the cost of capital, price control separation/disaggregation and the duration of the price control. Following our consultation in August 2012, we set out our decisions in December 2012[232] on some of the more detailed issues relating to Network Rail's financial framework, e.g. our approach to inflation.

12.15 Our financial framework is consistent with the key transformational goals we set out alongside our PR13 objectives, especially aligning incentives and having a clear focus on what matters to passengers, freight customers and taxpayers – particularly improving value for money.

12.16 We have developed the financial framework for CP5 by considering all of our statutory duties and using our judgement to apply an appropriate amount of weight to each of them.

12.17 We have taken into account the views of stakeholders. In particular, we have worked closely with Network Rail, DfT and Transport Scotland to establish a financial framework for Network Rail that meets our objectives whilst also considering the requirements of others.

12.18 In its response to our draft determination, Transport Scotland supported the financial arrangements that we set out in our draft determination, in particular the adjusted WACC approach. DfT has made specific comments on various issues that we discuss below.

12.19 In PR08 we introduced an 'early start' mechanism which allows Network Rail in certain circumstances to request early notification in the periodic review process about whether or not we would allow activity and expenditure to be funded through its access charges. We thought that this policy was needed as some of the investment projects that Network Rail was likely to propose in its SBP would have long lead times

---

[229] Network Rail has used outperformance to pay rebates to DfT and Transport Scotland, invest in the network and pay down debt.

[230] The amount of debt that can be raised under the FIM is currently capped at 90% of the RAB (90% is equal to the current debt to RAB licence limit of 75% * 1.2), which is well above Network Rail's current level of gearing (64.4% at 31 March 2013). Network Rail's estimated value of the RAB at 31 March 2013 was approximately £45bn, so the cap on the FIM was around £41bn at 31 March 2013 (in 2012-13 prices). This compares to Network Rail's debt at 31 March 2013 of £29bn.

[231] *Setting the financial and incentive framework for Network Rail in CP5*, May 2012, available at: http://www.rail-reg.gov.uk/upload/pdf/financial-incentive-framework-cp5.pdf.

[232] *Financial issues for Network Rail in CP5: decisions*, December 2012. This document is available at: http://www.rail-reg.gov.uk/pr13/consultations/financial-issues.php.

and the periodic review process may disrupt planning to the extent that there would be uncertainty about the level of funding in the run up to the final determination.

12.20 Therefore, the early start mechanism provides more clarity of the required outputs of the determination and the allowed revenue at an earlier stage of the price control process. This should mean that Network Rail does not delay investment. This is important as delays can reduce the efficiency of investment and increase costs in the supply industry.

12.21 We decided in our May 2012 document that we would retain the current early start mechanism as it helps to manage the peaks and troughs of Network Rail's workload and avoid delays in investment.

12.22 The early start mechanism required Network Rail to propose in its SBP the expenditure and outputs in the first year of CP5 that it considered should qualify for early start funding. This investment would need to have a defined (observable/measurable) output, clear and agreed dates for delivery, firm cost proposals and funder support (if relevant). The projects that we have used the early start mechanism for are discussed in the enhancements chapter (chapter 9), e.g. the Northern Hub.

Approach to risk and uncertainty

Introduction

12.23 All businesses face risk and uncertainty on their costs and revenues from the impact of external events. Economically regulated businesses such as Network Rail are no exception. For the PR13 regulatory framework, we have decided how these risks, e.g. inflation, should be allocated between Network Rail, its customers and funders.

12.24 Allocating to Network Rail the risks that it is best placed to manage should ensure that it is incentivised to secure continuous improvements in value for money and operate commercially where appropriate, e.g. in managing its financial risks.

12.25 In this chapter we explain our approach to some aspects of financial risk that may not be efficiently controllable by Network Rail. These include inflation and input prices and traction electricity, industry costs and rates. We then explain how risk buffers and re-opener provisions can be used to manage risk.

Inflation and input prices

Background

12.26 Network Rail, like other businesses and households, faces the risk that the prices it pays for goods and services, may rise or fall, i.e. inflation is a general risk faced by everyone. The inflation that each consumer faces depends on the particular mix of goods and services that it consumes. This is no different for Network Rail, as inflation can affect not only the prices that it must pay for labour and materials, but also the

interest rates that it must pay on its borrowings and the real value of its assets and liabilities.

12.27 The general level of inflation in the economy is usually measured by reference to the rate of change in the average prices of a basket of goods and services that is representative of typical consumption patterns. The most common measures of inflation are the retail prices index (RPI), and the consumer prices index (CPI).

12.28 The RPI is the most commonly used index to adjust payment flows to maintain their real value. For example, payments of interest and repayments of capital on certain government bonds (known as index-linked gilts) are indexed to RPI.

12.29 To the extent that a particular consumer faces higher or lower inflation, compared to RPI, because the average price of the basket of goods and services he or she consumes is rising or falling at a different rate compared to the RPI basket, there is a so-called relative price effect. The difference between the two reflects a change in the real cost of the goods and services consumed compared to the economy-wide average and is often referred to as input price inflation.

12.30 Each consumer can affect the particular inflation that he or she faces by the choices that they make in their selection of goods and services to buy and the way in which they buy these goods and services. The impact of inflation can therefore be managed to an extent.

12.31 As shown in Table 12.1, the biggest effect of inflation on Network Rail's revenue requirement is its effect on Network Rail's allowed return and amortisation. As explained in our December 2012 financial issues decisions document, the majority (approximately 70%) of Network Rail's revenue requirement is composed of income and expenditure assumptions that are not related to costs where we think there could be an issue with Network Rail's management of general inflation risk, i.e. amortisation, allowed return and Schedule 4 & 8 payments. This is because those costs either relate to: past decisions, e.g. amortisation; how we fund Network Rail for the general inflation element of its financing costs; or are compensation schemes, e.g. Schedule 4 & 8 payments, where indexing those payments by general inflation maintains their value in real terms.

Table 12.1: Breakdown of Network Rail's Great Britain final determination net revenue requirement

Component of revenue requirement	Percentage of revenue requirement	Is the management of inflation risk an issue?
Support, operations, maintenance	35%	Yes: 30%
Traction electricity, Industry costs and rates	10%	
Other single till income	-15%	
Schedule 4 & 8	5%	No: 70%
Allowed return	20%	
Amortisation	45%	
Total revenue requirement	**100%**	**100%**

Our decisions in our previous decision documents and in our draft determination, and our implementation consultation document

12.32 In our December 2012 financial issues decisions document, we explained that in CP5 we had decided to retain the key elements of our PR08 approach to incentivising Network Rail's management of inflation risk. Our approach reflects our view that general inflation risk is not efficiently controllable by Network Rail and that the more specific risk of input price changes is efficiently controllable by the company and is taken into account in our expenditure assessment[233]. This is consistent with conventional regulatory practice. It also reflects the view of respondents to our August 2012 consultation on detailed financial issues.

12.33 Reflecting the difference between Network Rail's inability to manage general inflation risk and its ability to manage more specific risks associated with changes to its input prices, we set out in our draft determination that we intended to incentivise Network Rail to efficiently manage inflation risk in CP5 using the following approach:

(a) we included ex-ante forward looking assumptions[234] for both general inflation and input price inflation for CP5[235];

(b) we included our input price inflation assumptions in our efficiency challenge (for CP5 this is zero for all expenditure). This means Network Rail will gain if it delivers on that challenge and lose if it does not deliver the challenge;

[233] Based on the evidence, for CP5 we decided to make no explicit adjustments to our efficiency assumptions for input price inflation. This is explained in more detail in the overview of efficient expenditure chapter (chapter 4).

[234] This means that we will forecast our view of both general and input price inflation for CP5 and not just assume that the current level of general and input price inflation continues for CP5.

[235] Including input price inflation in our efficiency assumption has a similar effect, in terms of efficiency, as adjusting our inflation assumptions for an estimate of input price inflation.

(c) we reflected in our efficiency challenge, the findings of a study by Credo[236] who have carried out a study for us to identify how efficiently Network Rail manages inflation risk[237];

(d) to be consistent with the allocation of input price risk to Network Rail, we said that we will not adjust Network Rail's renewals expenditure for movements in a specific inflation index; and

(e) as we did not think that general inflation risk is efficiently controllable by Network Rail, we decided not to expose Network Rail to variances in general inflation between our assumptions and the actual outturns by continuing to[238]:

(i) index allowed revenue by general inflation (i.e. RPI), which will provide stability for the industry through CP5; and

(ii) adjust Network Rail's RAB by the actual movements in general inflation (i.e. RPI) to retain the real value of its asset base (against which it raises finance).

12.34 For PR08, we used RPI as the measure of general inflation to index allowed revenue and the RAB. However, there are other general inflation measures[239] that could be used instead of RPI, for example, RPIX[240], CPI[241] and the GDP deflator[242], and we could use specific indices that include the effect of input price inflation such as IOPI or COPI[243].

12.35 These other measures of inflation may or may not provide a more accurate index of the effect of inflation on Network Rail. However, any assessment of the effect of inflation on Network Rail would also need to consider the effect of inflation on Network Rail's financing costs and at the moment most financial instruments are normally

---

[236] We summarise the findings of the Credo inflation management study in the overview of efficient expenditure chapter (chapter 4).

[237] The study considered total inflation risk because in practice it is difficult to separately identify general inflation risk and input inflation risk.

[238] This means that Network Rail will neither gain nor lose from the effects of general inflation.

[239] These measures of general inflation include productivity improvements in the wider economy. Therefore, when considering our efficiency and inflation assumptions (and in particular our frontier shift efficiency assumptions) we need to take this into account. Further information can be found at http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/may-2012/stb---consumer-price-indices---may-2012.html#tab-background-notes.

[240] RPIX is RPI excluding mortgage interest payments.

[241] The Consumer Prices Index (CPI) measures the prices of goods and services purchased for the purpose of consumption by households in the UK and is similar to RPI but excludes mortgage interest payments and other costs and is calculated differently.

[242] The GDP deflator is a much broader price index than RPI, RPIX or CPI (which only measure consumer prices) as it reflects the prices of all domestically produced goods and services in the economy. Hence, the GDP deflator also includes the prices of investment goods, government services and exports, and subtracts the price of UK imports.

[243] The Construction Output Price Index (COPI) represents the movement in the cost of construction work carried out in the UK. The Infrastructure Output Price Index (IOPI) is a subset of COPI for infrastructure projects.

indexed by RPI. Approximately 50% of Network Rail's gross debt (£15bn) is index-linked[244] and the index used to adjust the value of that debt for inflation is RPI.

12.36 Respondents to our May 2011 first consultation document generally favoured retaining RPI for indexation of the RAB. The use of RPI to index Network Rail's RAB is also consistent with regulatory precedent.

12.37 Given the above factors and in particular that financial instruments are indexed in the markets by RPI and approximately 50% of Network Rail's debt is indexed by RPI, we decided in our draft determination to continue to use RPI to index Network Rail's RAB for inflation in CP5.

12.38 For CP4, the formula that was used to index access charges was based on the average RPI from January to December for freight contracts and the RPI in November for passenger contracts.

12.39 The formula that we proposed to use to index access charges was included in our consultation on changes to access contracts and the network licence to implement PR13, which we published on 12 July 2013[245]. In that document, we proposed two changes to the way we index charges in CP5:

(a) use a consistent indexation approach based on an annual average change in the Retail Prices Index (RPI) for all operators (passenger and freight); and

(b) introduce a 'true-up' mechanism[246] to more accurately take account of the general inflation risk that Network Rail faces.

Responses to our draft determination

12.40 Network Rail stated that it does not agree with our efficiency overlay of 0.2% (per annum) for the management of inflation and thinks it is unconventional and unprecedented in economic regulation. We have included Network Rail's response on this issue in our overview of efficient expenditure chapter (chapter 4).

12.41 RIA responded that it is yet to be convinced of the substitutability that Network Rail may be able to achieve to be able to offset external pressures on input prices.

12.42 Network Rail supported our proposals on the indexation of access charges but it set out the following issues that it wanted clarification on:

(a) that indexation based on the change in the calendar year average RPI will apply to Network Grant income received in lieu of the FTAC;

---

[244] Index-linked debt is debt where the value of the debt is adjusted for movements in inflation, instead of the assumed level of inflation being included in an interest payment.

[245] See the access charges chapter (chapter 16) for further details.

[246] A 'true-up' mechanism adjusts forecast financial assumptions for the actual financial effect that has been experienced.

(b) how the true-up for the last year of a control period will be reflected in the next control period;

(c) the methodology for uplifting the price base used in our final determination to year 1 of the control period;

(d) the December 2013 RPI value will not be available in time for the publication of the CP5 price list; and

(e) it thinks that for both passenger and freight TACs, all adjustment factors should be rounded up to three decimal places.

12.43 Network Rail also noted that we should not use forecast December 2013 RPI values. Instead Network Rail has suggested that the actual December RPI values (published in mid-January 2014) be used.

12.44 Train operating companies opposed changes to the indexation of access charges. Franchised operators noted that they would not be protected from the financial impact of this change through the financial adjustment mechanism in schedule 9 of their franchise agreement. This would transfer the risk of variances in general inflation from Network Rail to them.

12.45 GB Railfreight noted that Network Rail should manage inflation with good contract management and encourage efficiencies from its suppliers to reduce costs. It added that simply passing increased costs through to the customer is not an acceptable way to improve its efficiencies.

12.46 The train and freight operating companies largely considered that the indexation approach that has operated since privatisation is both transparent and implementable, especially in the context of any changes to the franchising process and the potential exposure of franchised operators to changes in charges at future periodic reviews. They suggested that an RPI approach based on a specific month before the start of the financial year in question, was more appropriate than our proposed approach, particularly given the current franchising timetable that DfT has published.

Our comments on the responses to our draft determination

12.47 It is normal for regulators to consider the effect of inflation (both general inflation and input price inflation) on a regulated company and to make adjustments for the effect of input price inflation. The adjustment we have made to our expenditure assumptions is similar in nature to an input price adjustment, in that we are assessing how Network Rail's costs are likely to change relative to general inflation and then adjusting for that difference. Our views on this issue are explained further in the overview of efficient expenditure chapter (chapter 4).

12.48 GB Railfreight's comments about Network Rail being able to manage inflation support the approach we have adopted to the management of inflation.

12.49 Network Rail supported our proposed approach to the indexation of access charges. However, the train operating companies did not support us and they have some concerns about the effects of our proposal on their accounts, e.g. the volatility of their profits.

12.50 As a result we considered an alternative to our proposal, where we would log up the differences between actual inflation and our PR13 inflation assumptions to Network Rail's opex memorandum account[247]. This would have meant that we could have retained the same approach to access charges as in PR08 but still ensured that Network Rail did not unduly gain/lose as a result of how we index its revenues for inflation. However, Network Rail was concerned with the effects of this proposal on its accounts.

12.51 Given the complexity of the effects on the industry of our proposed 'true-up' mechanism, we consider that it is better not to use our proposed approach in CP5. However, this is an important issue and we will consider it in our PR18 development work.

Our determination

12.52 As we have not seen any representations or further evidence to persuade us to change the decisions set out in our draft determination and for the reasons set out above, we consider that the decisions set out in 12.33 and 12.37 remain appropriate for CP5. We therefore confirm our overall approach as set out in our draft determination.

12.53 However, for the reasons set out above, we have decided to retain the existing CP4 approach to the way we index access contracts, except that we will use the actual RPI for November 2013 instead of an estimate. This is set out in the access charges chapter (chapter 16).

12.54 For the avoidance of doubt, this means that we have decided that we will not implement the proposed 'true-up' mechanism for CP5 that we set out in our consultation on changes to access contracts and the network licence to implement PR13 and we will continue to use the average RPI from January to December for freight contracts and the RPI in November for passenger contracts.

Traction electricity, industry costs and business rates

12.55 The key issue for us in determining the treatment of traction electricity costs, industry costs and business rates is to ensure that Network Rail is incentivised to efficiently manage these costs where appropriate. Our decisions were set out in our December

[247] This is an account where monies due to Network Rail, e.g. incentive payments, are held.

2012 financial issues decisions document and our treatment of each cost category is set out below[248].

Traction electricity (£238m in 2013-14)

Background, our decisions in previous decision documents and our draft determination

12.56 We determined the efficient level of traction electricity costs and set an ex-ante allowance for each year of CP5. For those elements of traction electricity costs that we consider are controllable by Network Rail, we decided that it is at risk for the outturn being different to our ex-ante assumption. These are:

(a) transmission losses; and

(b) Network Rail's own use of traction electricity, e.g. power supplies for signals and stations.

12.57 We also decided that the elements of traction electricity costs that we deem not to be sufficiently controllable by Network Rail (i.e. all traction electricity costs except for transmission losses and Network Rail's own use of traction electricity) will be passed through to train operators. This will be implemented in CP5 through the four-weekly billing process and end of year reconciliations that the industry already uses to charge for traction electricity. This is explained further in the access charges chapter (chapter 16).

Responses to our draft determination

12.58 Network Rail recognised that it is at risk for any difference between actual and forecast rates for electricity consumption paid for by Network Rail and in relation to a share of the volume discrepancy related to transmission losses.

12.59 Go-Ahead said that Network Rail should take responsibility for areas of electricity supply and usage within its control.

Our determination

12.60 We note that Go-Ahead agreed with our approach to traction electricity costs. We confirm the decisions set out in our draft determination.

British Transport Police (£71m in 2013-14)

Background, our decisions in previous decision documents and our draft determination

12.61 We determined an efficient level for Network Rail's share of British Transport Police (BTP) costs and we set an ex-ante allowance for CP5. We decided that these costs are sufficiently controllable by Network Rail[249] and so the risk of the actual cost being

[248] Our assumptions on traction electricity, industry costs and business rates are set out in the traction electricity, industry costs and rates chapter (chapter 6).

[249] Network Rail is a Police Service Agreement (PSA) holder of the BTPA. One of Network Rail's directors is also a member of the BTPA, but he is not representing Network Rail. Network Rail is the

different from our assumptions will be borne by Network Rail. We think that this treatment is important as some of the benefits that are provided by BTP (such as reductions in delay minutes) relate to cost and performance issues that Network Rail is incentivised to deliver. BTP costs will also be included in financial performance reporting in CP5.

Responses to our draft determination

12.62 Network Rail noted that the assessment of its share of BTP costs underpinning its CP5 SBP was based on a thorough and detailed process by BTPA. Network Rail also noted that it recognises that better overall policing will deliver lower levels of crime, which is of benefit to Network Rail.

12.63 Network Rail thinks that the most significant economic effect of crime is on train performance (due to reduced cable theft), which had been reflected in its CP5 SBP, though it is difficult to value the impact of lower crime on costs and outputs. Network Rail therefore disagreed with our efficiency assumption on these costs.

12.64 Although Network Rail's preferred approach is for BTP costs to be treated in the same way as the ORR licence fee, Network Rail suggested that we could apply a risk sharing mechanism to these costs. For example, 25% of any difference between actual and assumed costs could be included in an assessment of financial performance.

12.65 BTPA's response stated that it is not within Network Rail's power to control BTP's policing costs, since the policing costs are decided by BTPA. BTPA noted that each year a budget is set which is taut, realistic and is reviewed by members of the authority who have considerable commercial and financial experience. BTPA argued that a reduction to Network Rail's contribution would need to be offset by increased contributions from freight and train operating companies to deliver the required level of policing. BTPA also note that policing costs have fallen per passenger kilometre.

Our comments on the responses to our draft determination

12.66 We have assessed these responses and consider that:

(a) we agree that it is for the BTPA to decide how much Network Rail should pay for the BTP;

(b) it is our responsibility to determine Network Rail's total efficient costs for the whole company. This involves making assumptions on every type of cost that the company incurs and our assessment needs to be based on evidence;

(c) Network Rail is the largest funder of the BTP and is capable of exercising industry leadership when commenting on the BTPA's proposed budgets for BTP.

---

largest funder of the BTP and is capable of exercising industry leadership. We consider that it therefore has sufficient influence over its share of BTP costs for us to treat these costs in the same way as we treat support costs.

It also chairs the Rail Delivery Group Policing and Security sub group, which also has representation from TOC MDs, the BTPA Chief Executive and the BTP Deputy Chief Constable; and

(d) the Winsor report and the RVfM study identified a number of initiatives for reducing costs and Network Rail has not adequately explained why these initiatives are not appropriate.

Our determination

12.67 As we have not seen any representations or further evidence to persuade us to change the decision set out in our draft determination and for the reasons set out above, we consider that this decision remains appropriate for CP5. We therefore confirm the decision set out in our draft determination.

12.68 Given that we consider that BTP costs are sufficiently controllable by Network Rail, we do not consider that a risk sharing mechanism for BTP costs is necessary.

RSSB costs (£9m in 2013-14)

Background, our decisions in previous decision documents and our draft determination

12.69 We determined an efficient level for Network Rail's share of RSSB costs and set an ex-ante allowance for CP5. We decided that these costs are sufficiently controllable by Network Rail[250] and so the risk of the outturn costs being different from our assumptions should be borne by Network Rail. RSSB costs will be included in the reporting of financial performance in CP5.

Responses to our draft determination

12.70 Although Network Rail's preferred approach is for RSSB costs to be treated in the same way as the ORR licence fee, Network Rail suggested that we could apply a risk sharing mechanism to these costs. For example, 25% of any difference between actual and assumed costs could be included in an assessment of financial performance.

Our comments on the responses to our draft determination

12.71 Given that Network Rail is the largest industry funder of RSSB and can exercise leadership in discussing the RSSB budget, we consider that these costs are sufficiently controllable by Network Rail.

12.72 As we consider that RSSB costs are sufficiently controllable by Network Rail, we do not think that a risk sharing mechanism for RSSB costs is necessary.

[250] Network Rail is a member of the RSSB, and two of its directors are also on the RSSB Board. It is the largest funder of RSSB and can exercise industry leadership. We consider that it has sufficient influence over these costs for us to treat them in the same way as support costs.

Our determination

12.73 As we have not seen any representations or further evidence to persuade us to change the decision set out in our draft determination, we consider that this decision remains appropriate for CP5. We therefore confirm the decision set out in our draft determination.

ORR Licence fee and safety levy (£17m in 2013-14)

Background, our decisions in previous decision documents and our draft determination

12.74 We decided that the ORR licence fee and railway safety levy are not sufficiently controllable by Network Rail and so we will log-up/down any variances in these costs between the actual costs and the assumptions in our determination to the opex memorandum account and if appropriate adjust Network Rail's CP6 revenue requirement. These costs will be excluded from the reporting of financial performance in CP5.

Responses to our draft determination

12.75 Network Rail supported our policy not to expose it to variances in the ORR licence fee and railway safety levy. Network Rail agreed that these costs are not controllable by Network Rail and that any variance between actual costs and our forecast of the costs should be logged up/down in the next control period.

Our determination

12.76 We confirm the decision set out in our draft determination.

Business (cumulo) rates (£151m in 2013-14)

Background, our decisions in previous decision documents and our draft determination

12.77 We decided in our draft determination to include an ex-ante forecast of business rates in Network Rail's CP5 allowed revenue. As long as Network Rail can satisfy us that it has negotiated efficiently with the Valuation Offices, we decided that we will log-up/down any variations from the level of these costs assumed in our determination and adjust Network Rail's CP6 revenue requirement through the opex memorandum account. If we determine that Network Rail has negotiated these costs efficiently, they will be excluded from the reporting of financial performance in CP5, otherwise we will include them.

Responses to our draft determination

12.78 Network Rail supported our proposal not to expose it to changes to business rates subject to Network Rail demonstrating that it has negotiated efficiently. Network Rail has asked us to define 'negotiated efficiently' so that it is clear about what is required prior to the negotiation process. Network Rail also requested that the assessment should be done ex-post by an independent reporter.

Our comments on the responses to our draft determination

12.79 We set out in our December 2012 financial issues decisions document that in assessing whether Network Rail had negotiated efficiently with the Valuation Offices we would consider whether Network Rail has raised the right issues, at the right time and in the right way. As an independent regulator, we should use independent reporters where they can add value to our work and where this is the most cost efficient approach. We do not currently consider that using an independent reporter to assess this issue would add value.

Our determination

12.80 As we have not seen any representations or further evidence to persuade us to change the decision set out in our draft determination, we consider that this decision remains appropriate for CP5. We therefore confirm the decision set out in our draft determination.

Reporters' fees (£3m in 2013-14)

Background and our draft determination

12.81 We commission independent reporters[251] to provide assurance in relation to different areas of Network Rail's regulated activities, for example, the sustainability of its asset policies and asset information quality. The volume of work that we commission from independent reporters reflects the level of confidence that we have in Network Rail's information and processes. Network Rail therefore has significant control over the costs arising from the use of independent reporters. However, we also have some influence over the level of work that is required and we will work with Network Rail to help it to develop more effective and efficient processes for providing assurance to us.

12.82 As a result, in our draft determination we proposed that we would determine an efficient level of independent reporters' fees for CP5. If at the end of CP5, Network Rail can show that any material under/over spend is the result of our actions instead of being driven by an issue at Network Rail, then we will log-up/down the costs of our actions and adjust Network Rail's CP6 revenue requirement through the opex memorandum account. Independent reporter fees will be included in the reporting of financial performance in CP5 but we will adjust for variances caused by our own actions.

Responses to our draft determination

12.83 Network Rail considered that our policy on independent reporters fees could result in a disproportionate amount of discussion/negotiation in relation to whether a review is required, who is best placed to carry out the review and the budget for that work.

[251] Independent reporters are firms who provide independent expert advice and are used by us to review some aspects of Network Rail's performance, plans and activities, e.g. its financial reporting. They owe a duty of care to both ORR and Network Rail but Network Rail pays for their costs.

Network Rail was concerned that there could be an incentive for us to commission independent reporters rather than review Network Rail's analysis internally.

12.84 Network Rail noted that there are some examples of where this occurred during CP4 and that it considers that independent reporters' fees can be more effectively controlled by us rather than Network Rail and that we should be incentivised to consider the overall costs of regulation rather than just our direct costs. Network Rail's main concern was about independent reporters' fees being higher than forecast if the driver for this higher cost is a lack of 'in-house' capability for us to effectively regulate Network Rail.

12.85 Network Rail requested that we clarify our definition of what we consider to be a "material under/over spend" and how we would assess whether our actions have resulted in an overspend.

12.86 Network Rail suggested an alternative incentive rate approach for independent reporters' fees whereby it would retain part of the benefit/cost of independent reporters' fees being lower/higher than assumed. Network Rail considered that this has a significant advantage of not requiring an ex-post assessment of each report on a case-by-case basis.

Our comments on the responses to our draft determination and our determination

12.87 We recognise that the approach that we set out in our draft determination could be overly bureaucratic. Therefore, we have decided to introduce a risk sharing mechanism for reporters' fees in CP5, whereby Network Rail will be able to retain 25% of the underspend but will bear 25% of the overspend. This means we will log-up/down any variances in these costs between the actual costs and the assumptions in our determination to the opex memorandum account (after adjusting for the 25% incentive rate) and if appropriate adjust Network Rail's CP6 revenue requirement.

Incentive strengths

Background, our decisions in previous decision documents and our draft determination

12.88 By incentive strengths, we mean by how much Network Rail financially gains or loses if it outperforms or underperforms our determination. For example, if we assumed in our determination that Network Rail would spend £300 on maintenance and it efficiently spends £200 then it retains the £100 of outperformance, i.e. the incentive strength is 100%. The incentive strengths for capital expenditure are largely 25%, i.e. if Network Rail efficiently underspends by £100, it retains £25.

12.89 In our May 2012 document we decided to retain the PR08 incentive strengths for PR13. This will avoid unnecessary changes to our regulatory approach and should help to make the incentives easier to understand.

Responses to our draft determination

12.90 We did not receive any material responses on the decision set out in the draft determination.

Our determination

12.91 We confirm the decision set out in our draft determination.

Risk buffers

Background, our decisions in previous decision documents and our draft determination

12.92 In PR08, we established an 'in-year risk buffer' for Network Rail. This was the amount we thought that Network Rail needed to manage business risk and normal fluctuations in cash flow. In PR08, the in-year risk buffer was £226m for England & Wales and £28m for Scotland per annum (in 2012-13 prices).

12.93 We decided in December 2012 that we will not provide Network Rail with an in-year risk buffer in CP5. This is because we considered that, for a number of reasons, the benefits of an in-year risk buffer may not be achieved in practice and that circumstances have changed since PR08. These reasons include:

(a) given it is not likely that Network Rail will issue unsupported debt in CP4 or CP5 and as it has the FIM, it is likely that it will be able to continue to deliver our determination irrespective of whether an efficiency initiative has failed;

(b) as Network Rail is not planning to issue unsupported debt in CP5, this means that everything else being equal, we expect the consequences of Network Rail experiencing an unexpected increase in costs will be less severe than we thought in PR08. This is because as Network Rail is still using the FIM, it should still be able to access financial markets on reasonable terms even if it is underperforming. Therefore, the benefit an in-year risk buffer provides in relation to this issue is not significant for CP5;

(c) in our PR08 determination, our base case assumption was that Network Rail would perform in line with our determination and would not require the use of the in-year risk buffer. Therefore, in PR08 we assumed that the annual in-year risk buffer in CP4 would be used to reduce debt and not used to fund overspends. If we did provide Network Rail with an in-year risk buffer for CP5, it is likely that we would have taken the same approach. In practice this would just increase the balance sheet buffer, which means that the real issue is whether the size of the balance sheet buffer is appropriate;

(d) the adjusted interest cover ratio (AICR) was a very important financial indicator for us to consider in PR08, when we assessed Network Rail's financial sustainability. This was because credit rating agencies use the AICR to assess the financial position of a company. Without an in-year risk buffer, Network Rail's AICR would have been significantly lower. This could have made it more difficult

for Network Rail to issue unsupported debt in CP4. As we do not expect Network Rail to issue unsupported debt in CP5 it is not necessary to provide Network Rail with an in-year risk buffer for financial sustainability reasons;

(e) providing funding for Network Rail in advance of it being needed could be perceived as being an unnecessary cost at a time of constrained government funding and current overall pressures on public finances, and it could weaken incentives. This is particularly the case given that we confirmed in our May 2012 document that we would be using the adjusted WACC approach to determine Network Rail's allowed return and that we did not expect Network Rail to issue unsupported debt in CP5; and

(f) Network Rail publishes statutory accounts, we require Network Rail to publish regulatory financial statements and we report on its efficiency in our annual efficiency and finance assessment. The overspend (everything else being equal) caused by the failure of an efficiency initiative would still be included in our monitoring in our annual efficiency and finance assessment, as our reporting needs to be balanced. Therefore, the financial consequences of the failure of an efficiency initiative would still be clear.

12.94 Prior to the publication of our draft determination, Network Rail had expressed concerns about the potential impact on its profitability of our approach to risk and the adjusted WACC approach. We explored these concerns with Network Rail and as a result we slightly re-profiled the financial sustainability adjustment, so that profits are more constant over CP5 than they otherwise would have been.

12.95 We agree with Network Rail that it is important to retain the flexibility to change Network Rail's financing structure. Although there are no current plans to introduce risk capital, either through concessions or other means, if a situation arises in CP5 that requires a different approach to Network Rail's cost of capital we could deal with that situation as we discuss below in the level of financial indebtedness section.

12.96 Also, as in CP4, Network Rail has a balance sheet buffer that can be used to manage risk. We noted in our draft determination that, as Network Rail's financial indebtedness limits are 75.0% for each year of CP5, the balance sheet buffer would be on average during CP5 £2,440m for Great Britain, £2,092m for England & Wales and £349m for Scotland (2012-13 prices). The balance sheet buffer in this example is the difference between a debt/RAB ratio of 72.5% and our forecast of Network Rail's debt/RAB ratio in our determination for each year of CP5.

Responses to our draft determination

12.97 We did not receive any material responses on the decision set out in our draft determination.

Our determination

12.98 We confirm the decision that we will not provide Network Rail with an in-year risk buffer in CP5 as set out in our draft determination. Given Network Rail's financial indebtedness limit is 75.0% for Great Britain as explained below, then our forecast of the balance sheet buffer for Great Britain is on average during CP5 £2.9bn (2012-13 prices).

Financial ring-fence

Background, our draft determination and our implementation document

12.99 The financial ring-fence protects Network Rail's customers and funders from the company being exposed to financial risks, e.g. it limits Network Rail from taking part in activities that are not part of its core business as the operator of the majority of Great Britain's rail infrastructure.

Network Rail's activities

12.100 As part of PR08, we reviewed some aspects of the financial ring-fence but deferred a review of other financial ring-fence issues. The work we deferred included a review of the activities that Network Rail is permitted to carry out under the provisions of its network licence. We consulted on this issue in March 2010 but deferred taking a decision as the structure of the industry was being reviewed, which could have impacted on our decisions.

12.101 The current de-minimis provisions in Network Rail's network licence already provide a reasonable approach to this issue. But, Network Rail has said in the past that there should be more flexibility to expand the scope of its operations where that improves value for money.

12.102 We have started to discuss with Network Rail, DfT and Transport Scotland and other stakeholders their views of the activities that Network Rail should be permitted to carry out under the provisions of its network licence. However, our discussions with stakeholders are still at an early stage.

12.103 If following the conclusion of the discussions with stakeholders the outcome is that we think it is appropriate to propose a review of the activities that Network Rail is permitted to carry out under the provisions of its network licence, we will commence the review after PR13.

Other issues

12.104 In our consultation on the changes to contractual and licensing provisions to implement PR13 that we published on 12 July 2013, we identified areas where the financial ring-fence licence condition needed updating. In particular, to ensure that we kept the financial ring-fence up to date with regulatory best practice, we considered whether there had been changes to other economic regulators' financial ring-fences, which were relevant to Network Rail's financial ring-fence.

12.105 In our July 2013 document, we also identified areas where the financial ring-fence could be improved. The two main areas covered were the payment of dividends and the repayment of outperformance to governments (rebates). The policy issues on rebates are discussed in the use of outperformance section below.

12.106 The financial ring-fence issue is simply about making the conditions of the licence condition clearer as we set out in our implementation document, where we proposed to:

(a) revise the section on the payment of dividends, to make it clear that the licence holder shall not declare or recommend a dividend or make any other distribution or redeem or repurchase any share capital of the licence holder unless it has both issued a certificate to us and we have consented to it; and

(b) revise the section on the payment of rebates, to make it clear that the licence holder shall not make a rebate payment unless we have consented to it.

Responses to our draft determination and implementation document

12.107 Network Rail supported our commitment to keeping the financial ring-fence up to date with regulatory best practice. However, it considered that its current regulatory obligations concerning its 'de-minimis' activities are unduly prescriptive, difficult to understand and give us unnecessary powers of veto. Network Rail commented that the regulatory regime must be open to evolution as Network Rail demonstrates greater responsibility, transparency and accountability. Network Rail also considered that certain 'core' activities should be reclassified.

12.108 Network Rail has made a number of detailed points on our proposed drafting of the dividend and rebate parts from our July 2013 document.

Our comments on the responses to our draft determination and our determination

12.109 We will continue to discuss with Network Rail, DfT and Transport Scotland and other stakeholders their views of the activities that Network Rail should be permitted to carry out under the provisions of its network licence and we will then decide whether we need to review Network Rail's network licence for these issues.

12.110 Network Rail has made a number of detailed points on our update to the licence condition on the payment of dividends and rebates and its policy issues are covered in the use of outperformance section of this chapter.

12.111 We have considered these points, given the intention of the licence condition is simply to make it clear that the payments of dividends and rebates by Network Rail is subject to our consent. We have decided that we can simplify that section of the licence condition, so it just says that Network Rail cannot pay any dividend or rebate without our consent as this is consistent with our decision on the use of outperformance as set out below. This avoids the need to identify a number of subsidiary conditions relating to these payments that do not need to be in the licence condition.

12.112 The statutory consultation on the drafting necessary to amend Network Rail's network licence condition, in relation to the payment of dividends as discussed above, will be published in November 2013, as discussed in the implementation of our determination chapter (chapter 22).

12.113 We will use the linked licence process to implement the changes to the network licence condition in relation to rebates as discussed above. This will be done through the review notices we expect to issue on 20 December 2013, as discussed in the implementation of our determination chapter (chapter 22).

Level of financial indebtedness

Background, our decisions in previous decision documents and our draft determination

12.114 Unless we have consented otherwise, Network Rail could be in breach of its network licence if it does not use reasonable endeavours to ensure that its total financial indebtedness does not exceed the limits specified in its network licence. This restriction has an important effect as it incentivises Network Rail to control its costs. The difference between Network Rail's limit on financial indebtedness and its actual debt/RAB ratio provides Network Rail with a balance sheet buffer that is fully available for it to use to manage risk and hence fund unexpected increases in costs, which should allow it to deliver its required outputs.

12.115 For these reasons we decided in December 2012 to retain the licence condition that restricts the level of Network Rail's financial indebtedness, and consistent with our aim of improving the disaggregation of Network Rail's price control, we said we will include separate limits for Network Rail's activities in England & Wales and in Scotland.

12.116 We noted in our draft determination that we would finalise the specific levels of Network Rail's maximum level of financial indebtedness in each year of CP5 in our final determination, as the levels need to reflect the entire PR13 package. In the draft determination we stated, based on our financial modelling, that the level of financial indebtedness in each year of CP5, should at no point exceed a limit set between 70-75% for England & Wales and for Scotland.

12.117 We consulted on these proposed changes to Network Rail's network licence in our July 2013 document.

Responses to our draft determination

12.118 Network Rail noted that as it will not be provided with an ex-ante or 'in year' risk buffer, the balance sheet buffer limit set in the debt/RAB limit will become particularly important. Network Rail considered that it requires five percentage points headroom above the debt/RAB ratio forecast in its draft delivery plan to be able to manage the potential additional costs of business risks 'crystallising' during CP5.

12.119 Network Rail noted that where the regulatory framework provides for efficient spend to be added to the RAB (for example to achieve longer term benefits), there should not be an additional requirement to avoid breaching the debt to RAB limit as this might result in perverse incentives. This means that Network Rail want us to exclude some types of spend from the calculation of financial indebtedness and RAB, for the purposes of licence condition 3.

12.120 In addition, Network Rail disagreed with our proposal to include separate terms in Network Rail's licence which restrict the maximum level of financial indebtedness (debt/RAB) in CP5 for England & Wales and Scotland as it considers it is unnecessary and inappropriate. Network Rail thinks that it should be regulated as a single entity in line with the corporate structure and network licence. However, Network Rail recognised in its response to our draft determination that England & Wales and Scotland are subject to separate price controls.

12.121 Network Rail also said that our proposal is inconsistent with the fact that it raises debt at a corporate level, and it is the gearing of the company as a whole which is important to debt and potential equity holders, rather than the notional gearing levels at a route level (as the individual routes cannot raise debt independently).

12.122 Network Rail expressed concern that this change in the licence condition would constrain its ability to raise finance and have no significant benefits. It also said that it could still report notional England & Wales and Scotland gearing levels, without there being separate limits on its financial indebtedness.

12.123 Railfuture stated that it was not clear whether any modelling had been done to determine the sensitivity of the funding requirement and the level of debt to variations in usage growth. Railfuture noted the rate of passenger growth is slowing, potentially indicating that the RPI + X% fare increases are reaching the limit of what the market can bear and could have an adverse impact on Network Rail's financial position.

Our comments on the responses to our draft determination

12.124 We do not agree with Network Rail's proposal that the limit on financial indebtedness should be based on the debt/RAB ratio in Network Rail's draft delivery plan. This is inappropriate as it would not be consistent with the rest of our determination and our view of risk.

12.125 With regard to Network Rail's comment about the treatment of additional efficient spend, whatever the purpose of a project, once the expenditure on the project has been incurred, then it is an historic event that has affected Network Rail's financial position, so we do not think that we should distinguish between different types of expenditure. Network Rail's suggestion would also worsen transparency and be complex, i.e. how would we decide on 'good' debt versus 'bad' debt.

12.126 Network Rail's concern about having separate limits on the level of financial indebtedness for England & Wales and Scotland largely relates to how it raises debt

rather than the incentive effects of the limit on the level of financial indebtedness and downplays the fact that the price controls for England & Wales and Scotland are separate.

12.127 The two key incentive effects that a limit on financial indebtedness provides are an incentive on Network Rail to control its costs and it also provides it with a balance sheet buffer to manage risk. Ultimately, it is important that Network Rail clearly considers the financial consequences of its decisions for Scotland on Scottish funders and customers, as it is Scottish funders and customers that will pay for any overspend in relation to Scotland. This is especially the case for capital projects.

12.128 When Network Rail modelled its risks, in order to provide us with a view on what it thought the limit on the level of financial indebtedness should be, its conclusion was based on a relative comparison to its forecast of the debt/RAB ratio in CP5. If the same logic is applied to a debt/RAB limit for Scotland, the limit on financial indebtedness would be around 70% as its forecast debt/RAB ratio in CP5 for Scotland is around 65%. However, Transport Scotland would prefer the same limit on the level of financial indebtedness as in England & Wales, i.e. around 75%.

12.129 Whether we set the limit for Scotland at around 70% or 75%, would largely depend on whether we place more weight on the incentive to:

(a) control Network Rail's costs, in which case a 70% limit would be better; or

(b) manage risk, in which case a 75% limit would be better.

12.130 Balancing the effect of these two incentive effects is difficult given the difference in the debt/RAB ratios in England & Wales and Scotland in CP5. This is especially the case given that we did not identify this as an issue before the CP5 HLOSs and SoFAs were developed.

12.131 We therefore consider that it would be better to signal our views on this issue to Network Rail, DfT and Transport Scotland in advance of the CP6 HLOSs and SoFAs, which will give DfT and Transport Scotland time to consider the consequences of separate limits on the level of financial indebtedness, when they are preparing their CP6 HLOSs and SoFAs. It will also give Network Rail time to consider this issue for its CP6 SBP. Therefore, we will consider these issues in our PR18 development work.

12.132 Also, in practice we consider that our monitoring of Network Rail will mean that we will be aware of the effect of higher expenditure or other cost shocks on Network Rail in advance of it coming close to its limit on financial indebtedness, which would provide sufficient time for a recovery plan to be developed. Network Rail will also continue to report on its debt/RAB ratios for both England & Wales and Scotland separately in its regulatory accounts. We will also report on the debt/RAB ratios for both England & Wales and Scotland separately in our annual efficiency and finance assessment.

12.133 Transport Scotland has previously raised a concern that without a separate limit on financial indebtedness in Scotland, Network Rail could in some situations be unable

to go ahead with a project in Scotland, even though the debt/RAB ratio for Scotland was below the limit on financial indebtedness for Great Britain. In principle, Transport Scotland is correct. However, in practice in CP5, this is unlikely to be an issue, given the size of the balance sheet buffer for Great Britain.

12.134 For both our draft and final determinations we have tested the sensitivity of the financial indicators to changes in our regulatory assumptions and used Monte Carlo analysis[252] to help identify the robustness of Network Rail's financial position in the face of cost and revenue uncertainty and hence our approach to financial sustainability.

Our determination

12.135 After considering the views of respondents, for the reasons set out above, we have decided that we will only include a limit on financial indebtedness for Great Britain, not for England & Wales and Scotland separately.

12.136 After consideration of our own and Network Rail's financial modelling we have decided that the level of financial indebtedness in each year of CP5 should at no point exceed 75% for Great Britain.

Re-openers

Background, our decisions in previous decision documents and our draft determination

12.137 We use the term re-openers to refer to mechanisms that can be used to re-open a price control in certain situations to allow changes to be made to the revenues that Network Rail is allowed to recover through access charges, for example, where material events have happened that are beyond reasonable management control or could not have reasonably been foreseen. Hence, the financial consequences of some elements of the risks that Network Rail faces are transferred to customers and funders.

12.138 In our May 2012 document, we decided that we would continue to use re-openers as part of our approach to risk and uncertainty. An enduring settlement across the control period is very important both for the incentives that Network Rail faces and to provide certainty to the industry and its investors. So, in our view, it is likely that re-openers will only be sparingly used as they are generally intended to only cover exceptional events that have a material effect on Network Rail.

12.139 We decided in December 2012, that for PR13 we would retain two of the re-openers that we used in PR08, and we consulted on the exact wording of these re-openers in

[252] Monte Carlo analysis is a technique used to analyse complex issues by simulating the various outcomes a large number of times.

our consultation on changes to access contracts and the network licence to implement PR13[253], which we published on 12 July 2013. The two re-openers are:

(a) if there is a material change in the circumstances of Network Rail or in relevant financial markets. This re-opener applies to events in England & Wales and Scotland; and

(b) for Scotland, if Network Rail's expenditure in Scotland is forecast to be more than 15% higher than our determination for Scotland over a forward looking period of three years.

12.140 In each case, to decide whether to re-open a price control, we would need to determine whether the terms of the relevant re-opener had been met and, if so, we would then consider whether there is a compelling case for an interim review in the light of our Section 4 duties.

12.141 In our July 2013 document, we also:

(a) consulted on whether the material change in circumstances re-opener should apply to material changes in Network Rail's circumstances or in relevant financial markets that may be likely in the future; and

(b) set out the procedure that we expect to follow in the circumstances that one or more of the criteria for initiating an access charges review prior to 1 April 2019 (i.e. an interim review) may have been triggered. We have developed this procedure on the assumption that any such interim review would need to be conducted as quickly as possible.

Responses to our draft determination

12.142 Network Rail was content with our proposals on re-openers and it supported the amendment to the contractual drafting on re-openers, so that it covers material changes in Network Rail's circumstances or in the relevant financial markets that may be likely in the future, in addition to material changes that have already occurred.

12.143 TSSA considered that a more flexible approach to re-openers should be used considering some of the uncertainties which could result in increased costs. This is particularly in areas where there are no contingency plans for proposed efficiencies (e.g. technological solutions such as the implementation of the national operating strategy) or there is a risk of outside influences (e.g. climate and specific political demands) requiring increased investment in certain areas. TSSA considered that without this, Network Rail may be forced to make too hasty cuts to achieve the efficiencies we are seeking.

[253] These re-openers will be implemented by being included in access contracts between Network Rail and TOCs.

Our comments on the responses to our draft determination

12.144 TSSA identified a number of risks that Network Rail faces and we consider that our risk and uncertainty framework covers them through a combination of specific provisions, e.g. the treatment of traction electricity, the indexation of revenue, the balance sheet buffer and re-openers.

Our determination

12.145 We confirm the decision in our draft determination.

12.146 We also confirm that we have decided to make the material change in circumstances re-opener apply to changes that may be likely in the future as well as to events that have already happened.

Investment framework/spend to save

Background and our draft determination

12.147 In CP4, the 'internal/Network Rail' part of the investment framework allows Network Rail, in certain situations, to spend money on capital schemes that were not funded as part of PR08[254]. This policy was aimed at helping to reduce the disincentive on Network Rail to make savings towards the end of a control period. There is also an 'external' part of the investment framework that deals with third party investments. As we are not making any changes to the 'external' part of the investment framework, we do not discuss this any further in this document[255].

12.148 In practice, our approach in CP4 has not been clear as it means that when we assess Network Rail's proposed expenditure in an access charges review we exclude some elements of Network Rail's potential revenue generating schemes (e.g. refurbishment of arches) and some elements of its cost saving schemes. It also duplicates some elements of our RAB roll forward policy and is inconsistent with other parts of our approach.

12.149 For example, although some types of Network Rail's information management (IM) spend are uncertain, they are similar in nature to the types of expenditure that go through the 'internal/Network Rail' part of the investment framework in CP4.

---

[254] The 'internal/Network Rail' part of the investment framework deals with schemes promoted by Network Rail that either generate additional income or reduce costs. The external part of the investment framework deals with schemes promoted by third parties, franchised operators and the governments (non-HLOS) during a control period.

[255] In October 2010, we published our 'Investment framework consolidated policy & guidelines', which focused on the external part of the investment framework. This document can be accessed at: http://www.rail-reg.gov.uk/server/show/ConWebDoc.10081.

12.150 In our draft determination, we outlined two main options for improving our CP4 approach:

(a) refine the 'internal/Network Rail' part of the investment framework to improve incentives; or

(b) remove the 'internal/Network Rail' investment framework and apply our normal RAB roll forward process, but amend the RAB roll forward process as described below, e.g. use different incentive strengths.

12.151 Our CP4 approach to 'internal/Network Rail' investment framework schemes does not financially incentivise Network Rail to invest in schemes that could reduce the cost of the network or generate additional income because:

(a) when we calculate the amount to be added to the RAB in the control period that the investment is made in, all of the savings and additional income in that control period are netted off the capital expenditure;

(b) we include all of the savings that the investment will generate for future control periods in our efficiency assumptions for those future control periods and include the additional income in our calculation of the revenue requirement; and

(c) it does not provide an incentive to make investments later in the control period. For example, if Network Rail invests £100 more on income generating schemes in year 5 of the control period, compared to our determination then using our normal RAB roll forward rules, it would bear (i.e. not receive funding for) £25 of the cost. Therefore, in order for Network Rail to be financially incentivised to go ahead with the scheme, the scheme would need to generate savings of more than £25 in one year, which may not be likely.

12.152 In order to improve transparency and provide clearer incentives on Network Rail, without overly complicating the financial framework, in our draft determination we proposed to:

(a) remove the 'internal/Network Rail' investment framework and apply our normal RAB roll forward process to deal with spend to save[256] schemes; and

(b) amend the RAB roll forward process to use different incentive strengths.

12.153 We proposed to change the incentives on spend to save schemes so that the incentive is 25% in year 1 of the control period, 20% in year 2 of the control period, 15% in year 3 of the control period, 10% in year 4 of the control period and 5% in year 5 of the control period. This means that, for example, if Network Rail overspends/underspends in year 1 by £100, it will bear/retain £25 of the cost of that overspend/underspend but if it overspends/underspends in year 5, it will bear/retain

[256] For the avoidance of doubt, when we say spend to save schemes, we are including income generating schemes.

5% of the overspend/underspend. This compares to our normal RAB roll forward approach where, in simple terms, Network Rail retains 25% of any underspend and bears 25% of any overspend in each year of the control period.

12.154 Adopting this approach should not only improve the incentive on Network Rail to invest in spend to save schemes but also encourage Network Rail to invest in these schemes early in CP5 because it will have longer to benefit from these investments.

12.155 In our draft determination, we said that we would discuss these issues further with Network Rail during the summer of 2013. In particular we said that we would consider our proposals in terms of: Network Rail's incentives; the calibration of the incentives; what types of expenditure should be included in the mechanism; and how we keep the mechanism as simple as possible.

12.156 In our draft determination, we proposed that our spend to save mechanism should cover the following types of expenditure:

(a) information management schemes that improve the business, i.e. excluding schemes that just replace/update an existing capability; and

(b) income generating schemes.

12.157 Given our proposals we included in our draft determination an estimate of the total expenditure on information management schemes and income generating schemes in CP5 (including an estimate of income generating schemes that were not identified at time of the SBP) and the associated benefits.

Responses to our draft determination

12.158 Network Rail proposed that the scope of the investment framework should be extended to cover all investments that improve the cost of operating, maintaining, renewing and enhancing the railway. It argued that the policy should also include wheeled plant and other NDS schemes, corporate offices, depots and information management.

12.159 Network Rail has analysed a number of NDS, property and IM schemes undertaken during CP4. It notes that the analysis showed that the overall payback period achieved or it is expecting to achieve varies from a little under 5 years to around 15 years. Its analysis also noted that, for most schemes, there is a lag between when the investment was undertaken and the commencement of the financial savings. The lag between the investment taking place and savings being made may not allow good schemes to achieve the required efficiency targets by the end of the control period.

12.160 Network Rail therefore suggested we change our proposed incentive rates, so that our incentive rates are moved back by 1 year, i.e. we use our year 2 incentive rate for year 1. This means the incentive rate in year 1 would be 20% instead of 25% and the incentive rate in year 5 would be 0% instead of 5%.

12.161 Network Rail suggested that we should clarify how income and expenditure will be treated in the assessment of overall financial performance. It also thought that income and expenditure should be treated only as determination assumptions for the purposes of determining the revenue requirement, rather than specific targets.

12.162 Network Rail requested that if more 'good' schemes are identified, then the expenditure should be added to the RAB through the RAB roll forward process.

12.163 ATOC considered that our proposal reflected a desire to simplify the funding and financial framework for Network Rail.

12.164 Railfuture thought that the incentives on spend to save schemes should be consistent throughout the control period. It noted that because savings will continue into future control periods, Network Rail should not be disincentivised from spending late in the control period, where this investment would generate savings in the following control period.

Our comments on the responses to our draft determination

12.165 The spend to save mechanism helps to improve the incentives on Network Rail to invest late in the control period because it allows more expenditure to be added to the RAB in recognition of the shorter period of time that is available for Network Rail to achieve savings. For example, under the current RAB roll forward rules, in simple terms, if Network Rail spends £100 on an investment in year 3 of the control period, £75 is added to the RAB (incentive rate of 25%). If the investment generates savings of £15 by the end of the control period[257], then Network Rail would be worse off by £10 (£15 + £75 - £100 = -£10) and so it will not be incentivised to make the investment.

12.166 By changing the incentive on the RAB, so that £90 is added to the RAB (incentive rate of 10% as proposed by Network Rail), then the net benefit to Network Rail in CP5 is £5 (£15 + £90 - £100 = £5) and Network Rail will have stronger incentives to make this investment.

12.167 In the section below, we have included our comments on Network Rail's response, where we explain the reasons for our determination. Our comments on Network Rail's response about how we should treat spend to save schemes in our assessment of financial performance are included in the financial monitoring chapter (chapter 23).

Our determination

Overview

12.168 After considering the responses to our draft determination, and after further discussions with Network Rail, we have decided to revise our approach to spend to

[257] Note: the rest of the investment in the project and the return on the project is paid back in later control periods, so that the investment has a positive effect on the railway.

save schemes in CP5. As we note above this section does not cover the external part of the investment framework.

12.169 Our revised approach should not only improve the incentives on Network Rail to invest in spend to save schemes but also encourage Network Rail to invest in these schemes early in CP5 because it will have longer to benefit from these investments. It will also address the disincentive on Network Rail to make investments later in the control period because under our revised approach, the amount of money added to the RAB will be higher than using either the 'internal/Network Rail' part of the investment framework or the normal RAB roll forward rules.

12.170 To help improve transparency and provide clearer incentives on Network Rail, without overly complicating the financial framework, we will remove the 'internal/Network Rail' investment framework and apply our normal RAB roll forward process to deal with spend to save schemes but amend the RAB roll forward process for spend to save schemes and income generating schemes as we describe below, e.g. use different incentive strengths.

12.171 For the avoidance of doubt, this policy replaces our previous policy on the Internal/Network Rail' part of the investment framework that is contained in various historic investment framework documents[258].

Scope of the spend to save framework

12.172 In order for a scheme to be included in the spend to save framework, the scheme must:

(a) generate future cost savings for Network Rail or generate additional income;

(b) add to the economic value of the rail network, i.e. it must have a positive net present value (using the regulatory cost of capital);

(c) be capable of being efficiently financed and delivered; and

(d) for very large schemes, Network Rail can afford to finance the planned expenditure and hence the scheme would not unduly affect Network Rail's financial sustainability.

12.173 The types of schemes that we have decided to include in the spend to save framework are:

(a) information management schemes. This is a wider category than in our draft determination, where we had proposed to just include in the spend to save framework information management schemes that improve the business, i.e. those schemes that do not just replace/update an existing capability. We have

[258] A list of the historic investment framework documents is available at: http://www.rail-reg.gov.uk/server/show/nav.190.

widened the definition of information management because we are trying to keep the spend to save framework as simple as possible and following discussions with Network Rail on this issue, we recognise that it is difficult to distinguish between information management schemes that improve the business and those that replace/update an existing capability;

(b) plant and machinery (including wheeled plant). For individual projects with a total cost in excess of £5m (2012-13 prices), that provide incremental benefits to our determination, i.e. generate efficiency savings over and above the efficiencies specified in our determination. We have included these schemes in the spend to save mechanism as it is more transparent to include them in a separate category rather than including them in 'other', as this one of the main areas where spend to save schemes could go ahead;

(c) income generating schemes that provide additional property income; and

(d) other cost saving or income generating schemes. For individual projects with a total cost in excess of £5m (2012-13 prices), that were not included in Network Rail's SBP or our determination.

12.174 We are including other cost saving and income generating schemes in the spend to save framework because we do not want to limit the areas that Network Rail can invest in within its permitted business to information management, plant and machinery and property schemes. This will give the company more scope to generate additional savings or additional income, compared to the forecast in our determination.

12.175 However, other cost saving or income generating schemes would only be included in the spend to save framework in exceptional circumstances and where Network Rail could explain to our reasonable satisfaction, why the scheme was not included in its PR13 SBP or other PR13 submissions and discussions with us. This is because our determination already provides an appropriate level of funding for Network Rail to efficiently deliver its required outputs in CP5 in a safe and sustainable way.

12.176 Schemes that provide additional benefits such as safety schemes are not included in the spend to save framework as they are covered by the RAB roll forward policy for additional outputs.

Financial treatment of spend to save expenditure

12.177 After considering the responses to our draft determination and further discussions with Network Rail, we will adopt the following approach to cost saving schemes and to income generating schemes.

12.178 Firstly, we have decided to change the incentive rates on these schemes so that the incentive is 20% in year 1 of the control period, 15% in year 2 of the control period, 10% in year 3 of the control period, 5% in year 4 of the control period and 0% in year 5 of the control period.

12.179 To give effect to these incentive rates we will:

(a) add the efficient capital expenditure to the RAB in CP5 in the year it is incurred;

(b) for the avoidance of doubt, not deduct incremental efficiency savings or incremental income achieved during CP5 from the value of the expenditure that will be added to the RAB;

(c) add capitalised financing (to the end of the control period) to the cost of the scheme in accordance with the normal RAB roll forward rules; and

(d) deduct the relevant incentive rate from the RAB addition.

12.180 As an example, if Network Rail spends £100 (including capitalised financing costs) on a spend to save scheme in year 3, that generates £15 of income/savings by the end of the control period, this scheme would produce a net benefit to Network Rail of £5 (£15 + £90 - £100 = £5), as it would:

(a) keep the £15 of income/savings generated by the scheme;

(b) the RAB would increase by £90. This reflects the addition of the efficient capital expenditure and capitalised financing costs to the end of the control period (£100) less 10% of the RAB addition (given the incentive rate of 10% in year 3 of the spend to save framework); and

(c) incur £100 of debt.

12.181 For information management schemes, this treatment will apply to all expenditure in this category, which comprises expenditure included in the determination and additional expenditure through the spend to save framework, i.e. for the avoidance of doubt this treatment replaces the normal RAB roll forward rules for the capital expenditure required for these schemes. This treatment would be applied to aggregate overspend or underspend compared to the assumption in the final determination. This is because we recognise that our expenditure assumption does not relate to particular schemes but instead it is a general assumption of the amount of expenditure that could be incurred on these schemes in CP5 and the income/additional savings that those schemes could generate.

12.182 For income generating schemes, this treatment will apply to all expenditure in this category, which comprises expenditure included in the determination and additional expenditure through the spend to save framework, i.e. for the avoidance of doubt this treatment replaces the normal RAB roll forward rules and current investment framework rules for these schemes. This treatment would be applied to aggregate overspend or underspend compared to the assumption in the final determination. This is because we recognise that our expenditure assumption does not relate to particular schemes but instead it is a general assumption of the amount of expenditure that could be incurred on these schemes in CP5 and the income that those schemes could generate.

12.183 For plant and machinery and other cost saving schemes the treatment set out above only applies to the expenditure above the level assumed in the determination, as we will only fund individual projects above £5m. For spend below the level assumed in the determination for these categories of expenditure, the normal RAB roll forward rules would apply. For the avoidance of doubt, for the purposes of this policy the determination does not assume any spend on other cost saving schemes and does not cover the ORBIS project.

12.184 Currently, we carry out an ex-post review of 'internal/Network Rail' investment framework schemes and we will carry out a similar review of spend to save schemes in CP5 to ensure that the efficient expenditure, on those schemes that meet the spend to save criteria, is added to the RAB.

Cost of capital

Introduction

12.185 Since PR08, there have been a number of changes that have prompted us to reconsider how we apply the cost of capital to the calculation of Network Rail's revenue requirement and in particular the approach that we take to Network Rail's financing costs. These changes include:

(a) uncertainty in financial markets, which could make it harder for Network Rail to issue unsupported debt in CP5;

(b) a worse economic climate that has put greater pressure on the governments' finances; and

(c) industry reforms. There are a number of initiatives that are currently in progress or being considered, e.g. Network Rail devolution, alliancing, concessions and REBS.

12.186 In determining our approach to how we apply the cost of capital to the calculation of Network Rail's revenue requirement in CP5, we have considered these changes.

Adjusted WACC approach

Background, our decisions in previous decision documents and our draft determination

12.187 In our May 2012 document, we confirmed that we will use the adjusted WACC approach[259] to determine Network Rail's allowed revenue in CP5. Using the adjusted WACC approach is consistent with Network Rail being unlikely to issue unsupported debt in CP5. Also, given that Network Rail is financed entirely by debt, and its debt is

[259] This approach identifies the cost of capital for Network Rail but recognises that Network Rail's debt is government backed and that it does not pay dividends. Therefore, we adjust the cost of capital by deducting the equity surplus (i.e. the potential dividend payment) and on a net basis we fund our forecast of Network Rail's efficient financing costs.

indemnified by the UK Government through the FIM, i.e. the UK Government takes the risk of default, the adjusted WACC approach is consistent with Network Rail's efficient financing costs being significantly lower than its cost of capital[260].

12.188 In the adjusted WACC approach we:

(a) first, identify Network Rail's cost of capital reflecting all the risks that it faces before some of them are ultimately transferred to funders, and hence its full funding requirement. Therefore, the cost of capital will still be clearly visible in our determination. It will still be the cost of capital that will be used in the investment framework for calculating the financing costs of non-HLOS investment schemes as it is important that investment decisions are made using Network Rail's cost of capital. In the interests of transparency, the cost of capital will still provide the basis for a calculation of what Network Rail's charges would have been if we allowed it to recover the cost of capital rather than our forecast of its efficient financing costs;

(b) second, identify Network Rail's efficient financing costs[261] including any additional financing costs that need to be provided for financial sustainability purposes, e.g. for the difference between efficient financing costs (in real prices) and efficient financing costs that include implied inflation on nominal debt;

(c) third, recognise that Network Rail's efficient financing costs are lower than its cost of capital, due to the existence and use by Network Rail of the FIM. The difference between Network Rail's cost of capital and its efficient financing costs is called the equity surplus;

(d) fourth, the equity surplus is recycled before the revenue requirement is determined, i.e. the equity surplus is netted off Network Rail's bottom-line revenue requirement. We do this by including in the calculation of Network Rail's revenue requirement Network Rail's cost of capital in the calculation of the allowed return, then we deduct the equity surplus; and

(e) we then recognise that this approach, everything else being equal, significantly reduces Network Rail's revenue. This reduction in revenue could cause additional financial sustainability issues. So we address this issue by increasing the amortisation charge[262].

---

[260] Network Rail pays a fee to DfT for the credit enhancement it gains from the FIM (the FIM fee). By credit enhancement, we mean that effectively Network Rail can borrow at cheaper rates than if it did not have the FIM. This is equivalent to having a higher credit rating.

[261] Efficient financing costs are calculated on a cash basis, i.e. they exclude inflation accretion on index-linked debt. Accretion is the amount of inflation added to the value of index-linked debt to compensate debt holders for inflation.

[262] In the calculation of the revenue requirements this is called – 'Amortisation financial sustainability adjustment'.

12.189 As a general principle, we support the introduction of risk capital and unsupported debt into Network Rail because of the incentives that this would bring to bear on Network Rail's management and through this, the behaviour of the company, making it a more 'conventional' company. We therefore want to retain the option for this to happen in CP5. The adoption of the adjusted WACC approach does not preclude the introduction of unsupported debt in later control periods as discussed below.

12.190 In order to improve transparency we have also published in Annex F (further detail on the effect of the financial framework on the level of access charges) what our determination of Network Rail's revenue requirement and access charges would be if we had used its cost of capital without making the adjusted WACC adjustments or using the PR08 ring-fenced approach.

Responses to our draft determination

12.191 Arriva said there is no realistic prospect of the use of private funds in Network Rail in CP5 and hence it is inappropriate to continue to employ the higher cost of capital allowed under previous periodic reviews to permit this eventuality.

12.192 All the other material comments on the responses about cost of capital are included in the impact of financial framework on financial parameters chapter (chapter 13).

Our comments on the responses to our draft determination

12.193 Our comments on the calculation of the cost of capital are included in chapter 13.

Our determination

12.194 We confirm the decision to use the adjusted WACC approach that we set out in our draft determination.

Other cost of capital considerations

12.195 We have reviewed the other cost of capital considerations in light of our decision to use the adjusted WACC approach for CP5 and these issues are addressed below.

Treatment of financing costs

Background, our decisions in previous documents and our draft determination

12.196 Network Rail's financing costs in CP5 will include interest costs on financial instruments that it has already issued, i.e. part of its interest costs in CP5 are already fixed. These costs are referred to as embedded debt costs. As we are using the adjusted WACC approach and we have removed the in-year risk buffer, we decided in December 2012 to take Network Rail's embedded debt costs into account in our determination of Network Rail's financing costs in CP5.

12.197 It is important that Network Rail efficiently manages its financing costs, so we have reviewed Network Rail's embedded debt costs as part of our periodic review process.

We have included Network Rail's embedded debt costs in this determination, where we consider that these costs were incurred efficiently[263].

Responses to our draft determination

12.198 Apart from Network Rail's comments about the embedded debt assumptions which are discussed in chapter 13, we did not receive any material comments on the decision set out in our draft determination.

Our determination

12.199 We confirm the decision set out in our draft determination.

Industry reform initiatives

Background, our decisions in previous decision documents and our draft determination

12.200 As explained above, the adoption of the adjusted WACC approach does not preclude the introduction of risk capital and unsupported debt directly into Network Rail. It should also not obstruct the development of further alliances or a concession.

12.201 In the event of future industry reforms or other significant changes, e.g. a concession, we would need to decide how we would handle the effects of these changes on Network Rail's price control, e.g. we may need to turn off the equity surplus adjustment.

12.202 However, a policy of turning off the equity surplus adjustment is difficult to put in place ex-ante, as we do not know with enough clarity which industry reform initiatives could happen and how they could affect Network Rail, e.g. how material they could be. Therefore, it would not be clear how much of the equity surplus adjustment should be turned off. There are also other financial effects of the adjusted WACC approach, such as additional amortisation, which would need to be considered as they may no longer be appropriate.

12.203 In an extreme case, where all of Network Rail's business was sold to another party that is conventionally funded by unsupported debt and equity, we would unwind the effects of the adjusted WACC approach, e.g. turn off the equity surplus adjustment. Different industry reforms, such as alliances or operating concessions, may not raise the same issues and may not therefore require an unwinding of the adjusted WACC approach.

12.204 In our August 2012 consultation we said that we would handle these issues on a case by case basis, i.e. material changes would lead us to consider re-opening the price control, whereas immaterial changes would be logged-up to CP6. Network Rail proposed that instead we should develop an automatic mechanism for adjusting the

[263] Our assessment is in the round rather than an examination of every treasury instrument Network Rail has taken out.

price control but did not explain how this could work. So, we provided further time for Network Rail to develop an automatic mechanism.

12.205 Prior to the draft determination, Network Rail provided us with details of its proposal but we thought that it was not adequate. For example, there are many different types of concession that Network Rail could enter into and they will have a variety of financial effects, which cannot be predicted in advance. Network Rail's proposal did not address this matter.

12.206 Therefore, in our draft determination we decided to adopt the approach that we set out in our December 2012 document. This means that in CP5, we will consider any adjustments to the price control that may be needed following an industry reform initiative, on a case-by-case basis. Material changes will lead us to consider re-opening the price control, whereas immaterial changes will be logged-up to CP6.

Responses to our draft determination

12.207 We did not receive any material comments on the decision set out in our draft determination

Our determination

12.208 We confirm the decision set out in our draft determination.

Calculation of the FIM fee

Background, our decisions in previous decision documents and our draft determination

12.209 We decided in our December 2012 document to calculate the FIM fee for CP5 by reference to the long-run value of the credit enhancement that the FIM provides. This is because it is consistent with the way that the cost of capital is calculated as it takes a long-term view of the cost of debt, it is cost reflective and sends the right price signals. A cost of capital study carried out by CEPA has helped to inform our decision on the level of the FIM fee. This study is discussed in chapter 13.

Responses to our draft determination

12.210 We did not receive any material comments on the decision set out in our draft determination.

Our determination

12.211 We confirm the decision to calculate the FIM fee for CP5 by reference to the long-run value of the credit enhancement that the FIM provides as set out in our draft determination.

Use of a semi-annual rate for calculating allowed revenue

Background, our decisions in previous decision documents and our draft determination

12.212 In calculating Network Rail's allowed revenue we converted our full cost of capital, which is normally presented on an annual basis (i.e. 4.75% in PR08[264]), into a semi-annual rate (i.e. 4.64% in PR08) because we assume that Network Rail's cash flows are spread evenly through the year[265].

12.213 We decided to use the semi-annual rate in the calculation of allowed revenues because a regulated utility should be able to re-invest any cash surplus that it has available during the year at its cost of capital, as that is the discount rate that is appropriate to use to assess investment opportunities and is similar to the approach used by other regulators.

Response to our draft determination

12.214 We did not receive any material comments on the decision set out in our draft determination.

Our determination

12.215 We confirm the decision to use the semi-annual rate in the calculation of allowed revenues as set out in our draft determination.

Roll forward of Network Rail's debt into CP5 and CP6

Background, our decisions in previous decision documents and our draft determination

12.216 We decided to maintain our PR08 policy of rolling forward the debt assumptions used in our PR08 determination for CP4 for efficient movements in debt in CP4, as we need to maintain appropriate incentives on Network Rail to manage expenditure efficiently. We will also use this approach to roll forward our debt assumptions from CP5 to CP6.

12.217 For our draft determination, we reviewed Network Rail's SBP forecast of CP4 closing debt and considered that it was appropriate to use its forecast as our opening balance for CP5 as the underlying assumptions making up the forecast are consistent with the income and expenditure assumptions used elsewhere in our draft determination.

Responses to our draft determination

12.218 Network Rail has updated its forecast of its closing debt at the end of CP4 for our final determination. Network Rail's updated forecast corrected for errors identified in its

[264] This is on a real vanilla basis. A 'vanilla' return is based on a pre-tax cost of debt and post-tax cost of equity.

[265] Therefore, as Network Rail's cash flows are largely spread evenly through the year using an annual cost of capital would over compensate the company as not all the balances that the cost of capital is applied to will have been in existence for the full year.

SBP forecast and included updated assumptions on the amount of renewal and enhancement expenditure in the final year of CP4.

12.219 We did not receive any further material comments on the decision set out in our draft determination.

Our comments on the response to our draft determination

12.220 We have reviewed Network Rail's updated forecast of CP4 closing debt for our final determination. We have adjusted our assumptions for errors in the SBP forecast and the known actual outturn at 31 March 2013. However, to ensure that the assumptions that we use in our forecast of closing debt for the final year of CP4 are consistent with our income and expenditure assumptions for CP5 we have decided to continue to use the underlying levels of expenditure in Network Rail's SBP forecast.

12.221 If the level of debt at the end of CP4 is lower or higher than our forecast (e.g. if Network Rail does spend its most recent forecast of additional expenditure on renewals and enhancements which will increase debt), any efficiently incurred or avoided interest costs will be adjusted for in CP6, after considering the effect of the expenditure in the final year of CP4 on our assumptions for CP5.

Our determination

12.222 We confirm the decision to roll forward the debt assumptions used in our PR08 determination for CP4 for efficient movements in debt in CP4 and to roll forward the debt assumptions used in our PR13 determination for CP5 for efficient movements in debt in CP5.

12.223 Our analysis of the calculation of Network Rail's closing CP4 debt/opening CP5 debt is shown in detail in chapter 13.

The effect of inflation on financing costs in the adjusted WACC approach

Background, our decisions in previous decision documents and our draft determination

12.224 In our advice to ministers and in our August 2012 consultation we presented our calculation of Network Rail's efficient financing costs for the allowed revenue requirement including the inflation element[266] of nominal financing costs as that is a cash cost, and the adjusted WACC approach funds cash efficient financing costs, and we did not include inflation accretion[267] on index-linked debt as that is not a cash cost.

12.225 We did this because we decided to keep the introduction of the adjusted WACC approach as simple and transparent as possible. Therefore, we decided to:

[266] The interest rate on nominal debt includes compensation for the use of the money that has been borrowed for the life of the debt, e.g. if the real interest rate was 2% and the expected inflation rate was 3%, then the nominal rate would be approximately 5%.

[267] The amount of inflation added to the value of index-linked debt to compensate debt holders for inflation.

(a) calculate real efficient financing costs on a cash basis (i.e. using the conventional regulatory approach to the calculation of allowed revenue, except that it is based on financing costs instead of a cost of capital) and to adjust for financial sustainability. This is consistent with our approach to amortisation where we first calculate the amortisation assumption using our conventional approach and then we adjust for financial sustainability taking account of the adjusted WACC approach; and

(b) index the whole of the RAB by RPI, i.e. use the conventional regulatory approach to the indexation of the RAB.

Responses to our draft determination

12.226 We did not receive any material comments on the decision set out in our draft determination.

Our determination

12.227 We confirm the decision set out in our draft determination.

The use of financial indicators to assess financial sustainability

Background, our decisions in previous decision documents and our draft determination

12.228 In our December 2012 decisions document we decided that we would use the same set of financial indicators to assess financial sustainability for PR13 as we used in PR08. However, depending on the circumstances, the different financial indicators can have different levels of importance. In PR08, the adjusted interest cover ratio (AICR) and debt/RAB ratio were the key financial indicators that we used to assess Network Rail's financial sustainability.

12.229 However, the AICR does not provide us with useful information for CP5. This is because, by definition, under the adjusted WACC approach, the AICR is close to one and amortisation does not directly affect the AICR. Also, the use of the AICR is not as important for CP5 as Network Rail is not expecting to issue unsupported debt in CP5 and one of the main reasons for focusing on the AICR for CP4 was that the AICR is a key financial indicator used by credit rating agencies.

12.230 This means that our PR13 analysis has focused on the debt/RAB financial indicator. This is because it is an important financial indicator in its own right but also because the limit on Network Rail's financial indebtedness is set with reference to the debt/RAB limit.

12.231 Table 12.2 sets out the financial indicators and their definitions.

Table 12.2: Financial indicators

Indicator	Definition
Adjusted interest cover ratio (AICR)	FFO[1] less capital expenditure to maintain the network in steady state divided by net interest[2]
FFO / Interest	FFO divided by net interest
Debt[3] / RAB (Gearing)	Net debt divided by RAB
FFO / Debt	FFO divided by net debt
RCF[4] / Debt	FFO less net interest divided by net debt

Notes:

1. Funds from operations (FFO) is defined as gross revenue requirement less support costs, less traction electricity, industry cost and rates, less maintenance, less Schedule 4 & 8 costs and less cash taxes paid.
2. Net interest is the total interest cost including the FIM fee, but excluding the principal accretion on index-linked debt.
3. Debt is as defined in the Regulatory Accounting Guidelines[268].
4. Retained cash flow (RCF) is defined as FFO less net interest.

Responses to our determination

12.232 Network Rail's response about the use of additional financial indicators is included in the impact of financial framework on financial parameters chapter (chapter 13). We did not receive any other material comments on our use of financial indicators to assess financial sustainability.

Our determination

12.233 As we have not seen any representations or further evidence to persuade us to change the approach set out in our draft determination, we consider that this approach remains appropriate for CP5. We therefore confirm the approach in our draft determination to continue to use the financial indicators from PR08 but to focus on the debt to RAB ratio.

Amortisation and RAB

Amortisation

Background, our decisions in previous decision documents and our draft determination

12.234 Amortisation is the remuneration of past investment that has been previously added to Network Rail's RAB. It forms a major part of Network Rail's revenue requirement as Network Rail is a capital intensive business[269].

[268] This document is available at http://www.rail-reg.gov.uk/upload/pdf/regulatory-accounting-guidelines-2012.pdf.

[269] Amortisation is an accounting term that is largely equivalent to depreciation. In our context it relates to the RAB: whilst our RAB policy is now based on only adding actual capital expenditure to the RAB,

12.235 As we confirmed in our advice to ministers, our high-level approach to amortisation in CP5 is that it will be based on the long-run efficient annual average capital expenditure required to maintain the network in steady state (i.e. average long-run steady state renewals) subject to financial sustainability considerations. This means that the total allowance for amortisation in any year should be broadly equivalent to the long-run efficient annual average investment expenditure that is required in order to maintain the overall capability, age, condition, and serviceability of the network in steady state (i.e. the network would be neither getting better or worse if that level of capital expenditure is sustained over the long-run).

12.236 Our calculation of long-run steady state renewals is described in the asset management: maintenance and renewals expenditure chapter (chapter 8). The two main issues that affect the calculation (in addition to the underlying level of renewals) are that we:

(a) use the 35 year period from 2014-15 as the period for our assessment of Network Rail's long-run efficient annual average capital expenditure; and

(b) take account of the scope for future efficiency improvement after CP5 (the control period we are assessing in PR13) in our calculation of long-run efficient annual average capital expenditure and we have included an estimate of frontier shift over our thirty-five year assessment period in our calculation of the efficiency adjustment. This is because both current and future customers and funders should be sharing the cost burden of Network Rail's inefficiency.

12.237 In addition, as we decided in PR08, we will be amortising the non-capex RAB (around £4bn in 2012-13 prices) on a straight-line basis over thirty years.

12.238 In our May 2012 document, we confirmed that we would use the adjusted WACC approach to calculate Network Rail's allowed return in CP5. In order to address the financial sustainability issues that the adjusted WACC approach may cause, we also said that we would increase amortisation. After considering the effect of the adjusted WACC approach on all aspects of our draft determination, we assumed that for the purpose of our draft determination, total amortisation should be equal to our forecast of Network Rail's renewals spend in CP5. We have updated our assessment for our final determination. This is outlined in chapter 13.

Response to our draft determination

12.239 We did not receive any material comments on the approach set out in our draft determination.

---

the initial RAB was based on a value of the infrastructure assets and there were various non-physical asset based additions to the RAB prior to the current policy starting in CP4.

Our determination

12.240 We confirm the decision about how we calculate amortisation as set out in our draft determination.

RAB roll forward

12.241 This section of the chapter outlines our approach to the roll forward of the RAB in CP5 and covers the following issues:

(a) high-level principles;

(b) improvements to our approach in CP4;

(c) main features of our RAB roll forward policy in CP5;

(i) process for rolling forward the RAB in CP5;

(ii) our general policy for the RAB roll forward in CP5;

(iii) treatment of underspend on renewals and enhancements expenditure;

(iv) treatment of overspend on renewals and enhancements expenditure;

(v) non-delivery of outputs; and

(vi) exceptions to our general RAB roll forward policy,

(d) civils adjustment mechanism;

(e) enhancements cost adjustment mechanism for early GRIP projects;

(f) projects with specific protocols/arrangements;

(g) investment framework/spend to save; and

(h) key changes from CP4 to CP5.

High-level principles

Background, our decisions in previous decision documents and our draft determination

12.242 In our 2003 access charges review (ACR2003), we established a set of high-level principles for valuing the RAB, which were also used in PR08. These principles are:

(a) transparency: we will publish our assumptions and calculations in full. Network Rail's current and future lenders will have a clear and transparent basis on which to value the company. Looking ahead to the future, this should assist Network Rail if it raises additional debt without a government guarantee;

(b) consistency: our methodology must be consistent with the policy statements made previously. This is because predictability and consistency over time in our approach serves to improve confidence in the regulatory regime and will enhance Network Rail's ability to finance its business in future; and

(c) simplicity: we will strive, where possible, to ensure that the calculation of the RAB remains as straightforward as possible.

12.243 In December 2012, we decided to retain these principles for CP5.

Responses to our draft determination

12.244 We did not receive any material comments on the approach set out in our draft determination.

Our determination

12.245 We confirm the decision set out in our draft determination.

Improvements to our approach in CP4

Background, our decisions in previous decision documents and our draft determination

12.246 In our August 2012 consultation, we set out the key features of the RAB roll forward policy in CP4. We also explained that because we are keeping the current operating expenditure and capital expenditure incentive strengths for CP5 the same as in CP4, we intended to retain the same overall approach to the RAB roll forward in CP5 as it has appropriate incentive properties. We did, however, set out some areas where our RAB roll forward approach could be improved for CP5. These areas include:

(a) not indexing our renewals assumptions for changes in input prices[270];

(b) being consistent, where possible, between the treatment of renewals and enhancements to minimise any perverse incentives for Network Rail to favour one form of expenditure over the other;

(c) treating an overspend on enhancements in England & Wales in the same way as in Scotland (although we need to take account of the two price controls being separate);

(d) considering where our policies should distinguish between volume and unit cost based variances and how net underspend/overspends should be treated;

(e) whether to set out in our PR13 determination our criteria for determining when a non-delivery of outputs or Network Rail not maintaining the serviceability and sustainability of the network, would require a RAB adjustment and possibly an adjustment to efficiency;

(f) considering whether it would be useful to set out in our PR13 determination guidance on how we would adjust for a non-delivery of outputs or Network Rail not maintaining the serviceability and sustainability of the network in the short, medium and long-term;

[270] In PR08 we included a RAB adjustment to renewals expenditure for movements in input prices. The adjustment was based on movements in the infrastructure output price index (IOPI).

(g) whether we should treat all renewals underspends in the same way, given the difficulty we have in confirming that some types of renewals underspends are efficient, e.g. volume related underspends; and

(h) considering how the lack of clarity (due to a significant part of Network Rail's network being composed of long life assets) over the links between inputs, outputs and the serviceability and sustainability of the network in the short, medium or long-term could affect our RAB roll forward policy.

12.247 In our December 2012 financial issues decisions document, we decided not to index our renewals assumptions for changes in input prices, in order to be consistent with our decision to allocate input price risk to Network Rail[271]. This will improve the incentives on Network Rail to manage inflation risk related to its costs by including an upfront estimate of input price inflation in our efficiency assumptions in CP5 (for CP5 this is zero for all expenditure).

12.248 Apart from our treatment of input prices, we did not decide on the other issues in December 2012, as we wanted to discuss them further with Network Rail prior to the draft determination.

12.249 We had those discussions with Network Rail before our draft determination and in our draft determination we set out the following decisions:

(a) we decided that where possible, the RAB roll forward policy should not distinguish between renewals and enhancements expenditure to minimise any perverse incentives for Network Rail to favour one form of expenditure over the other, and to simplify the policy. In PR08, our enhancements expenditure assumptions for CP4 included contingency. For CP5, our enhancement expenditure assumptions do not include contingency, therefore we no longer need the £50m per annum deadband for enhancement overspend in England & Wales that we used in CP4, as Network Rail has not already been funded for that amount of money[272].

(b) in PR08 there are differences between the RAB roll forward treatment of enhancements expenditure in England & Wales and the treatment of enhancements expenditure in Scotland. There are advantages in having a consistent approach in England & Wales and in Scotland. However, as the two price controls are separate we have decided to retain the current differences in our approach between England & Wales and Scotland, i.e. for Scotland we will undertake a specific ex-post efficiency assessment;

[271] Therefore, to be clear, we have decided that we will not adjust Network Rail's renewals additions to the RAB in CP5 for movements in IOPI (or another specific inflation index).

[272] For the early stage GRIP schemes, our initial estimates in this document include contingency but when we assess these schemes through the enhancement costs adjustment mechanism, we will not allow contingency.

(c) in PR08 there are differences in the RAB roll forward treatment of volume and unit cost variances in renewals expenditure. We have decided that as it is the aggregate variance that is more important these variances should be treated equally to simplify the RAB roll forward policy. This should make the incentives on Network Rail more effective. The most appropriate way of implementing this change is to apply our approach for enhancements in England & Wales for renewals in England & Wales and in Scotland (i.e. overspend relating to additional volumes of work or unit costs for renewals in England & Wales and Scotland will be added to the RAB) unless the overspend is manifestly inefficient. This provides sufficient incentives against inefficient spend and is more practical than the complicated efficiency test that we used for renewals in England & Wales and Scotland in CP4. It would also maintain a consistent approach to renewals in England & Wales and Scotland;

(d) as in PR08 the burden of proof will be on Network Rail to show that it has met its required outputs. Where Network Rail has been funded to deliver an output that has not been delivered this may require a RAB adjustment. Due to the wide range of circumstances that can lead to Network Rail not delivering required outputs or maintaining the serviceability and sustainability of the network, we do not think that it is practicable for us to set out detailed prescriptive criteria for determining when and by how much a non-delivery of outputs would require a RAB adjustment. However, as our PR13 output specifications are more granular than those in PR08 we consider that it should be clearer whether Network Rail is meeting its requirements, e.g. using the new asset management indicators;

(e) we will decide in our RAGs, which will be published prior to the start of CP5, whether to provide more guidance on how an output adjustment should be calculated[273]. In particular, we will work with Network Rail to see if we can determine a methodology for calculating an adjustment for the non-delivery of performance outputs in CP5 (e.g. PPM) that can be included in the RAGs; and

(f) before we allow Network Rail to retain the benefit of an efficient underspend, consistent with our approach for assessing financial performance, we proposed in our draft determination to require Network Rail to[274]:

    (i) have successfully implemented a package of improvements on asset management, e.g. capability, asset policies, asset register, data quality, condition reporting and unit cost information;

[273] For example, how Network Rail should adjust for circumstances similar to its non-delivery of PPM and CaSL targets in CP4, which resulted in a £436m (in 2012-13 prices) adjustment to our assessment of Network Rail's financial performance for 2012-13.

[274] We discussed with Network Rail how this will work in practice, e.g. what the minimum confidence grade on its efficiency reporting should be, during the summer of 2013.

(ii) achieve a minimum confidence grade on its efficiency reporting, e.g. track volumes and unit costs;

(iii) justify its efficiencies by identifying the positive management actions that generated the efficiencies; and

(iv) explain how its expenditure is consistent with the delivery of its required outputs (including safety), is sustainable in the short, medium and long-term and is consistent with whole-life cost minimisation.

Responses to our draft determination

12.250 Network Rail largely supported the changes in our approach to the RAB roll forward from CP4 and the additional clarification except for the proposal that before we allow Network Rail to retain the benefit of an efficient underspend, it will need to show that it has successfully implemented a package of improvements on asset management and improved its reporting systems and processes. Network Rail's response on this issue is covered in detail in the monitoring, enforcement and reporting chapter (chapter 23), where we also discuss its views on how we decide whether an output has been delivered and how we value a non-delivery of outputs.

12.251 ATOC supported our proposal that Network Rail should only be able to retain the benefit of an efficient underspend if it has successfully implemented a package of improvements on asset management and improved its reporting systems and processes. ATOC considered this is an appropriate requirement to improve assurance to stakeholders as operators continue to work more closely with Network Rail. Also, train and freight operators have supported ORR's commitment to improve Network Rail's asset management and information.

12.252 In relation to the calculation of an output adjustment, a number of TOCs consider that, although a value based approach has significant theoretical merit, this should only be adopted if the incentive properties can be demonstrated and are transparent to operators. Some TOCs considered that the changes to the regulatory regime for CP5 are already significant and would not wish to see increased complexity unless there is a clear business case.

12.253 Train operators noted that the amount retained by Network Rail for any renewals underspend should be limited to instances where the work has been carried out and delivered more efficiently. Train operators considered that Network Rail should not benefit from not doing a renewal in the first place.

Our comments on the responses to our draft determination

12.254 In chapter 23 we say that we are continuing to discuss with Network Rail whether, before we allow Network Rail to retain the benefit of an efficient underspend, it will need to show that it has successfully implemented a package of improvements on asset management and to its reporting systems and processes.

12.255 We are also discussing with Network Rail its views on how we decide whether an output has been delivered and how the adjustments for the non-delivery of outputs will be calculated. We will publish our decisions in our RAGs prior to the start of CP5.

Our determination

12.256 With the exception of the proposals on:

(a) how we decide whether an output has been delivered; and

(b) whether, before we allow Network Rail to retain the benefit of an efficient underspend, it will need to show that it has successfully implemented a package of improvements on asset management and improved its reporting systems and processes as described above,

we have not seen any representations or further evidence to persuade us to change the decisions set out in our draft determination.

12.257 We consider that the remaining decisions remain appropriate for CP5. We therefore confirm the decisions in our draft determination.

Main features of our RAB roll forward policy in CP5

Background and our draft determination

12.258 The main features of our RAB roll forward policy for CP5 that we set out in our draft determination are set out below.

Process for the RAB roll forward in CP5

12.259 The process for rolling forward the RAB in each year of CP5 will be to:

(a) adjust the CP5 opening RAB per our PR13 determination into the price base of the relevant year;

(b) add the renewals and enhancements RAB additions (after adjusting for the effect of the RAB roll forward policy as described below);

(c) adjust as appropriate for the non-delivery of outputs or not maintaining the serviceability and sustainability of the network in the short, medium or long-term; and

(d) deduct our PR13 amortisation assumption.

Our general RAB roll forward policy for CP5

12.260 As our determination for England & Wales is separate to our determination for Scotland, renewals and enhancements will be rolled forward separately for England & Wales and for Scotland in accordance with our PR13 determination. We will also separately roll forward the indicative RABs for each of the nine England & Wales operating routes.

12.261 As we do not think that general inflation risk is efficiently controllable by Network Rail, we have decided to adjust Network Rail's RAB by the actual movements in general

inflation in CP5. Otherwise the real value of Network Rail's asset base (against which it raises finance) could be eroded, which could ultimately reduce the company's ability to access financial markets and finance the renewal and enhancement of the network. This approach means that Network Rail will neither gain nor lose from the effects of general inflation.

12.262 We will retain our PR08 approach and make yearly RAB adjustments for variances between our general inflation assumptions (i.e. RPI) and the actual outturns rather than unnecessarily waiting for the end of the control period. This approach has no effect on Network Rail's revenues.

12.263 To encourage Network Rail to improve efficiency throughout CP5, the incentives that Network Rail faces are equalised across the five years of the control period. For example, Network Rail faces the same incentive to outperform in the last year of CP4 as it does in the first year of CP5 and will bear the same cost of efficient overspend in year 5 of CP5 as in year 1 of CP5.

12.264 In order to simplify the calculations of the financial effect of a five year retention in our PR13 determination we have set the incentive rate at 25%, which is approximately the same as five years allowed return at 4.31% (the PR13 cost of capital). This is also called the 25% pain/gain sharing mechanism, which provides an appropriate incentive on Network Rail to manage renewals and enhancements efficiently but does not expose it too much to risk. Also, in order to simplify the calculation we make the relevant RAB additions/deductions in the year when they occur.

12.265 Network Rail will not be penalised for, or benefit from, rescheduling its renewals and enhancements programme (deferring work or bringing work forward) within CP5 where outputs are met[275]. By not penalising or rewarding Network Rail we mean that (subject to Network Rail showing that the required outputs in CP5 have been delivered and there is no adverse effect on the serviceability and sustainability of the network in the short, medium or long-term), we will not treat the variance in expenditure as an efficiency or inefficiency.

12.266 This means that we will adjust the RAB for the financial effect of rescheduling activity, so that Network Rail does not retain/bear the financing benefit/cost of the rescheduling, i.e. if there is a deferral of work from year 1 to year 2, in our PR13 determination Network Rail will have received an allowed return on that work for year 1. In order to make the effect of rescheduling within CP5 neutral, we will deduct from the RAB the amount of financing that Network Rail received for that work for the period until the work is completed in year 2. For the avoidance of doubt, these adjustments are not subject to the 25% pain/gain sharing mechanism.

[275] This should help to smooth the investment cycle – providing greater certainly and predictability for the supply chain. Also, it avoids incentivising Network Rail to inappropriately defer work or bring work forward.

12.267 As the actual outturn for renewals and enhancements expenditure in 2013-14 will not be available until the publication of the 2013-14 regulatory accounts in July 2014 we intend, where appropriate, to make an adjustment as part of the next access charges review, to the CP6 opening RAB at 1 April 2019. The adjustment, including where relevant the associated capitalised financing, will take account, where appropriate, of the difference between the final outturn figures for CP4 shown in the 2013-14 regulatory accounts and the forecast 2013-14 RAB movements included in our PR13 final determination.

12.268 For CP5, we have largely used Network Rail's statutory accounting policies as the basis for defining what can be added to the RAB as renewals and enhancements. This was because it is a transparent approach and one that is easy to understand. To ensure that our RAB roll forward policy is complied with, the audits of the regulatory accounts in CP5 will confirm that the boundaries between renewals and enhancements, and between maintenance and renewals/enhancements are the same as used in our PR13 determination and the capitalisation of overheads is on the same basis as in our PR13 determination.

12.269 Given that CP5 is a five year price control, the assessment of the RAB is a cumulative assessment for CP5, i.e. an overspend in year 1 could be offset by underspend in year 2. This means that it will only be possible to finalise the value of the RAB once CP5 is completed. All annual calculations of the RAB during CP5 in Network Rail's regulatory accounts will therefore be provisional.

12.270 To avoid undue complexity, agreed deferrals of expenditure from CP4 to CP5 (e.g. for elements of the electrification programme) will be treated under the CP5 RAB roll forward policy unless agreed otherwise.

Treatment of underspend on renewals and enhancements expenditure

12.271 Network Rail will retain 25% of an efficient underspend irrespective of whether the underspend is due to a variance in volumes or unit costs.

12.272 Given the information asymmetry between Network Rail and us, it is for Network Rail to show that a reduction in work volumes is efficient and does not inappropriately affect the serviceability and sustainability of the network in the short, medium or long-term. Where Network Rail cannot show that a reduction in volumes is efficient, any cost savings related to the deviation from the current agreed asset policies will be deemed inefficient and the related cost savings will be deducted from the RAB without Network Rail retaining 25% of the benefit. As in PR08 the burden of proof will be on Network Rail to show that it has delivered its required outputs.

Treatment of overspend on renewals and enhancements expenditure

12.273 If an efficient overspend is eligible for a RAB addition, Network Rail will generally bear 25% of the overspend (including when an overspend is offset against an efficient underspend). If the overspend is not eligible for a RAB addition, Network Rail will bear 100% of the cost of the overspend.

12.274 Overspend relating to additional renewals work in England & Wales and in Scotland will be added to the RAB unless the overspend is manifestly inefficient.

12.275 Manifestly inefficient enhancement expenditure will not be added to the RAB. Therefore, Network Rail will have to provide an explanation to us as to why additional investment is justified. This will ensure overspend that is either:

(a) outside of the scope of the HLOS requirements (if relevant);

(b) not meeting a customer reasonable requirement;

(c) not related to railway activity; or

(d) not adding economic value to the railway,

would not be eligible to be added to the RAB. We would expect a key element of Network Rail's justification would be evidence that internal project management and investment authorisation controls had been properly applied.

12.276 In order to ensure the price control is sufficiently flexible to cope with planning uncertainty, where the governments or other funders agree with Network Rail that Network Rail will deliver additional outputs during the control period, we can where appropriate log-up the efficient cost (including capitalised financing costs) of delivering these additional outputs for inclusion in the RAB at the beginning of the next control period.

Non-delivery of outputs

12.277 As PR13 is an output based determination, Network Rail should not benefit from a non-delivery of its required outputs irrespective of whether it is under/over spending. We will therefore ensure that if Network Rail does not deliver its required outputs in CP5 or maintain the serviceability and sustainability of the network in the short, medium or long-term, then it will not retain the associated financial benefit. We will also make an adjustment for capitalised financing on the logged down amount and Network Rail will not retain 25% of an underspend.

12.278 We will do this by either making an appropriate deduction from the RAB or not funding the company for any deferred work that it will not be doing in CP5 as appropriate. We will make this adjustment regardless of whether there has been an underspend or overspend. Our adjustment will be calculated with reference to our PR13 determination and RAGs.

12.279 In PR08 our adjustments for the non-delivery of outputs were based on the amounts of expenditure that Network Rail avoided by not delivering its outputs or failing to maintain the serviceability and sustainability of the network in the short, medium or long-term. For PR13, we are continuing to discuss with Network Rail whether a value based adjustment would be more appropriate and we will publish our decision in relation to this matter in the RAGs prior to the start of CP5.

Exceptions to our general RAB roll forward policy

12.280 In our draft determination we identified four exceptions to our general RAB roll forward policy for the civils adjustment mechanism, enhancements cost adjustment mechanism, projects with specific protocols/arrangements and spend to save schemes. These exceptions are described later in this chapter.

Responses to our draft determination

12.281 Network Rail disagreed that a reduction in expenditure should be deemed to be inefficient unless Network Rail can show that it was efficient. Network Rail noted there is an established means of assessing the sustainability of its asset policies and it thinks that the same approach should be taken when we or the reporter assess sustainability for financial performance purposes. Network Rail considered that some of the recent statements from Arup and us have indicated a different approach to sustainability, which Network Rail considers is subjective.

12.282 Network Rail emphasises that we considered that there is only a 45% confidence in Network Rail meeting its CP5 PPM target. Given this, Network Rail considered that there is little prospect of it being able to demonstrate that any cost saving is efficient. Network Rail claimed that the mechanism therefore provides an incentive to overspend rather than to strive for savings. Network Rail considered that there should be a presumption that underspend is efficient and it should be the aggregate variance that is important in order to avoid detailed reconciliations and bureaucracy.

12.283 Network Rail would like us to clarify in our final determination in what circumstances the cost of capital approach should be used when rolling forward its RAB and when the adjusted WACC approach should be used. It suggested that the rates to apply should be as follows:

(a) rescheduling of capital expenditure within CP5 whilst still meeting outputs. It thinks that Network Rail should be held neutral to this and hence the capitalised financing should be based on the cost of financing that it received in the revenue requirement (i.e. the adjusted WACC);

(b) deferral of work from CP5 to CP6: It thinks that this would result in a RAB reduction that should include an adjustment for the financing costs it has received on the logged down amount and so in these situations the adjustment should be calculated using the adjusted WACC rate; and

(c) additional investments requested by governments and other funders in CP5, or additional Network Rail promoted investments (income generating and spend to save schemes). As these are additional investments over and above those funded through the PR13 determination, the normal real cost of capital should apply for the capitalised financing costs (i.e. 4.31%).

Our comments on the responses to our draft determination

12.284 We note in chapter 23 that we continue to consider that the burden of proof should be on Network Rail to show that any underspend is efficient, so we do not think that underspends should be deemed to be efficient, this is particularly because of the need for us to hold Network Rail to account, given its corporate structure and financing.

12.285 Network Rail's comment that because we are using the adjusted WACC approach, we should not use the cost of capital for calculating the effect of capitalised financing through the RAB roll forward policy, has some merit. However, the adjusted WACC approach is, as far as possible, to be solely used for calculating Network Rail's revenue requirement as we think that it is better that financial decisions should be made with reference to Network Rail's cost of capital, which reflects the risks it faces. Therefore, for RAB capitalised financing adjustments, we have decided to use Network Rail's cost of capital to calculate the adjustment.

Our determination

12.286 As we have not seen any representations or further evidence to persuade us to change the approach set out in our draft determination, we consider that this approach remains appropriate for CP5. We therefore confirm the approach in our draft determination.

Civils adjustment mechanism

Background and our draft determination

12.287 As explained in the asset management: maintenance and renewals expenditure chapter (chapter 8), Network Rail thinks that a significant backlog of work has developed in civils. However, Network Rail's SBP did not fully demonstrate this which prevented us from concluding on the level of efficient civils expenditure in our draft determination. Because of this we are having to take the unusual step of implementing a civils adjustment mechanism for the RAB in CP5 as follows:

(a) in years 1 and 2 of the control period, Network Rail will be expected to deliver the volumes of civils work that it proposed to deliver in its PR13 SBP. If Network Rail under delivers on its planned volumes it will have to catch up, so Network Rail will not benefit from an under-delivery including the capitalised financing effect. Over-delivery of volumes will be subject to the normal RAB roll forward policy (in simple terms, the RAB roll forward policy allows Network Rail to retain 25% of efficient underspend but requires it to bear 25% of overspend). Any under or over spend on unit costs will be subject to our normal RAB roll forward policy; and

(b) the actual volumes and unit costs to be applied in years 3, 4 and 5 of the control period are not yet known. Our view on the level of efficient civils expenditure in these years will therefore depend on the outcome of our assessment of the plan of work that we will require Network Rail to publish by 31 March 2015. These

volumes and unit costs could be under or over those assumed in our determination. If Network Rail under-delivers on its planned volumes it will have to catch up, so Network Rail will not benefit from an under-delivery including the capitalised financing effect. Over-delivery of volumes will be subject to the normal RAB roll forward policy. Any under or over spend compared to our revised determination for unit costs will be subject to the normal RAB roll forward policy as described above.

12.288 Any adjustments to Network Rail's RAB and revenue requirement that are needed following our adjustments to the civils assumptions, will be logged up/down to Network Rail's RAB and/or the opex memorandum account for CP6.

Responses to our draft determination

12.289 Network Rail supported the principle of the civils adjustment mechanism and agreed that it is an appropriate way of recognising the current level of uncertainty about the efficient level of activity and expenditure for renewal of these assets.

12.290 Passenger Focus also agreed that the civils adjustment mechanism is appropriate given the current uncertainty over the work required.

12.291 No further material consultation comments were received about the RAB treatment of the civils adjustment mechanism.

Our comments on the responses to our draft determination

12.292 We did not receive any comments that did not support the approach set out in our draft determination.

Our determination

12.293 We confirm the approach set out in our draft determination.

Enhancements cost adjustment mechanism for early GRIP projects

Background and our draft determination

12.294 The RAB roll forward policy for early GRIP projects will operate normally and, for the avoidance of doubt, an incentive payment that Network Rail makes to a TOC to help in delivering an efficient project can be included in the efficient cost of the project. However, as discussed in the enhancements expenditure chapter (chapter 9), our PR13 determination for efficiently incurred enhancement costs will be adjusted at the end of 2014-15 following our review of the costs of the early GRIP projects. Any adjustments to Network Rail's RAB and revenue requirement that are needed following this review will be logged up/down to Network Rail's RAB and/or the opex memorandum account for CP6.

Response to our draft determination

12.295 We did not receive any material comments on the approach set out in our draft determination.

Our determination

12.296 We confirm the approach set out in our draft determination.

Projects with specific protocols/arrangements

Background and our draft determination

12.297 In our draft determination we set our approach to projects with specific protocols/arrangements.

Responses to our draft determination

12.298 We did not receive any material comments on the approach to projects with specific protocols/arrangements set out in our draft determination.

Our determination

12.299 Our approach to projects with specific protocols/arrangements is as set out below.

Introduction

12.300 The following enhancement projects have either an established separate protocol, other arrangements or are subject to a target price arrangement that identifies a target price and a pain/gain share mechanism, which will apply if outturn costs vary from the target price. The RAB would then be adjusted at the start of CP6 to reflect these arrangements. This approach should ensure that Network Rail is incentivised to manage the financial risk of the project but is not exposed to open ended financial risk. We are continuing to discuss with the Welsh Government and DfT the specific arrangements for the Welsh Valley Lines project.

Thameslink

12.301 In CP5, Network Rail will complete the final stage of the Thameslink programme giving a further improved train service of up to 24 trains per hour between St Pancras and Blackfriars stations, at a total cost of about £1.6bn (2012-13 prices). This phase also provides the required infrastructure to allow operation through London Bridge. There is a protocol in place between Network Rail and DfT under which a target price and a pain/gain mechanism has been agreed and Network Rail's obligations are defined.

Crossrail

12.302 The Crossrail project involves work outside of the central tunnel section with a total cost of about £1.5bn (2012-13 prices). These works will facilitate new train services from Maidenhead and Heathrow in the west to Shenfield and Abbey Wood in the east. A protocol is in place between Network Rail, Crossrail Limited and the DfT that details Network Rail's obligations. Under the terms of this protocol a target price and a pain /gain share mechanism have been agreed.

Edinburgh to Glasgow Improvement Programme (EGIP)

12.303 The Edinburgh to Glasgow Improvement Programme (EGIP) programme will deliver more frequent and faster rail services between Scotland's two principal cities at a total

cost in CP5 of around £500m (2012-13 prices). Network Rail and Transport Scotland are finalising the commercial arrangements, which will incorporate a pain/gain mechanism. Network Rail's obligations will be established in the enhancements delivery plan, which we will hold it to account for.

Borders

12.304 The Borders project comprises a new railway line linking the Midlothian and Scottish Borders areas to central Edinburgh and the existing national network at a total cost in CP5 of about £174m (2012-13 prices). Like EGIP, Network Rail and Transport Scotland are finalising the commercial arrangements, which will incorporate a target price and a pain/gain mechanism.

ETCS

12.305 In our draft determination, we included £194m (2012-13 prices) of ETCS cab-fitment expenditure in renewals. This has now been re-allocated to enhancements. As we discussed in the enhancements expenditure chapter (chapter 9), the expenditure on ETCS will be treated on an emerging efficient cost basis. This means that the normal RAB roll forward approach will not be used for this expenditure and instead efficient expenditure will be added to the RAB following an ex-post review.

Additional HLOS depots and stabling enhancements

12.306 As we discussed in chapter 9, the £312m (2012-13 prices) of expenditure on additional HLOS depots and stabling enhancements will be treated on an emerging efficient cost basis. This means that the normal RAB roll forward approach will not be used for this expenditure and instead efficient expenditure will be added to the RAB following an ex-post review.

Ring-fenced funds

12.307 For ring-fenced funds, expenditure above the level of the funds will not be added to the RAB and Network Rail will not benefit from an underspend, including the effect of capitalised financing. We will carry out an ex-post review of Network Rail's expenditure on a sample basis. One of Network Rail's regulated outputs for CP5 is to deliver a plan to maximise the reduction in the risk of accidents at level crossings. Our draft determination included £67m (in 2012-13 prices) of enhancement expenditure to support this work. In our final determination, following the receipt of new evidence from Network Rail, we have decided to increase this funding by £32m to £99m (in 2012-13 prices). The level of this fund is capped (i.e. the maximum RAB addition is £99m, even if Network Rail spends more than that) and if Network Rail spends less than £99m, it will not be able to rollover any unused CP5 level crossing safety fund into CP6, i.e. the unused amount (including capitalised financing) will not be included on the RAB.

Development fund

Introduction

12.308 As set out in the financial incentives chapter (chapter 19), we have signalled our support for R&D and innovation as a means of improving Network Rail's productivity and reducing its costs in the medium to long-term.

Funding in our determination

12.309 In our determination, we have provided £144m (2012-13 prices) of HLOS funding for the development fund, this includes R&D (including innovation), work to develop the link between High Speed 2 and the existing network and project development work for CP6. The R&D part of this funding (£52m in 2012-13 prices) is ring-fenced for R&D projects only.

12.310 In addition, we have assumed that Network Rail spends £50m (in 2012-13 prices) more than the HLOS funding through the matched funding process as described below, so our determination includes a total RAB addition of £194m in 2012-13 prices (£144m + £50m) for R&D, work to develop the link between High Speed 2 and the existing network and project development work for CP6.

Treatment of actual expenditure in CP5 on R&D

12.311 For R&D, due to the unique nature of the expenditure on R&D (in terms of risk and uncertainty), if certain conditions are met, such as the agreement of the governance process and robust evidence being provided that the expenditure will increase the value of the railway, this spend can be added to the RAB in CP5 up to a cap of £52m (2012-13 prices). This is discussed in more detail in chapter 19.

12.312 For R&D, work to develop High Speed 2 and project development work, efficient expenditure up to a maximum of £92m (£144m - £52m) can be added to the RAB, subject to an ex-post review of the efficiency of this expenditure.

12.313 For Network Rail's development fund expenditure, Network Rail will not benefit from any underspends (including the related capitalised financing).

Matched funding

12.314 In the financial incentives chapter (chapter 19), we further signal our support for Network Rail's R&D expenditure by introducing the matched funding mechanism. Subject to a well justified proposal from Network Rail (which we will assess on an ex-ante basis) for a portfolio of projects which it is either using its financial outperformance to fund or using third party funding, we will match each additional pound which Network Rail (or a third party) spends on R&D up to £50m over CP5. For the avoidance of doubt, the amount Network Rail spends on matched funding projects will not be added to the RAB but our part of the funding will be.

12.315 For example, if Network Rail spends £20m on a matched funding project (including third party funding), then our funding will be £10m and in total £10m will be added to the RAB. In order to incentivise Network Rail, we have assumed these projects go

ahead in CP5 and we have added £50m (2012-13 prices) to the RAB in our determination.

12.316 If the £50m of matched funding is not used in CP5, we will adjust Network Rail's RAB, so that it does not benefit from an underspend in relation to matched funding projects (including the related capitalised financing).

Rollover of CP4 ring fenced funds

12.317 Our general rule is that underspend on specific funds cannot be rolled forward from one control period to the next. However, due to the exceptional circumstances discussed in the enhancements expenditure chapter (chapter 9), we are allowing some unused CP4 funds to be rolled forward into CP5. Therefore £40m (2012-13 prices) of unused CP4 strategic freight network funding will be included in the CP5 strategic freight network fund, and £29m (2012-13 prices) of unused CP4 access for all funding and £7m (2012-13 prices) of unused CP4 national stations improvements programme funding will be added to the CP5 Stations Improvements Programme fund.

12.318 In CP5, Network Rail will not benefit from an underspend on these funds and no additional expenditure on these projects above the levels set out above will be added to the RAB. We will adjust Network Rail's RAB at the end of CP4, so that Network Rail does not benefit (including capitalised financing) from the unused CP4 funds.

Spend to save

Background and our determination

12.319 Our approach to spend to save schemes is set out above in the spend to save policy section of this chapter.

Key changes from CP4 to CP5

12.320 The decisions that we have set out in this document will mean that the approach to the RAB roll forward will be different in CP5. In summary, the main differences between our RAB roll forward policy in CP5 compared to CP4 are:

(a) we will not adjust our renewals assumptions for movements in the IOPI index (as outlined in our December 2012 decisions document);

(b) overspend relating to additional volumes of work or unit costs for renewals in England & Wales and Scotland will be added to the RAB, unless the overspend is manifestly inefficient. This is instead of having a complicated efficiency test;

(c) there will be no enhancement deadband; and

(d) as we are using the adjusted WACC approach to Network Rail's cost of capital there is no ring-fenced fund in CP5. This means that there will be no adjustment for the element of renewals and enhancements that are funded by a ring-fenced fund in CP4.

Non-capex additions to the RAB and the opex memorandum account

Background, our decisions in previous documents and our draft determination

12.321 We decided in PR08 that only capital expenditure will be added to the RAB. Incentive payments, which before CP4 were added to the RAB at the start of the next control period, are now remunerated via the opex memorandum account. This works by 'logging up' the payment to the account during a control period and then releasing any monies from this account over an appropriate period of time, which is generally across the next control period.

12.322 In our December 2012 decisions document, we explained that we had decided to retain the use of the opex memorandum account for CP5. This is because it:

(a) avoids distorting the RAB;

(b) is more transparent;

(c) formalises the way these issues are resolved, which reduces regulatory risk; and

(d) allows us to smooth the effect of the release of monies in this account to Network Rail on Network Rail's income and charges.

Responses to our draft determination

12.323 Network Rail supported the retention of the opex memorandum account and agreed that it should continue to cover the same items as in CP4.

Our comments on the responses to our draft determination

12.324 We did not receive any comments that did not support the approach set out in our draft determination.

Our determination

12.325 We confirm the decisions that only capital expenditure will be added to the RAB and to retain the use of the opex memorandum account for CP5 as set out in our draft determination.

Reactive maintenance

Background and our draft determination

12.326 In our August 2012 consultation, we explained that we were considering whether Network Rail's reactive maintenance costs should be remunerated in the year these costs are incurred, (i.e. for the purpose of calculating the revenue requirement, treat them in the same way as operating and other maintenance costs).

12.327 This would improve transparency, as Network Rail currently accounts for reactive maintenance costs, as operating costs in its statutory accounts, but as capital expenditure (renewals) in its regulatory accounts (to be consistent with our PR08 determination). This means that at the moment Network Rail needs to provide in its regulatory accounts a reconciliation of maintenance and renewals costs between its statutory accounts and its regulatory accounts.

12.328 Everything else being equal, the increase in maintenance costs from treating reactive costs as maintenance costs (and hence the revenue requirement) would largely be offset by a reduction in amortisation (and hence the revenue requirement), as we would expect the average long-run steady state renewals to be lower by an equivalent amount[276]. This means that a change in this policy should not have a material impact on Network Rail's revenue requirement.

12.329 Most respondents to our August 2012 consultation on financial issues thought that we should remunerate reactive maintenance costs in the year that these costs are incurred, largely because they thought that this is more transparent.

12.330 Network Rail did not support remunerating reactive maintenance costs in the year that these costs are incurred because:

(a) there could be an increase in preventative maintenance in CP5;

(b) there will still be other differences between the regulatory and financial accounts; and

(c) the current regulatory treatment reflects how it manages civils expenditure.

12.331 However, Network Rail's SBP assumed that its operational property inspections (CEFA) contract costs (approximately £50m per year), which are part of reactive maintenance, would all be remunerated in the year incurred. For our draft determination we further discussed this issue with Network Rail and it thought that it could identify reactive maintenance costs.

12.332 Given these factors, in order to improve transparency, we proposed in our draft determination that Network Rail's reactive maintenance costs should be treated as maintenance costs and remunerated in the year that they are incurred.

Responses to our draft determination

12.333 Network Rail did not support treating reactive maintenance costs as maintenance costs in CP5 as it manages its activities to renew and maintain civils and buildings on an integrated basis. Network Rail also noted that that this would be inconsistent with our proposal for a specific civils regime during CP5. Network Rail was also concerned that not including reactive maintenance in renewals may result in incentives for Network Rail to transfer activities between operating and capital costs in a manner that may be sub optimal.

12.334 Network Rail argued that there is considerable uncertainty about the amount of civils and buildings expenditure that would be classified as reactive maintenance in the statutory accounts. Network Rail said that a mechanism is needed to enable the

[276] Although there could be an effect, as our calculation of efficiency for maintenance in CP5 is based on the five years of that control period, whereas the calculation of efficiency for average long-run steady state renewals in CP5, is over thirty-five years.

baseline to be adjusted to reflect the actual balance between reactive renewals and maintenance in CP5.

Our comments on the responses to our draft determination

12.335 As explained below, Network Rail's comment that if we treat reactive maintenance costs as maintenance costs, there will be different regulatory regimes in place given the civils renewals mechanism, confuses the issue. Our policy on reactive maintenance should not be driven by the civils renewals mechanism, as that is a short term solution to a problem.

12.336 The issue we are discussing here is how reactive maintenance costs should be funded in our determination and reported in Network Rail's regulatory accounts and as we set out in the asset management: maintenance and renewals expenditure chapter (chapter 8), reactive maintenance costs are not part of the civils renewals mechanism.

12.337 The issue of sub optimal incentives applies to the whole of maintenance and capital expenditure, where there are different treatments of under/over spends in maintenance compared to capital expenditure. These different incentives strengths for maintenance and capital expenditure have been in place since PR08 and as explained above, we will continue to use them in CP5. However, it is for Network Rail to manage its business so that it does not make sub optimal decisions.

12.338 The more important issue in relation to incentives is how variances in reactive maintenance are treated in our assessment of Network Rail's financial performance[277]. The introduction of the civils renewals mechanism has already complicated this issue because we will need to have a different treatment of civils renewals volumes compared to civils unit costs.

12.339 Therefore, we will resolve how reactive maintenance should be treated in our assessment of Network Rail's financial performance in the RAGs that will be published prior to the start of CP5.

Our determination

12.340 We have received no new evidence from Network Rail or any other representations or further evidence to persuade us to change the proposal set out in our draft determination.

12.341 For the reasons set out above we have decided that Network Rail's reactive maintenance costs should be treated as maintenance costs and remunerated in the year that they are incurred.

[277] This is covered in the financial monitoring chapter (chapter 23).

Funding of enhancements

Background and our draft determination

12.342 In our August 2012 consultation, we consulted further on our approach to amortisation, and in particular whether enhancements should be amortised immediately after they come into use. We raised this issue because amortisation based on average long-run steady state renewals does not fund the original construction cost of an enhancement, just the renewals needed to maintain the asset in a suitable condition[278].

12.343 This approach can be appropriate for an enhancement that adds economic value to the network for a very long time period (e.g. some rail bridges are over 100 years old and are still in regular use). However, if enhancements proposed in the HLOSs have lower economic contributions over the long-term than their costs, we need to consider how these enhancements should be funded.

12.344 In our August 2012 consultation, we set out three options for funding HLOS enhancement expenditure where the economic contribution that an enhancement provides to the network over the long-term is lower than its cost[279]. The three broad options were:

(a) as our amortisation policy takes into consideration long-term financial sustainability issues, we could increase amortisation to reduce Network Rail's debt;

(b) these enhancements could be funded on a pay-as-you-go basis, i.e. they are remunerated like maintenance costs; or

(c) amortised over a fixed period of time that reflects their useful economic life.

12.345 All of these options can resolve the funding issue. However, we consider that it is more transparent to fund these enhancements, on a pay-as-you-go basis (i.e. option (b)), or to amortise them over a fixed period of time reflecting their useful economic life (i.e. option (c)), instead of increasing amortisation for financial sustainability reasons (i.e. option (a)).

12.346 At a high-level we consider that enhancements that can be added to Network Rail's RAB should be projects that are broadly consistent with our investment framework criteria for a RAB addition[280]. However, we recognise that the investment framework

[278] The operating, maintenance and financing costs of the asset would be funded in future periodic reviews.

[279] When the wider social benefit that the enhancement provides is included, the total contribution provided by the enhancement should be greater than its cost.

[280] The criteria are included in our investment framework consolidated policy & guidelines document, which was published in October 2010 and is available at: http://www.rail-reg.gov.uk/server/show/ConWebDoc.10081.

is not designed for HLOS funded schemes and therefore some of the investment framework criteria are not relevant, e.g. the reference to other funders.

12.347 In our draft determination, we noted that in our final determination, as part of our review of financial sustainability, we would consider whether, if there is an overall surplus above the level of funding contained in the SoFAs, we could treat some enhancements that do not provide a commercial return as pay-as-you-go projects, i.e. not add them to the RAB.

12.348 This would improve financial sustainability and could be a more appropriate way of funding enhancements. In our draft determination, we said we would take this decision in consultation with Network Rail and the governments, having regard to our statutory duties.

Responses to our draft determination

12.349 Railfuture was concerned that with Network Rail`s RAB getting ever higher to fund continued enhancements and electrification, the burden of interest charges and debt repayments will require increasing support.

12.350 DfT understood the rationale for our proposal that if there was a surplus, that we could treat some enhancements that do not provide a commercial return as pay-as-you-go projects and wanted to be involved in the process.

Our comments on the responses to our determination

12.351 As we set out in our long-term regulatory statement[281], we have started to think about how the issue that Railfuture has raised can be addressed in the future. This will be one of the issues that our PR18 development work will also consider.

12.352 In view of the position on the affordability of the HLOSs as shown in the affordability of the HLOSs chapter (chapter 21), that the overall position depending on how inflation is treated is quite tight, we do not think that it would be appropriate for CP5 to treat some enhancements that do not provide a commercial return as pay-as-you-go projects. However, we will consider this issue for CP6 in our PR18 development work.

Tax

Introduction

12.353 Corporation tax is a normal business cost and as such is one of the building blocks of Network Rail's revenue requirement. As a result of Network Rail's brought forward corporation tax losses and the effect of the adjusted WACC approach, our decision on the treatment of Network Rail's corporation tax costs is unlikely to have significant financial implications for Network Rail in CP5.

[281] Our document - Opportunities and challenges for the railway, ORR's long-term regulatory statement, is available at: http://www.rail-reg.gov.uk/upload/pdf/long-term-regulatory-statement.pdf.

12.354 Because Network Rail is unlikely to make significant corporation tax payments in CP5 the incentive effect of our corporation tax policy in CP5 on Network Rail could be significantly diluted as the effects of our incentives on corporation tax are largely realised in later control periods. However, it is nonetheless important that we clearly set out our approach to corporation tax as income and expenditure decisions in CP5 will affect corporation tax payments in future control periods and could affect efficiency reporting in CP5.

The 'corporation tax double-count'

Background and our draft determination

12.355 In PR08, we determined that Network Rail had been overfunded for corporation tax in CP3 and we decided that we would adjust for this overfunding[282]. This adjustment is called the corporation tax double-count. The amount of the double-count (£1.3bn) has been held on account[283] and in CP4 we reduced the balance by the amount of corporation tax that we estimated would be payable by Network Rail in each year of CP4.

12.356 Under this approach, we would do this until the balance on the account reaches zero. Once the balance reaches zero, we will fund Network Rail's efficient corporation tax payments through the regulatory corporation tax allowance.

12.357 As part of PR13 we reviewed our approach to the corporation tax double-count. As a result of this review, we decided to change our approach so that the value of the double-count is deducted from Network Rail's opening RAB at the start of CP5. We thought that this was more appropriate because it is more transparent than our PR08 approach. The adjustment to Network Rail's RAB for this issue is set out in the impact of financial framework on financial parameters chapter (chapter 13).

Responses to our draft determination

12.358 Network Rail noted that it and its consultants Oxera have previously stated that they do not agree with our quantification of the corporation tax 'double-count'. However, Network Rail accepted that we have concluded on this matter and it noted that it welcomes the 'cleaning up' of the RAB to resolve this issue once and for all and it agreed that our proposed revised approach is more transparent than the approach used in PR08.

Our determination

12.359 We confirm our decision that the value of the corporation tax double-count is deducted from Network Rail's opening RAB at the start of CP5 as set out in our draft determination.

---

[282] Network Rail's debt is lower as a result of this overfunding.

[283] This is a regulatory balance that we use to adjust Network Rail's revenue requirement for this overfunding.

Corporation tax incentive strengths

Background and our draft determination

12.360 In PR08, when we determined our overall approach to the financial incentives on Network Rail, we determined that the overall incentive strengths on income and expenditure on a net of tax basis, i.e. if the company outperforms by, say, £100 then the company will retain an overall net benefit of £78 (this assumes a corporation tax rate of 22%)[284]. In our May 2012 document, we decided to retain the incentive strengths on income and expenditure.

12.361 The way the incentive strengths are given effect is through our decisions on the roll forward of corporation tax balances from CP4 into CP5 and from CP5 into CP6. In PR08, we said that our approach to rolling forward corporation tax balances was that:

(a) we will not adjust the roll forward of corporation tax balances from CP4 into CP5 for variances in income, support costs, operations costs, BTP costs, RSSB costs, maintenance costs, financing costs and corporation tax[285];

(b) we will take account of the changes in future income, costs and hence potentially capital allowances as a result of our policies on rolling forward the RAB, when rolling forward the corporation tax balances for variances in these elements of renewals and enhancements expenditure;

(c) we will take account of the changes in future revenue as a result of our policies on traction electricity and the ORR licence fee and the railway safety levy, when rolling forward the corporation tax balances for variances in those costs, to ensure that Network Rail is appropriately compensated for changes in these costs on a net of tax basis;

(d) where appropriate, we will adjust the roll forward of corporation tax balances in CP5 for any additional allowances that Network Rail has gained during CP4[286]; and

[284] A more detailed example of this issue is if the company outperforms by, say, £100 and an ex-ante approach has been adopted to the opening corporation tax CP5 balances, then the corporation tax the company will pay on the outperformance will not be reimbursed by us, so the net benefit is £78 (this assumes a corporation tax rate of 22%). If the company underperforms by £100 and an ex-ante approach has been adopted then the reduction in corporation tax, as a result of the underperformance, will not be captured by us, so the net cost is £78. Using an ex-ante approach therefore reduces the net incentive to outperform as the financial consequences of outperforming (e.g. costs being lower than expected) are reduced but is less risky as the company's downside is also lower. If we adjusted the corporation tax opening balances at the next control period for actual income and expenditure, then in the above example the taxation effects of the outperformance or underperformance would be adjusted for, so the company would retain £100 of the outperformance and bear £100 of the underperformance. Therefore, the incentive is increased but the financial consequences of underperforming (e.g. costs being higher than expected) are also increased.

[285] This means changes in corporation tax excluding the underlying differences in income, expenditure and financing costs, e.g. if a capital allowance rate changed.

(e) we will consider whether changes in the treatment of some of its costs during CP4 should affect the CP5 opening corporation tax balances.

12.362 In our December 2012 financial decisions document, we said that we were discussing with Network Rail whether we should retain the above approach or whether we should amend our PR08 approach to take more account of Network Rail's actual corporation tax position in CP4, as that may be a simpler and more transparent way of rolling forward Network Rail's corporation tax position from CP4 into CP5 without unduly affecting customers and funders and without having an effect on Network Rail's incentives.

12.363 This is because the corporation tax issues in CP4 relate to events that have largely already happened and as explained above the incentive effect of our decisions is diluted anyway, as Network Rail is unlikely to make significant corporation tax payments in CP4 or CP5. This approach is consistent with the views of respondents to our August 2012 financial framework issues consultation who generally wanted us to take as simple an approach to the treatment of corporation tax as possible.

12.364 For our draft determination, we decided to take our view of Network Rail's latest forecast of CP5 opening tax balances based on our view of Network Rail's forecast efficient position at 31 March 2014 (i.e. the end of CP4), rather than use the PR08 approach. Network Rail agrees with this approach.

12.365 Although this is a change in policy that affects Network Rail's position in CP4, we think that this is the most simple and pragmatic approach, given the relatively low levels of corporation tax paid by Network Rail and given Network Rail's current low levels of corporation tax, we think that the impact on its incentives will be minimal.

Responses to our draft determination

12.366 We did not receive any material comments on the decision set out in the draft determination.

Our determination

12.367 We confirm the approach set out in our draft determination.

Value added tax and other issues

Background and our draft determination

12.368 Network Rail has identified some potential claims in relation to outstanding historic value added tax (VAT) issues. Some of these claims are material but they are uncertain and Network Rail did not forecast in its SBP that it will receive any benefit from these claims in CP5.

---

[286] In PR08, some aspects of the calculation of Network Rail's corporation tax payments where Network Rail could possibly claim enhanced allowances (e.g. for research and development expenditure or expenditure on energy saving or environmentally beneficial equipment) were uncertain and in PR08 Network Rail did not provide an estimate of the impact of these issues. Given this uncertainty, we assumed that Network Rail would not receive any benefit from these schemes.

12.369 For our draft determination, we reviewed how VAT issues could affect Network Rail in CP5. This was informed by a study by our consultants, Alvarez & Marsal, who thought that Network Rail's assumptions were too cautious, i.e. Network Rail could gain more than it forecast in its SBP.

12.370 However, given the uncertainty of these claims, we assumed in our draft determination that Network Rail does not receive any benefit from these potential VAT issues in CP5. We also proposed to adjust CP6 for any benefit that Network Rail receives in CP5 from these VAT issues and we proposed that we would not include any of these VAT gains in financial performance in CP6.

Responses to our draft determination

12.371 Network Rail did not agree with our proposal to adjust, in CP6, for any financial benefits that it receives in CP5 from VAT policy challenges, and to exclude any such gains from its financial performance in CP5. Network Rail noted that our proposed approach would remove the current financial incentive to pursue VAT rebates.

12.372 Network Rail considered that this is inconsistent with the established principles of incentive based regulation and that the regulatory framework should incentivise Network Rail to behave like a 'conventional' company, which would include pursuing VAT rebates.

12.373 Network Rail noted that any potential future rebates are highly uncertain and so, whilst being transparent with us about its potential future opportunities, it did not include an estimate in its SBP for the 'expected value' of such rebates (which it estimates to be around £1m).

12.374 Network Rail stated that we had not clearly articulated the benefits of our removing the incentive to pursue VAT rebates. Network Rail noted that it wants to act commercially, including with regards to possible VAT rebates, and that any such rebates should also contribute to its financial performance. Network Rail suggested that one way to incentivise it to act commercially whilst addressing our concerns would be to introduce a mechanism that would let Network Rail keep a share of any such rebates.

Our comments on the responses to our draft determination

12.375 Network Rail's SBP assumed it would receive no VAT rebates in CP5 which means that it would have retained 100% of any VAT rebates it does receive in CP5. Given that Alvarez & Marsal thought that Network Rail's estimates were too cautious, we did not think that this was appropriate as it could provide Network Rail with windfall gains. However, we also thought that it was too uncertain to forecast a value for VAT rebates that could be included in our calculation of Network Rail's revenue requirement.

Our determination

12.376 We recognise that the approach that we set out in our draft determination does not provide Network Rail with a financial incentive to act commercially. Therefore, in order

to improve the incentives on Network Rail, we have decided that we will not include an assumption for VAT rebates in our calculation of Network Rail's revenue requirement, but we will introduce a risk sharing mechanism for VAT rebates in CP5, whereby Network Rail will be able to retain 25% of any VAT rebates that it receives. We will also include VAT rebates in the calculation of Network Rail's financial performance in CP5.

12.377 The issues involved with VAT rebates are similar to those with corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure, so we have decided that where Network Rail receives a cash benefit from these other sources in CP5, Network Rail will be able to retain 25% of the benefit.

12.378 The potential benefits from corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure are uncertain, so we have decided not to include an estimate of them in our calculation of Network Rail's revenue requirement. We will also include corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure in the calculation of Network Rail's financial performance.

12.379 For the avoidance of doubt, given the nature of these issues and that our approach to setting a baseline for VAT rebates, corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure was cautious (i.e. we have assumed zero income in CP5), we consider it appropriate that Network Rail would bear 100% of any downside.

Network grant

Background, our decisions in previous decision documents and our draft determination

12.380 While we recognise the case for public subsidy of the railway, we would like to see much more of Network Rail's funding coming from train operators paying access charges and from other customers, with greater clarity over what public money is buying. This is in line with our preference for transparency and cost-reflective charges, which will in turn send signals for the efficient usage and provision of the network. It would also help avoid blurring the roles and responsibilities of Network Rail and the governments.

12.381 The provision of network grants by the governments, and the lack of clarity over exactly what the governments are buying, can undermine Network Rail's accountability to its customers, which is not consistent with the more commercial relationships we would like to see drive behaviour in the industry. However, we see these changes happening over time.

12.382 We recognise the governments' reporting issues and that in their budgets, they classify spend according to whether it is capital or operating (operating spend is also referred to as current or resource) and network grant is treated as a capital cost, so

our decision on the level of network grant affects the split between their capital and operating budgets, which could affect affordability.

12.383 In determining our PR13 policies, we are required to take into account all of our statutory duties. In relation to this issue we consider that two of our duties are particularly relevant: our duty to have regard to the funds available to the Secretary of State and our duty that requires us, in summary, when having regard to guidance from the Scottish Ministers, to have regard to the expenditure that is to be incurred by them.

12.384 Taking these duties into account, we decided to allow part of Network Rail's income to be provided directly from the governments through network grants, which will be set ex-ante for each year of CP5.

12.385 In the network grant chapter (chapter 17) we set our assessment of the level of network grant payments in CP5.

Responses to our draft determination

12.386 Train and freight operating companies generally do not think that there is a problem with network grants being paid to Network Rail in lieu of access charges. One of their reasons for this view is that if access charges increased to replace network grant there would be a structural imbalance with road, it may also make it more difficult for train and freight operating companies to raise capital and may increase the regulatory burden.

12.387 However, Chiltern Railways supported our view that replacing network grants with charges from train operators would help to reinforce the message that train operating companies are the customers of Network Rail.

12.388 Railfuture in its response to our draft determination notes that provided that the equivalent subsidy is provided to TOCs and freight operators, so that their net costs remain consistent with present funding arrangements and total funding to Network Rail is unchanged, it agrees that more of Network Rail`s funding should come from access charges and that the network grant should be phased out over time. It supports the move to cost-reflective charges so that Network Rail is encouraged to act like a commercial business.

12.389 The DfT and Transport Scotland agreed that we should allow part of Network Rail's income to be provided directly from the governments through network grants.

Our determination

12.390 We have not seen any representations or further evidence to persuade us to change the decision to allow part of Network Rail's income to be provided directly from the governments through network grants, which will be set ex-ante for each year of CP5. Hence we consider that this decision remains appropriate for CP5. We therefore confirm the decision in relation to network grants in our draft determination.

Grant dilution

Background, our decisions in previous decision documents and our draft determination

12.391 Current track access contracts include a grant dilution provision that provides for increases in track access charges if for any reason the governments do not pay network grants according to the agreed schedule of payments.

12.392 In the unlikely situation that the governments did not meet their funding obligations, we decided in December 2012 to retain the grant dilution provision in track access contracts for CP5 to ensure that Network Rail recovers its required revenue and can finance its activities.

Responses to our draft determination

12.393 We did not receive any material comments on the approach set out in the draft determination.

Our determination

12.394 We confirm the approach set out in our draft determination and we will include provisions in Schedule 7 of franchised operator track access contracts to ensure that Network Rail's financial position is protected. The precise nature of any such provisions will depend upon the circumstances relating to the payment of network grant by each government at that time but such provision would need to ensure that Network Rail did not face any shortfall in funding from 1 April 2014. We anticipate that any such provision would provide for an adjustment to be made to fixed charges in the event that anticipated grant income was not received by Network Rail.

12.395 At the date of our determination, Network Rail has not entered into new grant arrangements with either DfT or Transport Scotland for CP5. We expect clear arrangements consistent with our determination and otherwise satisfactory to us, to have been entered into and become effective by the date on which we issue our review notices. We will engage with Network Rail, DfT and Transport Scotland on this issue.

Outperformance

Background and our draft determination

12.396 In our August 2012 consultation, we explained that we had considered whether our approach to incentive strengths for Network Rail's operating expenditure and capital expenditure needed refining to encourage Network Rail to materially outperform our determination and to avoid materially failing to deliver our determination. We also considered whether efficiency initiatives that are genuine 'game-changers' should be more heavily incentivised than normal efficiency savings as they are important in identifying ways to meet Network Rail's long-term efficiency challenge.

12.397 Given it is difficult to distinguish between 'game-changers' and normal efficiency initiatives and it is also difficult to identify which efficiency initiative takes Network Rail beyond the target level and into the outperformance area, and that we are trying to keep the calculation of efficiency as simple as possible, we have decided that it is not appropriate to more heavily incentivise 'game-changers' than normal efficiency savings in CP5.

Responses to our draft determination

12.398 We did not receive any material comments on the decision set out in our draft determination.

Our determination

12.399 We confirm the approach set out in our draft determination.

Use of financial outperformance

Background and our draft determination

12.400 Financial outperformance can happen when Network Rail spends less or earns more income in CP5 than we assumed in our determination as the efficient cost of delivering its required outputs and maintaining the sustainably and serviceability of the network in the short, medium and long-term.

12.401 We consider that our determination is challenging but achievable. This means that Network Rail is incentivised to financially outperform our determination. Therefore, there needs to be a policy in place to decide how any financial outperformance is used.

12.402 Our current policy for deciding how financial outperformance is used is set out in a policy statement that we issued in 2006[287].

12.403 In line with this policy, in our draft determination we set out that if Network Rail has financially outperformed in CP4, it can choose, after first consulting with stakeholders, how to use that financial outperformance. The main options are that the financial outperformance can be used to:

(a) pay down debt;

(b) fund investments that reduce the future cost or improve the outputs of the railway; or

(c) pay a rebate to DfT and Transport Scotland.

12.404 We closely monitor Network Rail's performance and report on it in our annual efficiency and finance assessment but the process for deciding whether Network Rail has financially outperformed for the purpose of deciding how to use financial

[287] *Monitoring and treatment of Network Rail's underspend and efficiency: policy statement*, ORR, January 2006, available at http://www.rail-reg.gov.uk/upload/pdf/273.pdf.

outperformance is not as clear as it could be. One particular issue we considered in our draft determination was how uncertainty about financial performance in the early years of a five year control period is reflected in a decision about using financial outperformance.

12.405 We thought that this process could be improved and in particular that Network Rail should base its decisions on using outperformance on our assessment of its financial performance as that is more consistent with the view that we will take on Network Rail's financial position in the next access charges review.

12.406 In relation to our decision on how financial outperformance is used, in our draft determination we set out that the two main options are that we could:

(a) require that outperformance can only be used to pay down debt or fund R&D projects[288]; or

(b) allow Network Rail to decide how to use any financial outperformance, after having consulted with the governments and us about the best use of any financial outperformance. This would be a continuation of the approach used in CP4.

12.407 In our draft determination, we proposed that given the importance that we place on Network Rail's financial sustainability, we thought that any financial outperformance should be used to pay down debt or fund R&D projects up to a maximum value that would be decided in our final determination (option (a) above).

12.408 In particular, given our views on network grant and that grant payments should be fixed ex-ante as part of our determination, we did not think that financial outperformance should be used to make rebate payments to the governments in CP5, unless we are satisfied that there are exceptional circumstances. We noted in our draft determination that Network Rail said that it would publish an update of its policy on the use of outperformance by the end of March 2014.

12.409 We consulted on the proposed changes to Network Rail's network licence condition 4 necessary to implement this policy, in our consultation on changes to access contracts and the network licence to implement PR13, which we published on the 12 July 2013.

Response to our draft determination

12.410 Network Rail strongly disagreed with our proposed restriction on how outperformance can be used and considered our approach to be disproportionate. Network Rail noted that other uses of outperformance should not be excluded as a matter of principle at this stage and that it is inappropriate to constrain the use of any financial outperformance in the way that we proposed. Network Rail considered that this is

[288] We said that the maximum value of R&D projects that can be funded in this way will be decided in our final determination as discussed in the financial incentives chapter (chapter 19).

consistent with its overall network stewardship obligation as set out in its network licence.

12.411 Network Rail noted that it published its Business Planning Criteria, which set out the principles for how to use financial outperformance in October 2007. It is also committed to publishing an updated version of its policy on how financial outperformance should be used in CP5, by the end of March 2014.

12.412 Network Rail provided examples of potential uses of outperformance including expenditure on civils, level crossings or the delivery of unfunded enhancements.

12.413 DfT supported our proposal to use financial outperformance to pay down debt whilst also providing flexibility for Network Rail to be able to make rebate payments to government in exceptional circumstances.

12.414 Network Rail also provided some detailed comments on our proposed drafting for these issues, which are discussed above in the financial ring-fence section of this chapter.

Our comments on the responses to our draft determination

12.415 We have carefully considered the responses to our draft determination and consider that if Network Rail can show that using outperformance to invest in investments would reduce the future cost or improve the outputs of the railway in a way that provides value for money, i.e. the project has a positive net present value using Network Rail's cost of capital, then it can use outperformance in that way.

Our determination

12.416 For the reasons set out above we have decided that outperformance can only be used to pay down debt, fund R&D projects (up to a maximum of £50m for CP5 in 2012-13 prices) or fund other investments that reduce the future cost or improve the outputs of the railway in a way that provides value for money, i.e. the project has a positive net present value using Network Rail's cost of capital. Outperformance can only be used to pay a rebate to DfT and Transport Scotland in exceptional circumstances.

13. Impact of financial framework on financial parameters

Key messages in this chapter

- This chapter sets out the impact of our financial framework on the financial parameters in our determination.
- Our consultants have assessed Network Rail's cost of capital and financing costs by considering market data and regulatory precedent.
- Although we are using the adjusted WACC approach to set Network Rail's revenue requirement it is still important to identify Network Rail's WACC, which we have determined as 4.31% for Great Britain, England & Wales and Scotland.
- Our assumption for Network Rail's embedded debt costs is an average of 3.72% nominal and an average of 1.40% index-linked across CP5 for Great Britain, England & Wales and Scotland.
- Our assumption for Network Rail's new debt costs is an average of 2.99% nominal and an average of 1.33% index-linked across CP5 for Great Britain, England & Wales and Scotland.
- Our FIM fee assumption is 1.10% for Great Britain, England & Wales and Scotland.
- Network Rail's debt is expected to grow from £31.7bn at the start of CP5 to £49.6bn at the end of CP5 (in nominal prices) and Network Rail's RAB is expected to grow from £49.3bn at the start of CP5 to £71.0bn at the end of CP5 (in nominal prices), mostly due to additional enhancements and inflation.
- Our amortisation assumption is £11.9bn for Great Britain, £10.6bn for England & Wales and £1.3bn for Scotland (in 2012-13 prices).

Main changes since our draft determination

- We have changed our new debt cost assumptions from 2.53% to 2.99% for nominal debt and from 1.15% to 1.33% for index-linked debt, largely as a result of movements in market rates since our draft determination.
- Our assessment of Network Rail's opening debt at the start of CP5 has increased by £0.5bn (nominal prices) for Great Britain since our draft determination.
- Network Rail's closing debt at the end of CP5 for Great Britain has increased by £2.3bn (nominal prices) since our draft determination, largely due to higher opening debt (£0.8bn), higher enhancements costs (£0.7bn) and other changes (£0.8bn). These numbers include the effect of financing costs, so the effect of opening debt (£0.9bn) is higher than the difference in opening debt at the start of CP5 (£0.5bn).

Key messages in this chapter (continued)

- Our assessment of Network Rail's opening RAB at the start of CP5 has decreased by £162m (in 2012-13 prices) for Great Britain since our draft determination. Network Rail's closing RAB for Great Britain has increased by £1.6bn (in nominal prices) since our draft determination, largely due to higher inflation (£0.9bn) and enhancements (£0.7bn).
- Our amortisation assumption has reduced by £0.3bn for Great Britain, £0.2bn for England & Wales and £55m for Scotland (in 2012-13 prices). This is largely due to a reduction in our financial sustainability adjustment, as we are not now assuming that all renewals are cash funded in CP5. Instead we have considered Network Rail's financial position by comparing it to other comparable companies.
- Network Rail's average CP5 debt/RAB ratio has increased by 1.6 percentage points to 69.8% for Great Britain. This position is consistent with an investment grade credit rating but we will consider longer term financial sustainability issues in our PR18 development work.

Introduction

13.1 The financial framework chapter (chapter 12) sets out our determination of the financial framework for Network Rail in CP5. This chapter focuses on the impact of those financial framework decisions on our financial assumptions within our determination.

13.2 In this chapter we set out our assumptions on Network Rail's cost of capital, financing costs, tax, opening CP5 debt[289], movements in CP5 debt, opening CP5 RAB, movements in CP5 RAB, amortisation, financial sustainability, long-term financial sustainability, opex memorandum account, inflation assumptions and other key financial information. These assumptions are used to calculate Network Rail's CP5 revenue requirement. Also, our PR13 financial model has been audited and we summarise in this chapter the auditor's views of our financial model.

13.3 Most of the responses to our draft determination concentrated on cross-cutting issues, so we have largely summarised those responses in one section.

Cost of capital

Background

13.4 As we mention in the financial framework chapter (chapter 12), Network Rail is a CLG and raises debt like a normal company but the debt is government guaranteed.

[289]For the avoidance of doubt, where we refer to Network Rail's debt, unless stated we mean Network Rail's net debt (as defined in its Regulatory accounting guidelines).

However, it is still important to identify Network Rail's cost of capital to encourage Network Rail to invest efficiently, achieve the appropriate balance between maintenance and renewals, and ensure a level playing field (between Network Rail and potential competitors) for the delivery of enhancements.

13.5 In particular, Network Rail will use our cost of capital assumption as the basis for its decisions on investment framework schemes. Therefore, our assumptions on the cost of capital affect our income assumptions for investment framework projects as explained in the chapter on other single till income (chapter 18).

13.6 Given Network Rail does not have equity shareholders, our cost of capital[290] assumption is based on a hypothetical scenario in which Network Rail does not have access to the FIM and is also financed by equity as well as debt. This cost of capital is distinct from our forecast of efficient financing costs in CP5, which drives the allowed return in the adjusted WACC approach used to calculate Network Rail's revenue requirement in CP5.

13.7 Given the importance of Network Rail's cost of capital and in order to be transparent, in Annex F we have provided details of the revenue requirement on the basis that the allowed return is based on Network Rail's cost of capital and the adjusted WACC approach is not used.

13.8 Our consultants, a consortium led by CEPA in association with Lion's Head Global Partners and Indepen (hereafter referred to as 'CEPA'), have advised us on the appropriate cost of capital for Network Rail[291]. Table 13.1 provides a comparison of CEPA's cost of capital estimates with those provided by Network Rail and Oxera (Network Rail's consultants).

Summary of our draft determination

13.9 In our draft determination we said that, given the changes in the financial markets from CP4 and in particular the cost of debt, we thought that the appropriate cost of capital is 4.31% (real, vanilla[292]) for Network Rail in CP5. On a pre-tax basis, we assumed this cost of capital was 4.91%.

Responses to our draft determination

13.10 Most respondents on this area focused on the cost of capital assumption for the investment framework. A number of train operating companies welcomed our proposed reduction in the cost of capital for the investment framework as more

[290] The cost of capital is the return required by debt and equity investors on their investment in a company. It therefore reflects the costs of financing the risks that the company faces.

[291] Both CEPA's original report, called "Advice on estimating Network Rail's cost of capital", and its updated report are available at: http://www.rail-reg.gov.uk/pr13/publications/consultants-reports.php.

[292] A 'vanilla' return is based on a pre-tax cost of debt and a post-tax cost of equity.

projects will now become viable. However, they would prefer the cost of capital for the investment framework to be lower.

13.11 A number of train operating companies noted that the final determination should reflect the trajectory of cost of capital through CP5. ATOC noted that although it recognises Network Rail's revenue requirement is based on an assumed rate of return, the cost of finance may be lower, even for third parties, and that therefore the level should reflect a realistic assessment of likely costs going forward. ATOC noted that it looks to us to ensure that the final determination reflects a realistic estimate of the cost of capital to ensure that the overall cost of the industry is optimised.

13.12 Railfuture noted that the use of the full cost of capital for investment appraisal of non-HLOS proposals puts the business case of non-HLOS rail development opportunities at a disadvantage when compared to road developments, which would benefit from the interest rate advantage of direct government borrowing. Railfuture thought all transport developments should be appraised on a level playing field.

13.13 Following our draft determination, Oxera, acting on behalf of Network Rail, revised its range for Network Rail's cost of capital to be 4.3% to 4.6% (real, vanilla) and noted that it thought that corporation tax should be included in the pre-tax cost of capital as a nominal adjustment. Overall, Oxera considered that the cost of capital for the investment framework should be around 5.00% - 5.25%.

13.14 Network Rail's latest view is that the vanilla cost of capital should lie within Oxera's range and based on its comments on the pre-tax cost of capital, it thought that the vanilla cost of capital should be marginally higher than 4.31%. Network Rail thought that the 4.91% pre-tax cost of capital figure included in our draft determination suggested a level of precision that was unrealistic and that a cost of capital of 5% (pre-tax) for the investment framework was more appropriate and simpler.

13.15 TfL wanted us to include a more detailed breakdown of how we have calculated the cost of capital in our final determination.

Our comments on the responses to our draft determination

13.16 In summary, for our draft determination, CEPA's range for Network Rail's cost of capital was 3.80% to 4.40% (real, vanilla). CEPA has updated its analysis but it did not revise its estimated range to reflect changes to market rates since March 2013. This is because CEPA attached more weight to the long-term averages than to spot rates in reaching its cost of capital estimate and it considered that its initial estimates contained sufficient headroom to accommodate these changes in the market. CEPA's analysis compares to a range of 4.3% to 4.9% that Network Rail's consultants, Oxera, used to inform Network Rail's SBP (Network Rail assumed its CP5 cost of capital was 4.75% in its SBP). As we mention above, Oxera has also updated its analysis and its revised range is 4.3% to 4.6%.

13.17 We do not think it is appropriate to round the pre-tax cost of capital up to 5% for the investment framework. This is because, although we recognise that it would be simpler, it would also inappropriately increase costs to TOCs through higher facility charges.

13.18 In relation to Railfuture's comment on the use of the cost of capital, we consider that it is important that investment decisions are made using Network Rail's cost of capital, as that reflects the risks that it faces.

13.19 We have included a detailed breakdown of how we have calculated the cost of capital below.

Our determination

13.20 In determining our PR13 cost of capital assumptions, we have considered a range of evidence including:

(a) the views of respondents to our draft determination;

(b) CEPA's analysis;

(c) Oxera's analysis; and

(d) recent decisions and analysis of other regulators, e.g. Ofgem and CAA[293].

13.21 Given the changes in the financial markets from CP4, and in particular the cost of debt, we think it is appropriate to assume a cost of capital of 4.31% (real, vanilla) for Network Rail in CP5. On a pre-tax basis this is 4.93%. This is on an annual basis, when charges are calculated a semi-annual rate of 4.81% will be used.

Table 13.1: Comparison of our cost of capital assumptions against Network Rail's SBP and our PR08 assumptions

	ORR	Oxera	CEPA estimate – narrow range[1,2,3]		ORR
	PR08	**NR SBP**	**Low**	**High**	**PR13**
Gearing	60.00%	61.25%	62.50%	62.50%	62.50%
Risk-free rate	1.80%	1.75%	1.50%	1.75%	1.75%
Equity risk premium	5.00%	5.13%	5.00%	5.00%	5.00%
Equity beta	1.00	0.98	0.90	1.00	0.95
Post-tax cost of equity	6.80%	6.75%	6.00%	6.75%	6.50%
Pre-tax cost of debt	3.38%	3.30%	2.50%	3.00%	3.00%
Vanilla WACC	**4.75%**	**4.65%**	**3.80%**	**4.40%**	**4.31%**
Pre-tax WACC (t=20.2%)[4]	**5.43%**	**5.40%**	**4.38%**	**5.05%**	**4.93%**

Source: CEPA, Oxera and ORR.

[293] These are the regulators who have published recent analysis on cost of capital.

Notes:

1. For calculating the WACC, CEPA used a mid-point gearing assumption of 62.50% and its range was 60.00% to 65.00%.
2. Figures rounded to the nearest 0.05%.The corporation tax rate of 20.2% is an average across CP5 of 21% for 2014-15 then 20% thereafter.
3. CEPA's narrow range excludes the combination of low end parameters from its broad range, i.e. risk-free rate (1.0%), equity risk premium (4.5%) and equity beta (0.8), as combining these parameters together is likely to lead to an implausibly low cost of equity.
4. Our PR08 pre-tax WACC has been restated using a 20.2% corporation rate to be more comparable with PR13.

Financing costs

Background

13.22 In determining our financing cost assumptions, we took into consideration the type of financing strategy that an efficiently financed regulated utility could be expected to have in place based on historic, present and expected market conditions.

13.23 We commissioned CEPA to conduct an independent review of Network Rail's financing cost assumptions, which we have taken into account in deciding on our financing cost assumptions. Table 13.2 below summarises Network Rail and CEPA's views of Network Rail's financing costs, which have been updated since our draft determination.

13.24 In addition to modelling its financing costs, we along with CEPA, have considered Network Rail's treasury policy, for example, the timing of Network Rail's pre-hedging programme for CP5, the mix of debt such as nominal against index-linked and the maturity of its bonds.

13.25 Network Rail holds some index-linked debt at the moment and we are assuming that it issues more index-linked debt in CP5. Until this debt is redeemed, everything else being equal, Network Rail's index-linked debt pays out a lower amount of money than nominal debt as the debt increases with inflation annually instead of an assumption on inflation being included in the cash interest cost.

Summary of our draft determination

13.26 In our draft determination we assumed that the average embedded nominal debt cost over CP5 was 3.74% and the average cost of embedded index-linked debt over CP5 was 1.40%. These assumptions were broadly consistent with Network Rail's SBP assumptions.

13.27 In relation to new nominal debt we assumed an average cost over CP5 of 2.53% and for new index-linked debt we assumed an average cost over CP5 of 1.15%. These assumptions were lower than Network Rail's SBP assumptions of 4.63% for new nominal debt and 1.40% for new index-linked.

Responses to our draft determination

13.28 Network Rail stated that its financing costs in CP5 were likely to be less than it assumed in its SBP but higher than we assumed in our draft determination. The main issues that Network Rail raised were:

(a) it thought that it was not efficient to hedge 100% of CP5 forecast debt issuance;

(b) it has suggested that we should add 75 basis points to our new nominal debt interest cost assumption to provide, in its view, "a reasonable allowance for market volatility between the date of the final determination and eventual execution";

(c) it thought that the London Interbank Offered Rate (LIBOR) spread should be higher than our assumption in our draft determination as, in its view, "this was more reflective of the prevailing uncertainty over future market movements and the difficulty in obtaining meaningful LIBOR spread forecasts for this long time horizon";

(d) it recognised that market rates have increased since our draft determination;

(e) it thought that its debt at the start of CP5 would be higher than it assumed in its PR13 SBP and that the quantum of debt issued in CP5 would be higher than we assumed in our draft determination because its expenditure forecasts were higher; and

(f) it would normally have some cash on deposit, which means that its gross debt would be higher than its net debt.

13.29 No other material consultation comments were raised in relation to this issue.

Our comments on the responses to our draft determination

13.30 We have had extensive discussions about these issues with Network Rail, Oxera and CEPA since January 2013. CEPA considers that Network Rail should have pre-hedged more of its forecast debt issuance in CP5 than it has done and that this hedging programme should have started earlier than it did.

13.31 Whilst pre-hedging is one way of managing interest rate risk we do not assume that Network Rail should pre-hedge 100% of its CP5 forecast debt issuance. Instead we have assumed in the calculation of Network Rail's revenue requirement, our view of its efficient financing costs for CP5 and we have not provided a contingency for the risk that interest rates could change. This is because in PR13 we are not funding general provisions for contingency. Also, Network Rail's justification for the contingency was not convincing.

13.32 We consider that providing a contingency in this way, could unnecessarily increase Network Rail's revenue requirement and complicate the monitoring of Network Rail's financial performance in CP5.

13.33 Instead, Network Rail could manage this risk through its balance sheet buffer or it could pre-hedge its CP5 exposure. This is a more appropriate way of dealing with interest rate risk than providing Network Rail with a contingency that it may not need.

13.34 However, we recognise that market rates are volatile, so basing our assumptions on market rates on a particular day may not be a reasonable approach. Therefore, we have based our interest cost assumptions for new debt (both nominal and index-linked) on average forward interest rates using market data from August and September 2013. This period of time is close to the time we took our decisions for our final determination and it also covers a relatively high part of the interest cost curve over the last year as shown in Figure 13.1 below.

Figure 13.1: Recent experience of market rates

Source: CEPA analysis of 10-year LIBOR 6-month swap rates between 1 June 2012 and 27 September 2013.

13.35 At any time during the period shown in Figure 13.1 (or even before this period), Network Rail could have pre-hedged some of its exposure to interest rates in CP5, as it was aware of its likely capital expenditure levels and its own requirements for re-financing its existing debt. The majority of Network Rail's pre-hedging took place from March 2013 to September 2013. The effect of this pre-hedging by Network Rail has been included in our interest cost assumptions.

13.36 We think that our determination methodology:

(a) is a relatively cautious approach to calculating our interest rate assumptions for CP5;

(b) reasonably reflects Network Rail's current position; and

(c) overall, is similar to the interest rate assumptions in Network Rail's response to our draft determination (excluding its suggested risk buffer for the LIBOR spread and its suggested 75 basis point risk buffer for market rates).

13.37 This should mean that overall our financing assumptions are challenging but achievable.

13.38 Network Rail's analysis included a range of views on the expected LIBOR spreads in CP5, provided by various banks. We think that this evidence supports our assumptions on the LIBOR spread as most of the banks views were similar to ours. Therefore, we do not think that we need to add contingency on to our LIBOR spread assumption to provide a buffer for risk, as our assumption is already reasonable and we are not providing a risk buffer for the risk that market rates might change. CEPA's detailed analysis also confirms that our assumption is reasonable.

13.39 We agree with Network Rail that forward market rates have increased since we made our assumptions for our draft determination and we have factored our view of these changes into our assumptions for our final determination.

13.40 We have adjusted our forecast of Network Rail's debt at the start of CP5 based on our view of Network Rail's analysis. The financing cost implications of our decisions elsewhere in our determination are also included in our forecast of financing costs. Given that our view of Network Rail's expenditure in CP5 is different to Network Rail's view, this also gives rise to differences in financing costs. Our view of Network Rail's debt at the start of CP5 is included in Table 13.3.

13.41 We agree with Network Rail that it needs to hold some cash on deposit for short term liquidity purposes and, if required, to finance collateral and bond redemptions on some financial instruments. We have assumed that Network Rail's average cash balance in CP5 is £1bn, based on Network Rail's forecast and its cash balance in CP4. We have included an appropriate amount of interest income on these cash deposits, which is netted off financing costs in the calculation of Network Rail's revenue requirement.

Our determination

13.42 After taking account of the responses to our draft determination, market rates, Network Rail's treasury policy and the analysis provided by Oxera and CEPA, we have made our assumptions for financing costs as set out in Table 13.2. The main issues affecting our assumptions are summarised below.

Embedded debt

13.43 CEPA has worked with Network Rail to model the interest payments on Network Rail's existing debt (both nominal and index-linked) in order to verify how much those payments will be and whether they were efficiently incurred. CEPA's view is that

Network Rail's existing debt[294] was raised at an efficient rate and that the financing costs on this debt have also been efficiently incurred.

13.44 We have concluded that there is no evidence that Network Rail's existing debt was inefficiently incurred and we have, therefore, included CEPA's estimate of Network Rail's embedded debt costs in our final determination. We have updated this assumption for our final determination to take account of additional debt issued in the period between our draft determination and our final determination.

13.45 Table 13.2 shows that there are some differences in our assumptions between our draft determination and final determination. The main reasons for these differences are that since our draft determination:

(a) Network Rail has issued more debt;

(b) Network Rail has pre-hedged more of its CP5 debt issuance; and

(c) market rates have risen, which have been reflected in our assumptions.

New debt

13.46 As discussed above, we recognise that market rates are volatile, so basing our assumptions on market rates on a particular day may not be a reasonable approach. Therefore, we have based our interest cost assumptions for new debt (both nominal and index-linked) on average forward interest rates using market data from August 2013 and September 2013.

13.47 Based on current interest rates and market information, CEPA thinks that an efficient financing strategy in CP5 would result in additional index-linked debt being taken out, which is consistent with Network Rail's treasury strategy. We agree with this, so we have assumed in our calculation of efficient financing costs that some of Network Rail's debt issuance in CP5 will be index-linked.

FIM fee

13.48 Network Rail's SBP assumed a FIM fee of 1.25% based on the difference in CP4 between the cost of bonds issued by utility companies and the cost of Network Rail's issued bonds, which are supported by a government guarantee.

13.49 CEPA's analysis considered the difference in the cost between bonds issued by domestic utilities (A- and BBB+ rated)[295] and gilts (debt issued by the UK government) for the period from 1999 to present. This showed a difference of 1.40% - 1.60%. As a

[294] Note: This is not a comment about the reasons for the debt being incurred, e.g. for capital expenditure but about the efficiency of Network Rail in raising the debt.

[295] A credit rating A- and BBB+ is consistent with an investment grade credit rating and the credit rating Network Rail might want to have if it did not have access to the FIM.

cross check, CEPA identified a similar difference (1.30% -1.40%) using the iBoxx[296] trailing average index (incorporating the discount for long dated debt) for utility bonds.

13.50 Network Rail has typically issued bonds at a lower rate of around 0.40% above the cost of gilts due to the FIM guarantee. By deducting the difference between the cost of borrowing for Network Rail and the cost of gilts (estimated at 0.40%), from the difference between the cost of borrowing for comparable companies and the cost of gilts (estimated at 1.30% to 1.60%), CEPA derived an estimate of the credit enhancement provided by the FIM relative to an A-/BBB+ rated company of 0.90% – 1.20%. CEPA thinks that the FIM fee should be towards the top end of that range, e.g. it notes that the FIM fee could be 1.10% based on a recent issuance by High Speed 1 Ltd.

13.51 In our draft determination, we assumed a FIM fee of 1.10%. Network Rail agreed that this assumption was appropriate.

13.52 Given the above factors, we have decided in our final determination that the fee payable to DfT for the provision of the FIM will be set at 1.10% on the outstanding FIM-backed debt during CP5. We think that this fee broadly reflects the long-run value of the credit enhancement that Network Rail benefits from as a result of the FIM.

Summary of changes from our draft determination

13.53 Table 13.2 shows a comparison of the financing cost assumptions made in our draft determination compared to the assumptions made in our final determination.

[296] iBoxx provide an index of the cost of bonds. The iBoxx index is also used by Ofgem for its indexation of energy companies' debt costs.

Table 13.2: Comparison of Network Rail's financing costs assumptions (for Great Britain, England & Wales and Scotland[297])

Type of Debt	SBP	DD	NR DD response[298]	FD	FD – DD	FD – NR DD response
Nominal debt (embedded)	3.82%	3.74%	3.70%	3.72%	(0.02%)	0.02%
Index-linked debt (embedded)	1.41%	1.40%	1.39%	1.40%	0.00%	0.01%
Nominal debt (new)[299]	4.74%	2.53%	2.99%	2.99%	0.46%	0.00%
Index-linked debt (new)	1.41%	1.15%	1.46%	1.33%	0.18%	(0.13%)

13.54 For Network Rail's embedded debt, our final determination assumptions are similar to Network Rail's SBP, our draft determination and Network Rail's draft determination response. This is because these rates simply reflect the cost of Network Rail's existing debt. The slight reduction in rates on nominal embedded debt, compared to our draft determination, is because the embedded debt category now includes debt that Network Rail has issued since our draft determination was published.

13.55 For new debt, the changes compared to our draft determination, are more significant as these rates involve forecasting the cost of Network's future debt issuance:

(a) for new nominal debt, the increase in rates (46 basis points) reflects the increase in underlying forward rates since we published our draft determination. Overall, our assumption is the same as Network Rail's draft determination response. Our assumptions were based on average forward interest rates using market data from August 2013 and September 2013, whereas Network Rail's assumptions were based on forward market interest rates on 21 August 2013; and

(b) for new index-linked debt, the increase in rates (18 basis points) reflects the increase in underlying forward rates since we published our draft determination. Compared to Network Rail's draft determination response, our rates are lower (13 basis points), partly because the rates were based on a different time period

[297] The rates in Table 13.2 are annual rates. In our financial modelling we use semi-annual rates as discussed in the financial framework chapter (chapter 12).

[298] The rates for Network Rail's draft determination response in Table 13.2 have been restated by Network Rail to reflect the classification we are using for our final determination and also to take into account any additional debt issuance and pre-hedging up to 27 September 2013. These rates have also been restated on to an annual basis. The classification of debt between 'embedded' and 'new' has evolved during PR13 and has changed since our draft determination.

[299] Network Rail's forecast does not include its suggested contingency for risk (for the LIBOR spread and market rates), as discussed above.

as described above, and also because we have taken different approaches to calculating forward index-linked costs:

(i) Network Rail calculated its view of the market's expected underlying real yield for issuance of index-linked bonds by observing the market-implied forward yield on 30-year nominal gilts for each year of CP5 and then adjusted this for expected inflation. The expected inflation used was the break-even inflation rate between 30-year nominal gilts and 30-year index-linked gilts and implicitly assumed that the break-even rate for 30-year issuance would be constant over CP5; and

(ii) CEPA constructed a series of forward index-linked curves in the same way that the forward nominal curves are calculated. This approach assumes that the rates at which bonds can be borrowed reflect their underlying yields and means that CEPA's methodology incorporates both the impact of market expectations for real rates and inflation for the future. CEPA's methodology is similar to the methods used by the banks that Network Rail discussed this issue with, although some of them take a more short term approach, which results in lower rates than CEPA's.

Tax

Background and our draft determination

13.56 Our consultants, Alvarez & Marsal, have reviewed Network Rail's forecast corporation tax position and we have made some relatively small adjustments to Network Rail's corporation tax forecasts. As discussed in the financial framework chapter (chapter 12), we have assumed that Network Rail will not receive any benefit in CP5 from potential VAT rebate issues, corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure.

Responses to our draft determination

13.57 Apart from Network Rail's comments on the treatment of VAT rebates, which are considered in the financial framework chapter (chapter 12), no material consultation comments were raised in relation to tax.

Our determination

13.58 After taking account of these responses and also given that there has been no change to our views on Network Rail's tax position, we have not changed our assumptions on tax.

Opening debt

13.59 Our assumption for Network Rail's opening debt at the start of CP5 is an important driver of the level of Network Rail's financing costs in CP5 and hence it is a significant factor in our determination of the revenue requirement for CP5. Therefore, it is important that our forecast is as accurate as possible and consistent with the rest of

our determination as our income and expenditure assumptions for CP5 are based on Network Rail delivering the last year of CP4, as set out in its SBP.

13.60 Given the importance of being consistent with both the SBP and our forecast of the RAB at 1 April 2014, we have used the SBP forecast but adjusted it for errors and other changes to Network Rail's forecast, such as the actual level of debt at the end of March 2013, revised income from changes in assumptions and updated working capital assumptions but we are still assuming the same underlying level of renewals and enhancements expenditure in 2013-14[300]. Our calculation of financing costs in 2013-14 has been updated to reflect these changes to the assumptions for 2013-14. This is broadly similar to the approach we took in calculating the level of the opening RAB at 1 April 2014, which is described below.

13.61 Further details of the changes in our forecast of the level of Network Rail's opening debt at 1 April 2014, from our draft determination to our final determination, are outlined in Table 13.3. Note all debt numbers are in nominal figures.

Table 13.3: Summary of our forecast of Network Rail's opening debt at 1 April 2014, showing movements from our draft determination to our final determination

£m (nominal prices)	Great Britain	England & Wales	Scotland
Opening net debt per DD	**31,149**	**28,141**	**3,008**
Changes in 2012-13 closing debt	415	382	33
Changes in assumptions on 2013-14 income	(86)	(60)	(26)
Changes in assumptions on 2013-14 expenditure (excluding renewals and enhancements)	(7)	7	(14)
Changes in assumptions on 2013-14 financing costs	74	71	3
Errors identified in Network Rail's SBP forecast	293	243	50
Updated assessment of the deferral of enhancement expenditure to CP5	(40)	-	(40)
Changes in working capital assumptions	(307)	(283)	(24)
Adjustment for potential rebates in 2013-14	145	110	35
Adjustment for a potential fine in 2013-14	33	33	-
Opening net debt per FD	**31,669**	**28,644**	**3,025**

[300] We have adjusted for the deferral of the Borders enhancement project in Scotland to CP5 which has been partially offset by electrification being bought forward into CP4 (a net deferral of approximately £40m). This is based on an updated assessment since the SBP.

13.62 Table 13.3 above starts with the opening net debt figure at 1 April 2014 in our draft determination and updates that net debt figure for the 2012-13 actual outturn as well as changes in the 2013-14 assumptions that we have accepted as part of Network Rail's latest forecasts. It is also been updated for errors in the SBP net debt forecast and our latest assumptions on potential rebates and financial penalties[301].

Movements in CP5 debt

13.63 The level of debt in CP5 is an important driver of the level of Network Rail's financing costs and hence it is a significant factor in our determination of the revenue requirement for CP5. It is also important that our assumptions on the level of debt during CP5 are transparent as it is one of the key issues that affect financial sustainability, e.g. it is one part of the calculation of the debt/RAB ratio and our determination of the limits on financial indebtedness and hence the balance sheet buffer. This means that it is important to understand the key movements in Network Rail's debt over CP5, for Great Britain, England & Wales and Scotland.

13.64 Our analysis of the forecast movements in Network Rail's net debt in CP5 for our final determination are summarised in Table 13.4.

Table 13.4: Summary of the forecast movements in Network Rail's net debt from 1 April 2014 to 31 March 2019 for our final determination

£m (nominal prices)	Great Britain	England & Wales	Scotland
Opening CP5 net debt	**(31,669)**	**(28,644)**	**(3,025)**
Revenue	35,851	32,237	3,614
Support costs	(2,381)	(2,144)	(237)
Traction electricity, industry costs and rates	(3,461)	(3,185)	(277)
Network operations	(2,212)	(2,008)	(203)
Network maintenance	(5,810)	(5,231)	(579)
Schedule 4 and 8 costs	(1,191)	(1,057)	(134)
Tax paid (in cash)	(7)	(7)	-
Renewals	(13,614)	(12,108)	(1,506)
Enhancements	(14,361)	(12,868)	(1,493)
Financing costs (excl. inflation accretion)	(7,153)	(6,424)	(729)
Other	(513)	(513)	-
Inflation accretion	(3,093)	(2,792)	(301)
Closing CP5 net debt	**(49,614)**	**(44,744)**	**(4,870)**

[301] Network Rail's SBP forecast also included an assumption for a financial penalty in 2013-14.

13.65 Table 13.5 below shows the high level reasons for the movement in debt in CP5. This is a simpler analysis than Table 13.4 because most of Network Rail's revenue/expenditure is fully funded in the year it is incurred, so the expenditure is offset by revenue. Table 13.5 shows that the main reason for the increase in debt in CP5 is enhancement expenditure. This is because the renewals expenditure in CP5 is largely offset by the long-run steady state amortisation charge (including amortisation of the non-capex RAB).

Table 13.5: High level movements in our forecast of Network Rail's net debt from 1 April 2014 to 31 March 2019

£m (nominal prices)	Great Britain	England & Wales	Scotland
Opening CP5 net debt	**(31,669)**	**(28,644)**	**(3,025)**
Renewals	(13,614)	(12,108)	(1,506)
Enhancements	(14,361)	(12,868)	(1,493)
Amortisation (long-run steady state)	11,166	9,951	1,215
Amortisation (financial sustainability adjustment)	2,274	2,047	227
Inflation accretion	(3,093)	(2,792)	(301)
Other	(317)	(330)	13
Closing CP5 net debt	**(49,614)**	**(44,744)**	**(4,870)**

13.66 Table 13.6 shows the key reasons for the movements in our forecast of Network Rail's closing CP5 net debt for Great Britain between our draft determination and our final determination. These reasons are explained further in the relevant chapters.

Table 13.6: Movements in our forecast of Network Rail's closing CP5 debt for Great Britain from our draft determination to our final determination

£m (nominal prices)	Great Britain	Reference
Closing CP5 net debt per DD	**(47,325)**	
Updated inflation accretion calculation	(147)	Chapter 13 –para 13.118
Updated inflation	(312)	Chapter 13 – para 13.113
Revised opening debt	(801)	Chapter 13 – para 13.59
Revised financing costs	(224)	Chapter 13 – para 13.22
Revised financial sustainability adjustment	(414)	Chapter 13 – para 13.87
Revised renewals expenditure	214	Chapter 8
Revised enhancement expenditure	(670)	Chapter 9
Revised opex memorandum account	65	Chapter 13 – para 13.106
Closing CP5 net debt per FD	**(49,614)**	

Note: The numbers for each line in this table also reflect the change in debt as a result of the additional financing costs caused by the increase in debt from the underlying change in expenditure.

Opening RAB

13.67 As noted in the financial framework chapter (chapter 12), the RAB is a key building block in our methodology for determining access charges. The RAB also acts as a store of value that is released to Network Rail over time through the amortisation charge. It is also very important in calculating the financial indicators, especially the debt to RAB ratio. Therefore, accurately forecasting the opening CP5 RAB is important.

13.68 It is also important that our forecast is as accurate as possible and consistent with the rest of our determination as our income and expenditure assumptions for CP5 are based on Network Rail delivering the last year of CP4, as set out in its SBP.

13.69 Given the importance of being consistent with both the SBP and our forecast of the opening debt at 1 April 2014, we have used the SBP forecast but adjusted it for errors and other changes to Network Rail's forecast, such as the actual level of the RAB at the end of March 2013, but we are still assuming the same underlying level of renewals and enhancements expenditure in 2013-14[302]. This is broadly similar to the approach we took in calculating the level of opening debt at 1 April 2014, as described above.

13.70 We have also made some adjustments to reflect the non-delivery of outputs in CP4 and similar to our draft determination, our decision to reduce the RAB by the value of the corporation tax double-count adjustment (£1.3bn for Great Britain) as explained in the financial framework chapter (chapter 12).

13.71 Further details of the changes in our forecast of the level of Network Rail's opening RAB at 1 April 2014, from our draft determination to our final determination, are outlined in Table 13.7, which is in 2012-13 prices for ease of comparison to our draft determination.

[302] We have adjusted for the re-phasing of the Borders enhancement project in Scotland, i.e. expenditure in relation to this project will reduce in CP4 but increase in CP5. The increase in expenditure in CP5 on the Borders project has been partially offset by electrification being bought forward into CP4 (a net effect of approximately £40m).

Table 13.7: Summary of our forecast of Network Rail's opening RAB at 1 April 2014, showing movements from our draft determination to our final determination

£m (2012-13 prices)	Great Britain	England & Wales	Scotland
Opening CP5 RAB per the DD	**46,616**	**41,922**	**4,694**
Changes in the value of the 2012-13 closing RAB	(373)	(449)	76
Adjustment for non-delivery of outputs in CP4	266	275	(9)
Adjustment to forecast renewal expenditure in 2013-14	337	256	81
Adjustment to forecast enhancement expenditure in 2013-14	(197)	(227)	30
Deferral of enhancements on PR08 schemes to CP5	(98)	(93)	(5)
Deferral of enhancements on non-PR08 schemes to CP5	(39)	-	(39)
Indexation adjustment	(58)	(57)	(1)
Opening CP5 RAB per the FD	**46,454**	**41,627**	**4,827**

13.72 Table 13.7 above starts with our opening RAB assumption in our draft determination and we make the adjustments described below.

13.73 Our forecast of the RAB at 1 April 2014 has been updated for:

(a) the effect of a different closing RAB at the end of 2012-13;

(b) adjustment to the non-delivery of outputs as explained below (adjusting Network Rail's estimate for our current forecast of our assessment);

(c) adjustments to forecast renewal expenditure in 2013-14 for errors, reclassifications from enhancements and an updated forecast of the IOPI adjustment;

(d) adjustment to forecast enhancement expenditure in 2013-14, for the deferral of PR08 and non-PR08 schemes to CP5;

(e) adjustments to forecast enhancement expenditure in 2013-14 for errors, reclassifications to renewals; and

(f) an indexation adjustment to reflect our latest forecast inflation assumptions.

13.74 Network Rail's estimate of its RAB at 31 March 2013 included an assumption for the adjustment for the non-delivery of outputs in CP4 of £436m for Great Britain (i.e. a reduction in the RAB). Our updated assumption for that adjustment is £170m for

Great Britain based on our latest annual assessment of Network Rail's efficiency and finance that we published in 2012-13[303].

13.75 Our forecast of this adjustment is lower than Network Rail's despite the total cost of the non-delivery of outputs being higher as shown in our annual efficiency and finance assessment, because we think that Network Rail should not be worse off than if it had undertaken the additional expenditure necessary to deliver its required outputs and the additional expenditure had gone through our RAB roll forward process. The financial value added calculation does not adjust for the effect of the RAB roll forward policies as it simply just takes the difference in cash expenditure.

13.76 Following this methodology, our current assumption is that the adjustment to the RAB will be £170m, so given Network Rail assumed that the deduction would be £436m, we need to add back £266m to our forecast of the RAB for Great Britain at 1 April 2014[304].

Movements in Network Rail's CP5 RAB

13.77 The RAB is a key building block in our methodology for determining access charges. It is important that our assumptions on the level of the RAB during CP5 are transparent as it is one of the key issues that affect financial sustainability, e.g. it is one part of the calculation of the debt/RAB ratio and our determination of the limits on financial indebtedness and hence the balance sheet buffer. This means that it is important to understand the key movements in Network Rail's RAB over CP5 for Great Britain, England & Wales and Scotland.

13.78 The forecast movements in Network Rail's CP5 RAB that we assumed in our final determination are summarised in Table 13.8. In summary, the key movements are due to enhancement expenditure and indexation (this forecast is in nominal prices and inflation is added to the RAB each year to maintain its value in real terms). The renewals expenditure is mostly offset by the long-run steady state amortisation charge (including amortisation of the non-capex RAB), as explained in the financial framework chapter (chapter 12).

[303] Our 2012-13 annual efficiency and finance assessment is available at http://www.rail-reg.gov.uk/upload/pdf/nr-annual-asessment-2012-13.pdf.

[304] For Great Britain, this is £436m less £170m = £266m. Network Rail only adjusted for the performance adjustment in England and Wales in its 2012-13 regulatory financial statements. It did not make an adjustment for Scotland. We have adjusted for performance in both the England & Wales RAB and the Scotland RAB and they both now reflect our current view of the necessary adjustments. Network Rail's England & Wales RAB and Scotland RAB at 31 March 2014 will be finalised in our 2013-14 annual assessment of Network Rail's efficiency and finance, which will be published in September 2014.

Table 13.8: Summary of the forecast movements in Network Rail's RAB from 1 April 2014 to 31 March 2019

£m (nominal prices)	Great Britain	England & Wales	Scotland
Opening CP5 RAB	**49,283**	**44,162**	**5,121**
Renewals	13,614	12,108	1,506
Core enhancements (incl. PAYG funded)	14,361	12,868	1,493
Amortisation (long-run steady state)	(11,166)	(9,951)	(1,215)
Amortisation (financial sustainability adjustment)	(2,274)	(2,047)	(227)
Indexation	7,227	6,443	784
Closing CP5 RAB	**71,044**	**63,583**	**7,461**

13.79 Table 13.9 shows the key reasons for the movements in our forecast of Network Rail's closing CP5 RAB for Great Britain between our draft determination and our final determination. These reasons are explained further in the relevant chapters.

Table 13.9: Movements in our forecast of Network Rail's closing CP5 RAB for Great Britain from our draft determination to our final determination

£m (nominal prices)	Great Britain	Reference
Closing CP5 RAB per DD	**69,428**	
Updated inflation	882	Chapter 13 – para 13.113
Revised opening RAB	(194)	Chapter 13 – para 13.67
Revised financial sustainability adjustment	453	Chapter 13 – para 13.87
Revised renewals expenditure	(218)	Chapter 8
Revised enhancement expenditure	693	Chapter 9
Closing CP5 RAB per FD	**71,044**	

Amortisation

Background

13.80 As we set out in the financial framework chapter (chapter 12) amortisation includes three elements: average long-run steady state renewals, amortisation of the non-capex RAB and a financial sustainability adjustment.

13.81 Average long-run steady state renewals are based on the average forecast renewals expenditure for the period from CP5 to CP11 as set out in the asset management: maintenance and renewals expenditure chapter (chapter 8). The non-capex RAB is amortised on a straight line basis over 30 years and the financial sustainability adjustment for CP5 is our view of the additional funding that Network Rail requires for financial sustainability purposes as set out in Network Rail's revenue requirement chapter (chapter 14).

Responses to our draft determination

13.82 TfL considered that our approach seems inconsistent as one of the key messages of our periodic review is that we are not providing funding for Network Rail for risks in advance of them occurring. However, TfL noted that we have increased the amortisation charge on the grounds that a reduction in Network Rail's revenue could cause financial sustainability issues.

Our comments on the responses to our draft determination

13.83 We agree with TfL that in PR13 we are not providing funding for risks in advance of them occurring and the balance sheet buffer allows Network Rail to manage these risks. However, in adjusting our amortisation assumption for financial sustainability purposes, we are considering our forecast of Network Rail's actual financial position and we are deciding whether that position is appropriate. That is not the same as providing funding for a risk that may arise in the future.

Our decision

13.84 Our amortisation assumptions for Network Rail in CP5 are summarised in Table 13.10.

Table 13.10: Summary of our final determination amortisation (annual average) assumptions for CP5

£m (2012-13 prices)	Great Britain	England & Wales	Scotland
Average long-run steady state renewals	1,812	1,615	197
Non-capex amortisation	170	151	19
Total long-run steady state amortisation (inc non-capex amortisation)	**1,982**	**1,766**	**216**
Financial sustainability adjustment	400	360	40
Total amortisation	**2,382**	**2,126**	**256**

Summary of changes from our draft determination

13.85 The main changes in our CP5 amortisation assumptions from our draft determination to our final determination are outlined in Table 13.11.

Table 13.11: Comparison of our draft determination to our final determination average CP5 amortisation assumptions

£m (2012-13 prices)	Great Britain			England & Wales			Scotland		
	DD	FD	FD - DD	DD	FD	FD - DD	DD	FD	FD - DD
Average long-run steady state renewals	1,789	1,812	23	1,595	1,615	20	194	197	3
Non-capex amortisation	170	170	0	153	151	(2)	17	19	2
Total long-run steady state amortisation (inc non-capex amortisation)	**1,959**	**1,982**	**23**	**1,748**	**1,766**	**18**	**211**	**216**	**5**
Financial sustainability adjustment	476	400	(76)	420	360	(60)	56	40	(16)
Total amortisation	**2,435**	**2,382**	**(53)**	**2,168**	**2,126**	**(42)**	**267**	**256**	**(11)**

13.86 The main reason for the reduction in total amortisation of £53m per annum for Great Britain, £42m per annum for England & Wales and £11m per annum for Scotland is due to the reduction in our financial sustainability adjustment partly offset by an increase in average long-run steady state renewals.

Financial sustainability

Background

13.87 As discussed in the financial framework chapter (chapter 12), because we are using an adjusted WACC approach, we are including additional amortisation in the calculation of Network Rail's revenue requirement for financial sustainability reasons. For the purpose of our draft determination, we used a simple approach to financial sustainability and assumed that total amortisation was equal to our forecast of Network Rail's renewals spend in CP5. This had the effect of funding Network Rail's capital expenditure on renewals as if it was operating expenditure (i.e. for each pound we assume that it efficiently spends it receives a pound in income), which is not a conventional regulatory approach to funding capital expenditure as capital expenditure is normally funded over time.

13.88 Since our draft determination, our forecast of Network Rail's end of CP5 net debt has increased by £2.3bn (in nominal prices). This is largely due to: an increase in the opening debt assumption (£0.8bn); higher CP5 capital expenditure (£0.5bn); a lower financial sustainability adjustment (£0.4bn), which increases debt; updated inflation assumptions (£0.3bn), higher financing costs due to changes in market interest rates (£0.2bn); and a revised approach to our modelling of accretion on index-linked debt (£0.1bn). These changes are shown in more detail in Table 13.6.

13.89 We have also tested the sensitivity of Network Rail's net debt to RAB ratio to changes in our regulatory assumptions and used Monte Carlo analysis[305] to help identify the robustness of Network Rail's financial position in the face of cost and revenue uncertainty. This analysis has been used in our decisions on the level of the limit on financial indebtedness as discussed in the financial framework chapter (chapter 12).

Responses to our draft determination

13.90 Network Rail suggested that we should also consider two additional financial indicators. The first indicator considers the balance between the value of the RAB and the amount of funding that the industry receives from its customers (farebox), as Network Rail thinks that this ratio provides an indication of how affordable its RAB is in the context of whole industry funding.

13.91 The second indicator compares the balance sheet buffer (the value of the RAB – debt) to the amount of expenditure on support, operations, industry costs and rates, maintenance, & renewals[306] and is a means of checking whether the balance sheet buffer is sufficient to manage risk.

13.92 Railfuture noted that the assessment of financial sustainability should include an analysis of the trend in financial sustainability beyond CP5.

Our comments on the responses to our draft determination

13.93 We have not modelled Network Rail's first proposed additional financial indicator, as farebox forecasts are not publicly available, although Network Rail's analysis suggests that this financial indicator is stable over CP5.

13.94 We have modelled Network Rail's second proposed additional financial indicator for CP5 and our analysis suggests that it steadily improves over the control period.

13.95 Network Rail's proposed additional financial indicators are interesting but we consider that the conventional financial indicators that we, and other regulators, use provide a better indication of Network Rail's financial position. These financial indicators are set out in the financial framework chapter (chapter 12). This is because Network Rail's first additional indicator is more helpful when considering how enhancements should be funded and the second indicator is more helpful when trying to determine the size of the balance sheet buffer.

Our determination

13.96 We have considered Network Rail's financial position and after considering our determination in the round, our statutory duties and our forecast of Network Rail's financial indicators we consider that additional amortisation for financial sustainability of £2.0bn for Great Britain (£1.8bn for England & Wales and £0.2bn for Scotland) is

[305] Monte Carlo analysis is a technique used to analyse complex issues by simulating the various outcomes based on a large number scenarios.

[306] Note: It excludes traction electricity.

appropriate for CP5. As shown in Table 13.12, these amounts are lower than our draft determination by £0.4bn for Great Britain (£0.3bn for England & Wales and £0.1bn for Scotland).

Table 13.12: Additional amortisation for CP5 financial sustainability adjustment

£m (2012-13 prices)	DD	FD	FD - DD
Great Britain	2,379	2,000	(379)
England & Wales	2,101	1,800	(301)
Scotland	278	200	(78)

13.97 Our analysis of financial sustainability for our PR13 determination has involved comparing Network Rail's financial indicators to the levels typical in other utility companies with investment grade credit ratings. We have also examined our forecast level of these financial indicators in CP5, CP6 and CP7. Our analysis has focused on the debt to RAB ratio as the AICR does not provide us with useful information for CP5 because, by definition under the adjusted WACC approach, the AICR is close to one and amortisation does not directly affect the AICR.

13.98 We have also discussed this issue with some credit rating agencies and we think that Network Rail's debt/RAB ratio at the end of CP5 for Great Britain (69.8%), England & Wales (70.4%) and Scotland (65.3%) are consistent, everything else being equal, with an investment grade credit rating. Also, the levels during CP5 are not materially different from those at the end of CP5. Our forecasts of these financial indicators are shown in Tables 13.16, 13.17 and 13.18.

Long-term financial sustainability

13.99 Our analysis of Network Rail's financial position beyond CP5 shows that, assuming the adjusted WACC approach is used in CP6 and CP7[307], the debt to RAB ratios for Network Rail in CP6 and CP7 for Great Britain will be similar to the levels in CP5. These levels are comparable to other similar companies such as BAA, Thames Water and Yorkshire Water.

13.100 Figure 13.1 shows our forecast of Network Rail's net debt, RAB and net debt / RAB ratio for CP5, CP6 and CP7. Figure 13.2 shows the net revenue requirement for the same period.

[307] If the PR08 ring-fenced approach is used in CP6 and CP7, the financial indicators are generally better.

Figure 13.2: Forecast of Network Rail's debt and RAB to the end of CP7 for Great Britain

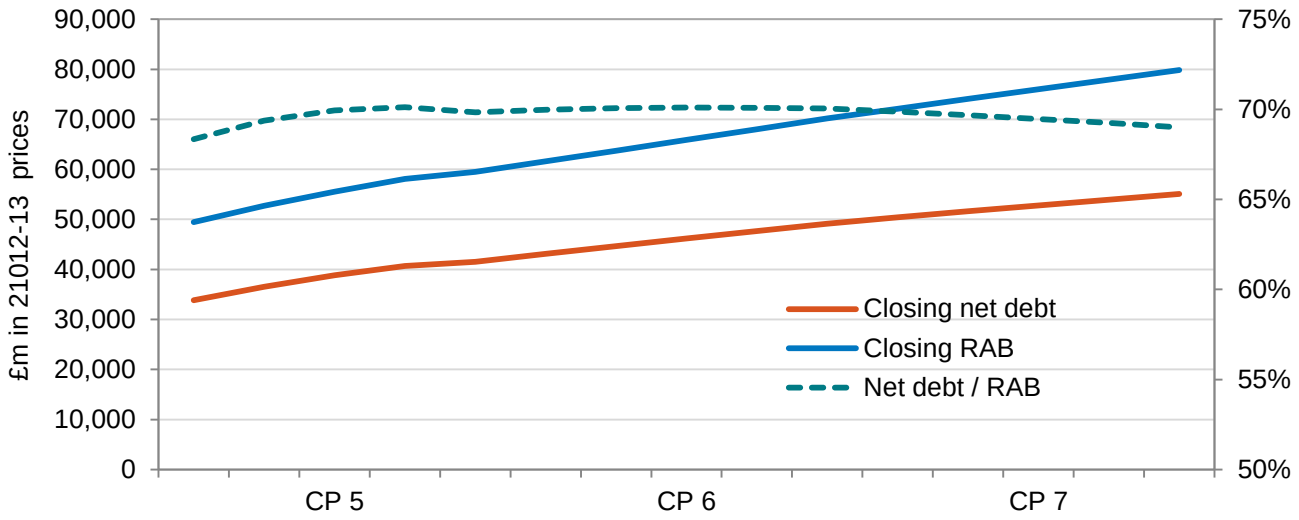
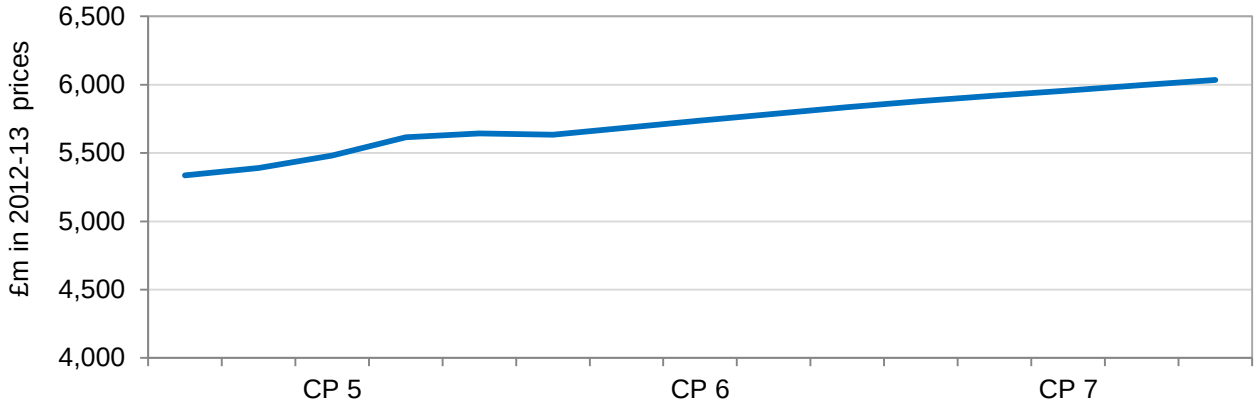


Figure 13.3: Forecast of Network Rail's net revenue requirement to the end of CP7 for Great Britain



13.101 We have used the following assumptions for our forecasts of CP6 and CP7:

(a) after CP5, Network Rail continues to invest £2.5bn (2012-13 prices) in enhancements to rail infrastructure every year. This reflects the average level of investment made and planned for CP4 & CP5 (2008-09 to 2018-19). This does not include the cost of additional enhancements not funded by Network Rail, such as the non-Network Rail part of Crossrail and HS2;

(b) renewals expenditure reflects our assumptions on Network Rail's long run renewals forecast and that Network Rail achieves its CP5 efficiency targets;

(c) we have not included any efficiencies beyond those proposed in our determination;

(d) Network Rail issues only government-guaranteed debt;

(e) Network Rail re-finances £1bn of debt a year;

(f) 15% of new debt is index-linked; and

(g) interest rates are assumed to be the same as in the last year of CP5.

13.102 We note the key trends shown in Figures 13.1 and 13.2 above:

(a) Network Rail's net debt / RAB ratio remains relatively stable (between 68% and 70%) over the three control periods;

(b) there is an increase in Network Rail's RAB (approximately £30bn) and debt (approximately £20bn), largely as a result of the assumed enhancement spend; and

(c) Network Rail's annual net revenue requirement increases from £5.4bn to £6.0bn. This is largely due to the increase in financing costs resulting from the higher level of debt, which offsets the reduction in operating costs.

13.103 We have forecast that Network Rail's debt to RAB ratio will increase from the end of CP4 to the end of CP5 by 7.4 percentage points for Great Britain. Some of this movement is due to one-off factors such as the revised treatment of the corporation tax double-count (1.6 percentage points) and the adjustments for non-delivery of CP4 outputs (0.2 percentage points). There is also an underlying increase of 5.6 percentage points, which is largely due to the net effect of the capital and expenditure programme and how that is funded in CP5[308] and the effect of the adjusted WACC approach. We will monitor closely in CP5 the debt/RAB ratio for Great Britain, England & Wales and Scotland.

13.104 In our long-term regulatory statement, published in July 2013, we identified financial sustainability as an important issue and we think that it is very important for PR18 that the industry and the governments have a clear understanding of the level of enhancements that may be needed in CP6, the benefits that these enhancements may bring, how they contribute to value for money and how they should be financed.

13.105 In particular, our PR18 development work will consider how the societal benefits of enhancements should be funded. We will also consider our approach to Network Rail's cost of capital and how we should take account of Network Rail not having equity shareholders and hence not paying an equity return to them, as the adjusted WACC approach is only intended to be used for CP5.

Opex memorandum account

13.106 As set out in the financial framework chapter (chapter 12), only capital expenditure can be added to Network Rail's RAB from the start of CP4. In previous control periods

[308] An illustrative example of this effect is if the debt at the end of CP4 was £50m and the RAB was £100m, the debt to RAB ratio is 50% (£50m / £100m). If in CP5 there is £50m of capex funded by debt, then the debt is now £100m (£50m + £50m) and the RAB is now £150m (£50m + £100m), so the debt to RAB ratio is now 67% (£100m / £150m).

we also added incentive payments such as the volume incentive, to the RAB at the start of the control period following the control period in which the payment was earned. These payments are now remunerated through the opex memorandum account. This works by 'logging up' the payment to the opex memorandum account during the control period and then reimbursing Network Rail in the following control period.

13.107 The opex memorandum account also includes funding for issues that needed adjustment, clarification or correction in CP4, e.g. adjustments for errors in capacity charges and updated business rates information. Where appropriate, our PR13 determination includes these amounts.

13.108 We have used Network Rail's latest forecasts of the CP4 opex memorandum account closing balance as the basis of our closing balance at 31 March 2014. We have also included the £3.1m (2012-13 prices) compensation to Network Rail for changes in variable usage charge rates for TEAP and TEAK wagons in relation to the Freightliner appeal under the Access & Management Regulations, which was decided after our draft determination. This compensated Network Rail for the loss of variable usage charge (VUC) income following our determination in January 2011 of an appeal under the Access & Management Regulations by Freightliner Heavy Haul Limited[309].

13.109 Table 13.13 provides an analysis of our forecast of the closing balance at 31 March 2014 on Network Rail's opex memorandum account for our final determination.

Table 13.13: Summary of our forecast of Network Rail's opex memorandum account balance at 31 March 2014

£m (2012-13 prices)	Great Britain	England & Wales	Scotland
Volume incentive	68	56	12
Euston and Victoria property sales income shortfall	72	72	-
Capacity charge error	49	49	-
NSIP underspend on maintenance costs	(75)	(75)	-
Business rates additional spend	51	54	-3
ORR costs (licence fee, safety levy and independent reporter costs)	4	3	1
Freightliner charges	3	2	1
Total	**172**	**161**	**11**

13.110 We have assumed that the balance on the opex memorandum account at 31 March 2014 will be released to Network Rail on a straight line basis over CP5. This

[309] Full details of our determination can be found on our website at http://www.rail-reg.gov.uk/server/show/nav.2471.

results in an average payment of £34m per annum (2012-13 prices) in CP5 for Great Britain, £32m per annum (2012-13 prices) in CP5 for England & Wales and £2m per annum (2012-13 prices) in CP5 for Scotland, which is included in the revenue requirements.

13.111 We will adjust the opex memorandum account in CP5 for any differences between our assumptions in our PR13 determination and the final balances on the opex memorandum account for the five year period ended 31 March 2014.

Summary of changes from our draft determination

13.112 The main changes in the forecast balance on the opex memorandum account at 31 March 2014 from our draft determination to our final determination are outlined in Table 13.14. The main reasons for this increase are due to an increase in the adjustment for business rates of £58m (due to an error in Network Rail's SBP assumption), Freightliner charges of £3m, offset by other relatively small adjustments.

Table 13.14: Comparison of the forecast balance on the opex memorandum account at 31 March 2014 from our draft determination to our final determination

£m (2012-13 prices)	DD	FD	FD – DD
Great Britain	115	172	57
England & Wales	111	161	50
Scotland	4	11	7

Inflation assumptions

13.113 Although we set our PR13 determination in 2012-13 prices, to calculate Network Rail's revenue requirement, we need to make assumptions about inflation over CP5, e.g. to support our calculation of Network Rail's financing costs.

13.114 Since our draft determination, we have revised our CP5 inflation assumptions. In our draft determination, we assumed that the Retail Price Index (RPI) would rise by 2.75% in each year of CP5, which is the long-term UK Government forecast. However, for our final determination we have used a forecast, based on independent forecasts, published by HM Treasury in August 2013[310]. This forecast only covered the years 2013-14 to 2017-18, so we have retained the 2.75% inflation assumption for 2018-19. Our CP5 inflation assumptions are set out in Table 13.15 below.

[310] Our assumptions for 2014-15 to 2017-18 are taken from HM Treasury's 'Forecasts for the UK economy: a comparison of independent forecasts' document available at: https://www.gov.uk/government/publications/forecasts-for-the-uk-economy-august-2013.

Table 13.15: CP5 inflation assumptions

Annual RPI inflation	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Modelling assumption	3.10%	2.90%	2.90%	3.00%	3.40%	2.75%

Financial modelling

13.115 We have used an excel-based financial model to support our PR13 determination of Network Rail's CP5 revenue requirement and financial position. As part of our quality assurance processes, our financial model has been audited by an independent consultancy firm, BDO LLP (previously PKF (UK) LLP). In January 2012, we commissioned them to carry out an audit of the financial model that we used for our advice to ministers.

13.116 In January 2013, we commissioned a further audit by BDO LLP for the financial model that supported our draft determination. Finally, in September 2013, we commissioned BDO LLP to audit the financial model that supports our final determination[311].

13.117 These audits provided assurance that our financial model was logically constructed, internally consistent and that the formulae, algorithms and calculations were materially accurate[312].

13.118 The main change in our financial model since our draft determination is that we now more accurately forecast the effect of inflation on index-linked debt.

Other key financial information

13.119 We set out in Tables 13.16, 13.17 and 13.18 some key financial information such as our assumptions on debt, RAB, financing costs, the FIM fee and the debt/RAB ratio.

13.120 Table 13.19, 13.20, 13.21 set out the comparison between Network Rail's SBP, our draft determination and our final determination for these assumptions.

13.121 In England & Wales, our forecast end of CP5 debt / RAB ratio has increased from 68.4% in our draft determination to 70.4% in our final determination. Whereas in Scotland our forecast end of CP5 debt / RAB ratio has decreased from 66.1% (draft determination) to 65.3% in our final determination. The main changes to the financial indicators are mostly attributable to the changes in the opening CP5 RAB and the opening CP5 debt[313].

---

[311] There have not been significant changes to our financial model since our draft determination but it is still important that the version of the model used for our final determination was audited.

[312] The summary of their opinion is available at: http://www.rail-reg.gov.uk/pr13/publications/consultants-reports.php.

[313] For Scotland, the debt / RAB ratio has reduced because our assumption of the opening CP5 RAB position has increased by £133m since our draft determination, which is substantially more than our assumption of the opening CP5 debt position increased by £18m since our draft determination.

Table 13.16: Our assumptions on key financial information for Great Britain in CP5

£m (nominal prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 closing/ total
Closing debt	35,869	39,900	43,659	47,330	49,614	49,614
Closing RAB	52,490	57,521	62,423	67,507	71,044	71,044
Financing costs (exc FIM fee)	779	831	944	1,083	1,193	4,830
FIM fee	380	425	468	509	541	2,323
Total financing costs	1,159	1,256	1,412	1,592	1,734	7,153
Debt / RAB ratio	68.3%	69.4%	69.9%	70.1%	69.8%	69.8%

Table 13:17: Our assumptions on key financial information for England & Wales in CP5

£m (nominal prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 closing/ total
Closing debt	32,278	35,744	39,121	42,566	44,744	44,744
Closing RAB	46,851	51,205	55,595	60,291	63,583	63,583
Financing costs (exc FIM fee)	703	745	844	971	1,073	4,336
FIM fee	343	382	419	456	488	2,088
Total financing costs	1,046	1,127	1,263	1,427	1,561	6,424
Debt / RAB ratio	68.9%	69.8%	70.4%	70.6%	70.4%	70.4%

Table 13:18: Our assumptions on key financial information for Scotland in CP5

£m (nominal prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 closing/ total
Closing debt	3,591	4,156	4,537	4,764	4,870	4,870
Closing RAB	5,639	6,316	6,828	7,216	7,461	7,461
Financing costs (exc FIM fee)	76	86	100	112	120	494
FIM fee	37	43	49	52	54	235
Total financing costs	113	129	149	164	174	729
Debt / RAB ratio	63.7%	65.8%	66.5%	66.0%	65.3%	65.3%

Table 13:19: Other key financial information for Great Britain in CP5, comparison of our final determination to Network Rail's SBP and our draft determination

£m (nominal prices)	SBP	DD	FD	FD - SBP	FD - DD
Closing debt	51,275	47,325	49,614	(1,659)	2,289
Closing RAB	74,489	69,428	71,044	(3,445)	1,616
Total CP5 financing costs (exc. FIM fee)	6,789	4,535	4,830	(1,959)	295
Total CP5 FIM fee	2,675	2,191	2,323	(352)	132
Total CP5 financing costs	9,464	6,726	7,153	(2,311)	427
Debt / RAB ratio	68.8%	68.2%	69.8%	1.0%	1.6%

Table 13:20: Other key financial information for England & Wales in CP5, comparison of our final determination to Network Rail's SBP and our draft determination

£m (nominal prices)	SBP	DD	FD	FD - SBP	FD - DD
Closing debt	46,097	42,568	44,744	(1,353)	2,176
Closing RAB	66,817	62,231	63,583	(3,234)	1,352
Total CP5 financing costs (exc. FIM fee)	6,094	4,065	4,336	(1,758)	271
Total CP5 FIM fee	2,401	1,966	2,088	(313)	122
Total CP5 financing costs	8,495	6,031	6,424	(2,071)	393
Debt / RAB ratio	69.0%	68.4%	70.4%	1.4%	2.0%

Table 13:21: Other key financial information for Scotland in CP5, comparison of our final determination to Network Rail's SBP and our draft determination

£m (nominal prices)	SBP	DD	FD	FD - SBP	FD - DD
Closing debt	5,176	4,756	4,870	(306)	114
Closing RAB	7,671	7,197	7,461	(210)	264
Total CP5 financing costs (exc. FIM fee)	695	470	494	(201)	24
Total CP5 FIM fee	274	225	235	(39)	10
Total CP5 financing costs	969	695	729	(240)	34
Debt / RAB ratio	67.5%	66.1%	65.3%	(2.2%)	(0.8%)

14. Network Rail's revenue requirement

Key messages in this chapter

- This chapter provides our determination of Network Rail's CP5 gross and net revenue requirements based on our assessment of the company's income and expenditure and our regulatory framework.
- Network Rail's net revenue requirement in CP5 is on average £5.5bn per annum in Great Britain, £4.9bn per annum in England & Wales and £584m per annum in Scotland. In comparison, the SBP assumed that Network Rail's net revenue requirement in CP5 would on average be £5.8bn per annum in Great Britain, £5.2bn per annum in England & Wales and £0.6bn per annum in Scotland.
- Indicative revenue requirements for each of Network Rail's operating routes are presented in Annex D.

Main changes since our draft determination

- We have determined Network Rail's Great Britain net revenue requirement for CP5 to be £27,465m. This is £37m higher than our draft determination (£27,428m).
- We have determined Network Rail's England & Wales net revenue requirement for CP5 to be £24,543m. This is £59m higher than our draft determination (£24,485m).
- We have determined Network Rail's Scotland net revenue requirement for CP5 to be £2,922m. This is £22m lower than our draft determination (£2,944m).

Introduction

14.1 This chapter sets out our determination of Network Rail's CP5 gross and net revenue requirements based on our assessment of the company's income and expenditure and our regulatory framework.

14.2 The revenue requirements represent the income and charges that are consistent with Network Rail delivering its regulatory outputs in CP5. The gross revenue requirement in CP5 is the total income that Network Rail needs to operate its business. The net revenue requirement is calculated by deducting Network Rail's other single till income, e.g. property income, from the gross revenue requirement. The net revenue requirement is received through access charges and network grant paid by governments 'in lieu of' some fixed track access charges.

14.3 The differences in financing costs, operating expenditure, opex memorandum account and amortisation compared to our draft determination and to Network Rail's SBP are further explained in the: support expenditure chapter (chapter 5); traction electricity, industry costs and rates chapter (chapter 6); the operations expenditure chapter

(chapter 7); asset management: maintenance and renewals expenditure chapter (chapter 8); impact of financial framework on financial parameters chapter (chapter 13); other single till income chapter (chapter 18); and the possessions and performance regimes chapter (chapter 20).

Revenue requirements

14.4 Figures 14.1, 14.2 and 14.3 set out the net revenue requirements for Great Britain, England & Wales and Scotland in CP5. These revenue requirements have been calculated after our reclassification of reactive maintenance costs to maintenance from renewals.

14.5 Tables 14.1 to 14.12 summarise, for Great Britain, England & Wales and Scotland:

(a) our annual assumptions of Network Rail's CP5 expenditure;

(b) our determination of Network Rail's annual CP5 net revenue requirements;

(c) a comparison of our final determination of Network Rail's CP5 expenditure assumptions compared to our draft determination, Network Rail's SBP and our PR08 determination; and

(d) a comparison of our final determination of Network Rail's CP5 net revenue requirements compared to our draft determination, Network Rail's SBP and our PR08 determination.

14.6 We have not restated our PR08 or SBP comparisons for the reclassification of reactive maintenance. We have also not restated the SBP comparisons for other issues that we have identified in the access charges chapter (chapter 16) and the other single till income chapter (chapter 18), e.g. income from freight connection agreements. These issues are explained in Annex C.

14.7 Indicative revenue requirements for each of Network Rail's operating routes are presented in Annex D.

Great Britain

Overview of changes from Network Rail's SBP

14.8 The net revenue requirement over CP5 is £1.8bn lower than the forecast in Network Rail's SBP, largely because:

(a) our assumption on Network Rail's adjusted allowed return is £2.1bn lower than Network Rail's, as we are assuming lower financing costs in CP5 (partly due to lower expenditure assumptions e.g. renewals), which has the impact of lowering the revenue requirement compared to the SBP;

(b) our other single till income assumption is £0.2bn higher as we are assuming more property income, which has the impact of lowering the revenue requirement compared to the SBP; and

(c) our total amortisation assumption is £0.4bn higher than Network Rail's as we have made a larger adjustment for financial sustainability than Network Rail did. This has the impact of increasing the revenue requirement compared to the SBP.

Overview of changes from our draft determination

14.9 The net revenue requirement over CP5 is broadly similar to our draft determination (£37m higher), largely because our assumption on Network Rail's:

(a) adjusted allowed return over CP5 is £0.3bn higher than our draft determination as we are assuming higher financing costs in CP5. This has the impact of increasing the revenue requirement compared to our draft determination; and

(b) total amortisation over CP5 is £0.3bn lower as we have made a smaller adjustment for financial sustainability. This has the impact of decreasing the revenue requirement compared to our draft determination.

Our determination

Figure 14.1: Our assessment of Network Rail's CP5 net revenue requirement for Great Britain

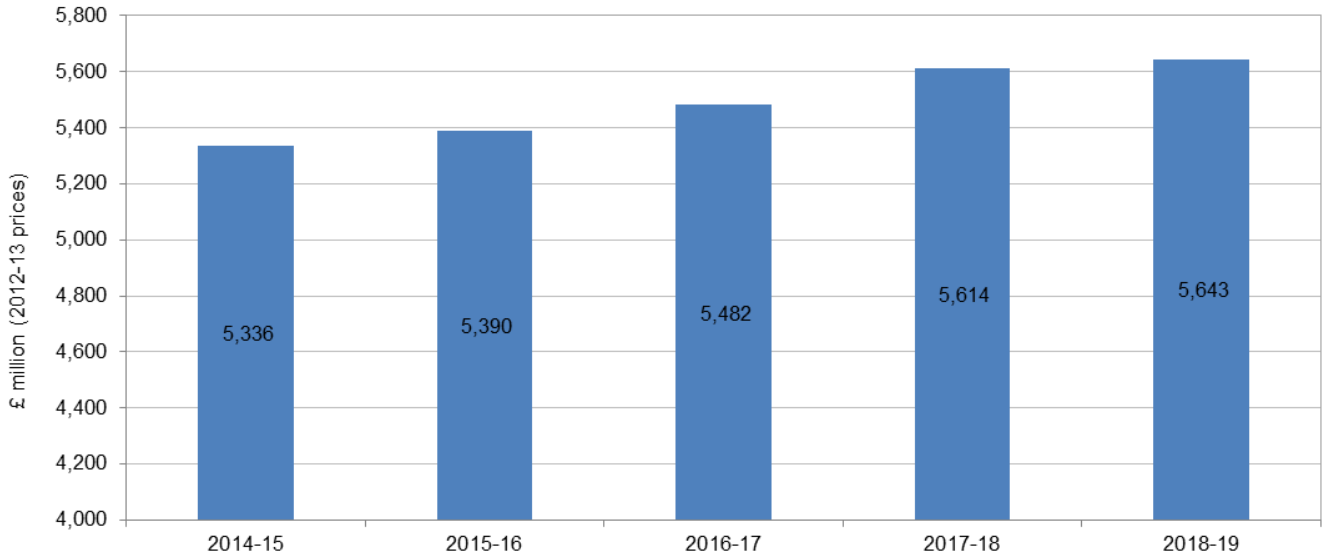


Table 14.1: Our assessment of Network Rail's CP5 expenditure for Great Britain

£m (2012-13 prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 total
Support costs	468	445	417	403	386	2,119
Network operations	425	412	395	378	358	1,968
Traction electricity, industry costs and rates	496	586	602	653	719	3,056
Network maintenance	1,091	1,074	1,033	1,001	966	5,166
Schedule 4 & 8 costs	207	219	225	204	203	1,058
Total operating expenditure	**2,687**	**2,735**	**2,672**	**2,640**	**2,633**	**13,367**
Renewals	2,508	2,575	2,477	2,357	2,190	12,107
Enhancements	2,797	2,921	2,730	2,672	1,699	12,818
Total capital expenditure	**5,305**	**5,496**	**5,207**	**5,029**	**3,888**	**24,925**
Total expenditure	**7,992**	**8,231**	**7,880**	**7,669**	**6,521**	**38,293**

Table 14.2: Our assessment of Network Rail's CP5 revenue requirement for Great Britain

£m (2012-13 prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 total
Total operating expenditure	2,687	2,735	2,672	2,640	2,633	13,367
Add: Long-run steady state amortisation (including non-capex amortisation)	1,982	1,982	1,982	1,982	1,982	9,909
Add: Regulatory tax allowance	4	-	-	-	3	6
Add: Opex memorandum account	34	34	34	34	34	172
Gross rev. req. before cost of capital	**4,707**	**4,752**	**4,689**	**4,656**	**4,652**	**23,455**
Add: Allowed return (real cost of capital)	2,024	2,155	2,283	2,396	2,479	11,337
Less: Real equity surplus	(931)	(1,004)	(1,027)	(1,027)	(1,028)	(5,018)
Adjusted allowed return	1,093	1,151	1,255	1,369	1,451	6,320
Gross rev. req. pre-sustainability adjustments	**5,800**	**5,903**	**5,944**	**6,025**	**6,104**	**29,775**
Add: Amortisation financial sustainability adjustment	300	300	400	500	500	2,000
Gross revenue requirement	**6,100**	**6,203**	**6,344**	**6,525**	**6,604**	**31,775**
Less: Other single till income	(764)	(813)	(862)	(911)	(960)	(4,310)
Net revenue requirement	**5,336**	**5,390**	**5,482**	**5,614**	**5,643**	**27,465**

Table 14.3: Comparison of CP5 expenditure for Great Britain

£m (2012-13 prices)	PR08	SBP	DD	FD	FD less SBP	FD less DD
Support costs	4,113	2,232	2,093	2,119	(113)	26
Network operations		2,027	1,968	1,968	(59)	-
Traction electricity, industry costs and rates	2,175	3,701	3,114	3,056	(645)	(57)
Network maintenance	6,126	4,669	5,152	5,166	497	14
Schedule 4 & 8 costs	870	712	1,131	1,058	346	(73)
Total operating expenditure	**13,284**	**13,341**	**13,456**	**13,367**	**26**	**(89)**
Renewals	13,141	14,365	12,173	12,107	(2,258)	(66)
Enhancements	9,296	12,388	12,239	12,818	430	579
Total capital expenditure	**22,437**	**26,754**	**24,413**	**24,925**	**(1,829)**	**513**
Total expenditure	**35,721**	**40,095**	**37,869**	**38,293**	**(1,802)**	**424**

Note: Some of the numbers included in the SBP column in this table have been adjusted in the relevant chapters to reflect either errors in the SBP or to make the numbers consistent with the treatment in our determination (e.g. for reactive maintenance). But we have not adjusted them in this table. The adjustments are explained in the relevant chapters.

Table 14.4: Comparison of CP5 revenue requirement for Great Britain

£m (2012-13 prices)	PR08	SBP	DD	FD	FD less SBP	FD less DD
Total operating expenditure	13,284	13,341	13,456	13,367	26	(89)
Add: Long-run steady state amortisation (including non-capex amortisation)	8,903	10,540	9,794	9,909	(631)	115
Add: Regulatory tax allowance	-	-	18	6	6	(11)
Add: Opex memorandum account	-	138	115	172	34	57
Gross rev. req. before cost of capital	**22,187**	**24,019**	**23,384**	**23,455**	**(564)**	**72**
Add: Allowed return (real cost of capital)	10,455	13,092	11,267	11,337	(1,755)	70
Less: Real equity surplus	-	(4,716)	(5,280)	(5,018)	(302)	263
Adjusted allowed return	10,455	8,376	5,987	6,320	(2,056)	333
Gross rev. req. pre-sustainability adjustments	**32,642**	**32,395**	**29,371**	**29,775**	**(2,620)**	**404**
Add: Amortisation financial sustainability adjustment	-	970	2,379	2,000	1,030	(379)
Gross revenue requirement	**32,642**	**33,365**	**31,749**	**31,775**	**(1,590)**	**25**
Less: Other single till income	(3,523)	(4,138)	(4,321)	(4,310)	(172)	11
Net revenue requirement	**29,119**	**29,227**	**27,428**	**27,465**	**(1,762)**	**37**

Note:

1. Total amortisation is - PR08 (£8.9bn); SBP (£11.5bn); draft determination (£12.2bn) and final determination (£11.9bn).

2. The SBP number for OSTI in this table has been adjusted in Table C.1 in Annex C to reflect either errors in the SBP or to make the OSTI calculation consistent with our treatment. Table C.4 in Annex C provides a reconciliation between the SBP number and our adjusted number. This is explained in Annex C.

England & Wales

Overview of changes from Network Rail's SBP

14.10 The net revenue requirement over CP5 is £1.6bn lower than Network Rail's forecast in its SBP, largely because:

(a) our assumption on Network Rail's adjusted allowed return over CP5 is £1.8bn lower than Network Rail's, as we are assuming lower financing costs in CP5 (partly due to lower expenditure assumptions e.g. renewals), which has the impact of lowering the revenue requirement compared to the SBP;

(b) our other single till income assumption over CP5 is £0.2bn higher as we are assuming more property income, which has the impact of lowering the revenue requirement compared to the SBP; and

(c) our total amortisation assumption over CP5 is £0.4bn higher than Network Rail's as we have made a larger adjustment for financial sustainability than Network Rail did. This has the impact of increasing the revenue requirement compared to the SBP.

Overview of changes from our draft determination

14.11 The net revenue requirement over CP5 is £0.1bn higher than our draft determination, largely because our assumption on Network Rail's:

(a) adjusted allowed return over CP5 is £0.3bn higher than our draft determination, as we are assuming higher financing costs in CP5, which has the impact of increasing the revenue requirement, compared to our draft determination; and

(b) total amortisation over CP5 is £0.2bn lower as we have made a smaller adjustment for financial sustainability. This has the impact of decreasing the revenue requirement compared to our draft determination.

Our determination

Figure 14.2: Our assessment of Network Rail's CP5 net revenue requirement for England & Wales

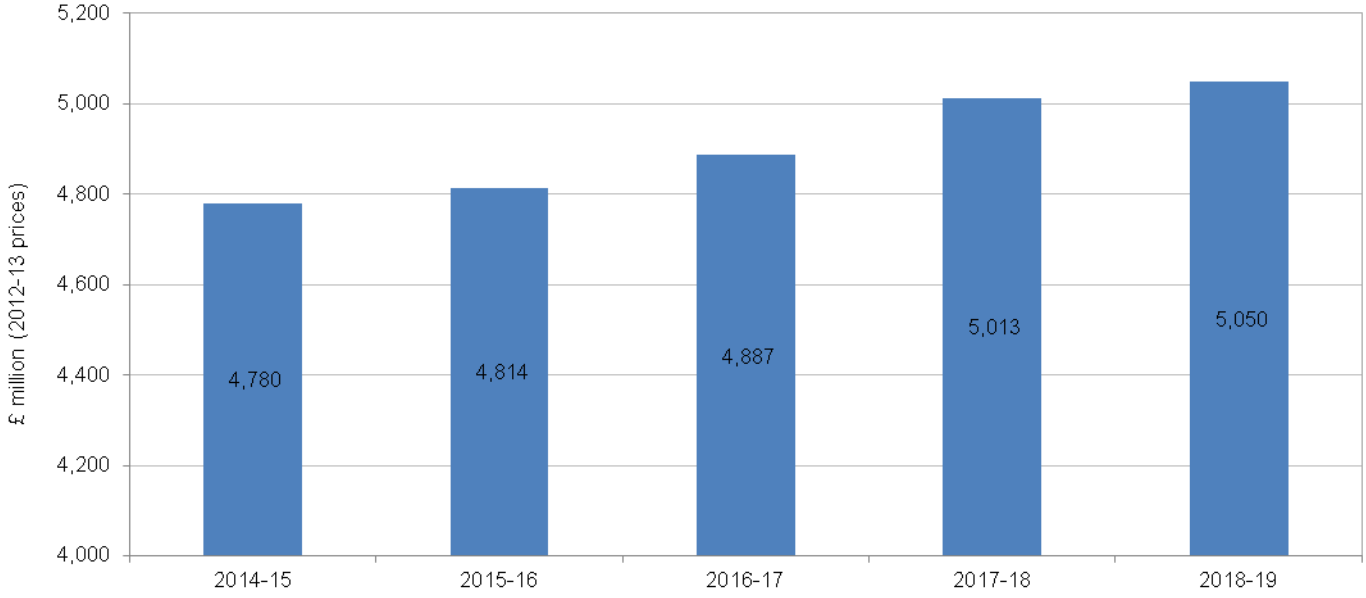


Table 14.5: Our assessment of Network Rail's CP5 expenditure for England & Wales

£m (2012-13 prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 total
Support costs	421	400	376	363	348	1,908
Network operations	385	374	358	344	325	1,787
Traction electricity, industry costs and rates	456	537	553	601	665	2,812
Network maintenance	986	965	930	899	872	4,651
Schedule 4 & 8 costs	187	194	195	182	182	939
Total operating expenditure	**2,434**	**2,472**	**2,411**	**2,389**	**2,391**	**12,097**
Renewals	2,242	2,248	2,199	2,113	1,964	10,766
Enhancements	2,329	2,533	2,465	2,516	1,620	11,463
Total capital expenditure	**4,571**	**4,780**	**4,664**	**4,629**	**3,584**	**22,228**
Total expenditure	**7,005**	**7,252**	**7,075**	**7,018**	**5,975**	**34,325**

Table 14.6: Our assessment of Network Rail's CP5 revenue requirement for England & Wales

£m (2012-13 prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 total
Total operating expenditure	2,434	2,472	2,411	2,389	2,391	12,097
Add: Long-run steady state amortisation (including non-capex amortisation)	1,766	1,766	1,766	1,766	1,766	8,831
Add: Regulatory tax allowance	4	-	-	-	3	6
Add: Opex memorandum account	32	32	32	32	32	162
Gross rev. req. before cost of capital	**4,236**	**4,270**	**4,210**	**4,188**	**4,192**	**21,096**
Add: Allowed return (real cost of capital)	1,810	1,921	2,033	2,137	2,217	10,117
Less: Real equity surplus	(824)	(888)	(909)	(909)	(910)	(4,441)
Adjusted allowed return	986	1,033	1,123	1,228	1,306	5,676
Gross rev. req. pre-sustainability adjustments	**5,222**	**5,303**	**5,333**	**5,415**	**5,498**	**26,772**
Add: Amortisation financial sustainability adjustment	270	270	360	450	450	1,800
Gross revenue requirement	**5,492**	**5,573**	**5,693**	**5,865**	**5,948**	**28,572**
Less: Other single till income	(712)	(759)	(806)	(852)	(899)	(4,028)
Net revenue requirement	**4,780**	**4,814**	**4,887**	**5,013**	**5,050**	**24,543**

Table 14.7: Comparison of CP5 expenditure for England & Wales

£m (2012-13 prices)	PR08	SBP	DD	FD	FD less SBP	FD less DD
Support costs	3,736	2,023	1,884	1,908	(115)	24
Network operations		1,842	1,787	1,787	(55)	-
Traction electricity, industry costs and rates	1,996	3,414	2,864	2,812	(602)	(52)
Network maintenance	5,543	4,214	4,644	4,651	437	7
Schedule 4 & 8 costs	818	632	1,003	939	307	(64)
Total operating expenditure	**12,094**	**12,124**	**12,182**	**12,097**	**(27)**	**(85)**
Renewals	11,569	12,809	10,840	10,766	(2,043)	(75)
Enhancements	8,820	10,959	10,833	11,463	504	630
Total capital expenditure	**20,389**	**23,768**	**21,673**	**22,228**	**(1,540)**	**555**
Total expenditure	**32,483**	**35,893**	**33,855**	**34,325**	**(1,568)**	**470**

Note: Some of the numbers included in the SBP column in this table have been adjusted in the relevant chapters to reflect either errors in the SBP or to make the numbers consistent with the treatment in our determination (e.g. for reactive maintenance). But we have not adjusted them in this table. The adjustments are explained in the relevant chapters.

Table 14.8: Comparison of CP5 revenue requirement for England & Wales

£m (2012-13 prices)	PR08	SBP	DD	FD	FD less SBP	FD less DD
Total operating expenditure	12,094	12,124	12,182	12,097	(27)	(85)
Add: Long-run steady state amortisation (including non-capex amortisation)	7,841	9,385	8,739	8,831	(554)	92
Add: Regulatory tax allowance	-	-	17	6	6	(10)
Add: Opex memorandum account	-	133	111	162	29	51
Gross rev. req. before cost of capital	**19,934**	**21,642**	**21,048**	**21,096**	**(546)**	**47**
Add: Allowed return (real cost of capital)	9,411	11,730	10,081	10,117	(1,613)	36
Less: Real equity surplus	-	(4,210)	(4,712)	(4,441)	(231)	271
Adjusted allowed return	9,411	7,520	5,369	5,676	(1,844)	307
Gross rev. req. pre-sustainability adjustments	**29,345**	**29,162**	**26,417**	**26,772**	**(2,390)**	**355**
Add: Amortisation financial sustainability adjustment	-	815	2,101	1,800	985	(301)
Gross revenue requirement	**29,345**	**29,977**	**28,518**	**28,572**	**(1,405)**	**53**
Less: Other single till income	(3,241)	(3,858)	(4,034)	(4,028)	(170)	5
Net revenue requirement	**26,104**	**26,120**	**24,485**	**24,543**	**(1,577)**	**59**

Note:

1. Total amortisation is - PR08 (£7.8bn); SBP (£10.2bn); draft determination (£10.8bn) and final determination (£10.6bn).
2. The SBP number for OSTI in this table has been adjusted in Table C.2 in Annex C to reflect either errors in the SBP or to make the OSTI calculation consistent with our treatment. Table C.4 in Annex C provides a reconciliation between the SBP number and our adjusted number. This is explained in Annex C.

Scotland

Overview of changes from Network Rail's SBP

14.12 The net revenue requirement over CP5 is £186m lower than Network Rail's forecast in its SBP, largely because:

(a) our assumption on Network Rail's adjusted allowed return is £212m lower than Network Rail's, as we are assuming lower financing costs in CP5 (partly due to lower expenditure assumptions e.g. renewals), which has the impact of lowering the revenue requirement compared to the SBP;

(b) our assumption on Network Rail's operating expenditure is £54m higher, as we are assuming higher maintenance and Schedule 4 & 8 costs slightly offset by lower traction electricity, industry costs and rates, which has the impact of increasing the revenue requirement compared to the SBP; and

(c) our total amortisation assumption is £32m lower than Network Rail's as we have made a lower assumption for long-run steady state amortisation (£78m) than Network Rail did, partly offset by a higher adjustment for financial sustainability (£46m). Overall, this has the impact of decreasing the revenue requirement compared to the SBP.

Overview of changes from our draft determination

14.13 The net revenue requirement is £22m lower than our draft determination, largely because our assumption on Network Rail's:

(a) adjusted allowed return is £25m higher than our draft determination, as we are assuming higher financing costs in CP5, which has the impact of increasing the revenue requirement, compared to the SBP; and

(b) total amortisation is £55m lower as we have made a smaller adjustment for financial sustainability (£78m), partly offset by a higher assumption for long-run steady state amortisation (£23m). This has the impact of decreasing the revenue requirement compared to the SBP.

Our determination

Figure 14.3: Our assessment of Network Rail's CP5 net revenue requirement for Scotland

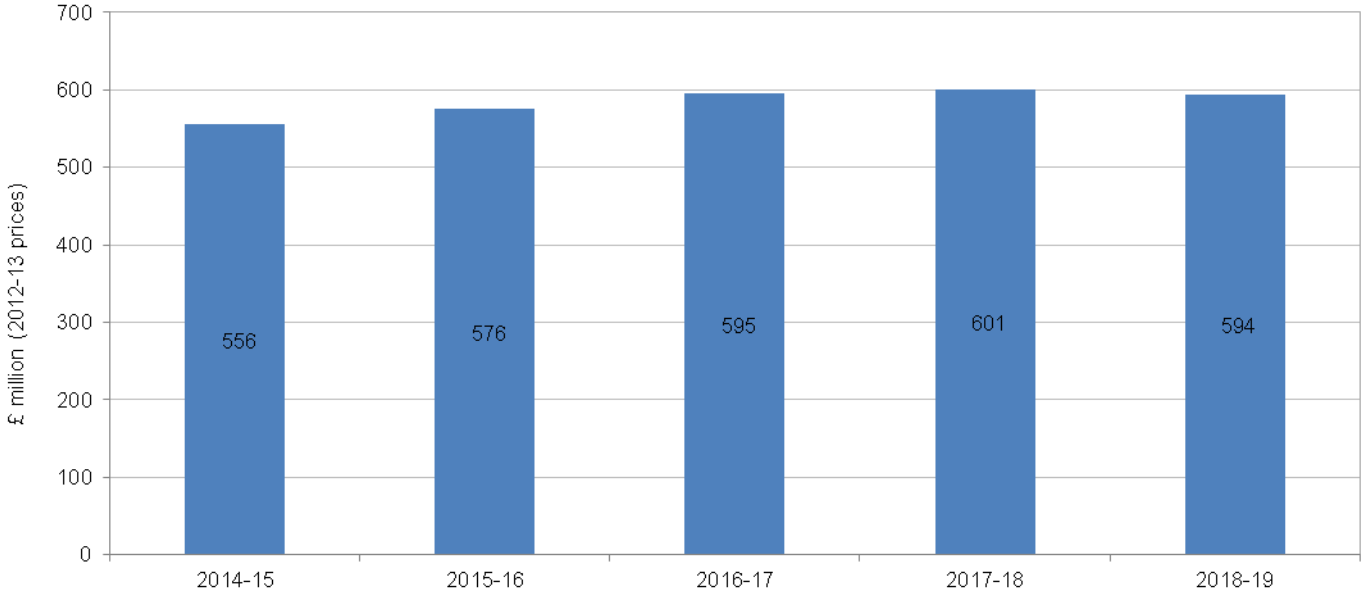


Table 14.9: Our assessment of Network Rail's CP5 expenditure for Scotland

£m (2012-13 prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 total
Support costs	47	44	42	40	38	211
Network operations	39	38	37	34	33	181
Traction electricity, industry costs and rates	40	48	49	52	55	245
Network maintenance	106	108	104	102	95	515
Schedule 4 & 8 costs	20	25	30	22	22	119
Total operating expenditure	**253**	**264**	**261**	**251**	**242**	**1,271**
Renewals	266	327	278	244	225	1,341
Enhancements	468	388	265	156	79	1,356
Total capital expenditure	**734**	**716**	**543**	**400**	**304**	**2,697**
Total expenditure	**987**	**979**	**804**	**651**	**547**	**3,968**

Table 14.10: Our assessment of Network Rail's CP5 revenue requirement for Scotland

£m (2012-13 prices)	2014-15	2015-16	2016-17	2017-18	2018-19	CP5 total
Total operating expenditure	253	264	261	251	242	1,271
Add: Long-run steady state amortisation (including non-capex amortisation)	216	216	216	216	216	1,078
Add: Regulatory tax allowance	0	-	-	-	0	0
Add: Opex memorandum account	2	2	2	2	2	11
Gross rev. req. before cost of capital	**471**	**481**	**479**	**468**	**460**	**2,360**
Add: Allowed return (real cost of capital)	214	234	250	259	263	1,220
Less: Real equity surplus	(107)	(116)	(118)	(118)	(118)	(576)
Adjusted allowed return	107	118	132	141	145	644
Gross rev. req. pre-sustainability adjustments	**578**	**600**	**611**	**610**	**605**	**3,004**
Add: Amortisation financial sustainability adjustment	30	30	40	50	50	200
Gross revenue requirement	**608**	**630**	**651**	**660**	**655**	**3,204**
Less: Other single till income	(52)	(54)	(56)	(59)	(62)	(282)
Net revenue requirement	**556**	**576**	**595**	**601**	**594**	**2,922**

Table 14.11: Comparison of CP5 expenditure for Scotland

£m (2012-13 prices)	PR08	SBP	DD	FD	FD less SBP	FD less DD
Support costs	377	211	209	211	0	2
Network operations		185	181	181	(4)	-
Traction electricity, industry costs and rates	178	287	250	245	(42)	(5)
Network maintenance	583	455	508	515	60	7
Schedule 4 & 8 costs	52	80	128	119	39	(8)
Total operating expenditure	**1,190**	**1,217**	**1,275**	**1,271**	**54**	**(4)**
Renewals	1,572	1,555	1,333	1,341	(214)	9
Enhancements	477	1,430	1,406	1,356	(74)	(51)
Total capital expenditure	**2,048**	**2,985**	**2,739**	**2,697**	**(288)**	**(42)**
Total expenditure	**3,238**	**4,202**	**4,014**	**3,968**	**(234)**	**(46)**

Note: Some of the numbers included in the SBP column in this table have been adjusted in the relevant chapters to reflect either errors in the SBP or to make the numbers consistent with the treatment in our determination (e.g. for reactive maintenance). But we have not adjusted them in this table. The adjustments are explained in the relevant chapters.

Table 14.12: Comparison of CP5 revenue requirement for Scotland

£m (2012-13 prices)	PR08	SBP	DD	FD	FD less SBP	FD less DD
Total operating expenditure	1,190	1,217	1,275	1,271	54	(4)
Add: Long-run steady state amortisation (including non-capex amortisation)	1,063	1,156	1,055	1,078	(78)	23
Add: Regulatory tax allowance	-	-	1	0	0	(1)
Add: Opex memorandum account	-	5	4	11	6	7
Gross rev. req. before cost of capital	**2,252**	**2,378**	**2,335**	**2,360**	**(18)**	**25**
Add: Allowed return (real cost of capital)	1,044	1,362	1,187	1,220	(142)	33
Less: Real equity surplus	-	(507)	(568)	(576)	(69)	(8)
Adjusted allowed return	1,044	856	618	644	(212)	25
Gross rev. req. pre-sustainability adjustments	**3,296**	**3,233**	**2,954**	**3,004**	**(229)**	**50**
Add: Amortisation financial sustainability adjustment	-	154	278	200	46	(78)
Gross revenue requirement	**3,296**	**3,388**	**3,231**	**3,204**	**(184)**	**(27)**
Less: Other single till income	(283)	(280)	(288)	(282)	(2)	6
Net revenue requirement	**3,014**	**3,108**	**2,944**	**2,922**	**(186)**	**(22)**

Note:

1. Total amortisation is - PR08 (£1.1bn); SBP (£1.3bn); draft determination (£1.3bn) and final determination (£1.3bn).

2. The SBP number for OSTI in this table has been adjusted in Table C.3 in Annex C to reflect either errors in the SBP or to make the OSTI calculation consistent with our treatment. Table C.4 in Annex C provides a reconciliation between the SBP number and our adjusted number. This is explained in Annex C.