



Consultation on the financial framework for PR18

January 2017

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Executive summary

In this consultation we set out our approach to the financial framework for Network Rail for our 2018 periodic review (PR18). We describe the policy choices we have identified in areas that we think could (or might need to) change, in particular because of our move to greater route-level regulation and Network Rail's reclassification as a public sector arm's length body in 2014. We also explain why we consider that some features of the existing financial framework (in particular a five year control period and the building block approach) should be retained.

We are asking for views on the key financial issues for PR18 and the factors that will be relevant for our policy proposals in due course including:

- the possibility of new funding arrangements for some enhancement projects and the implications for the financial framework;
- different approaches to setting the cost of capital for Network Rail;
- ways of managing the financial risks that could affect Network Rail and its financial sustainability (including at route-level); and
- the design of:
 - appropriate financial incentive mechanisms; and
 - effective arrangements to assess Network Rail's financial performance and hold it to account.

We also explain, where relevant, the role of decisions that will be made by the UK and Scottish Governments.

Choices around the financial framework for PR18 matter because, taken together, they will impinge on the:

- success of route-level regulatory settlements;
- total costs borne by train operators, rail users, and taxpayers, now and in the future;
- management of financial and other risks and the early identification of problems;
- quality of network development decisions, with consequences for output achievement and service levels;
- effective renewal of rail infrastructure and its impact on asset performance and safety; and
- potential for new sources of financing and funding.

Background

Network Rail is the owner and operator of most of Britain's rail infrastructure. It is a company limited by guarantee, with a board of executive and non-executive directors, and no shareholders. It is classified as a public sector arm's length body and the Secretary of State is its sole member.

As noted in ORR's initial consultation on PR18, we have not identified any convincing reasons to depart from a five year control period over which to set the revenue requirement, meaning that control period 6 (CP6) will run from 1 April 2019 to 31 March 2024.

Network Rail will produce route and national system operator (NSO) level business plans and strategic business plans for England & Wales and Scotland that will set out how it will operate, maintain, renew and enhance the railway during CP6. We will calculate whether the outputs required by the UK and Scottish Governments in their high level output specifications (HLOSs) can be delivered with the money referred to in their statements of funds available (SoFAs), separately for England & Wales and Scotland. It is also likely that the governments will impose limits on Network Rail's borrowing (as they did for control period 5 (CP5)) and we will take these into account.

Network Rail finances its activities principally using:

- revenue from access charges paid by train operating companies;
- revenue from network grants paid by governments in lieu of charges; and
- debt.

Since Network Rail's reclassification as a public sector arm's length body, it now borrows directly from the UK Government, with separate borrowing limits for England & Wales and for Scotland. Network Rail also receives some income from its non-core activities such as property letting. Under the building block approach, which we outline in chapter 1, in broad terms, Network Rail's revenue is used to pay for operations, maintenance, renewals and interest costs on its debt and debt is used to pay for enhancements.

The governments will set borrowing limits for CP6, and Network Rail's financial flexibility during CP6 will depend upon the combination of:

- those borrowing limits;
- its income levels under the cost of capital approach for CP6 (referred to below); and
- its ability to manage its expenditure and activity levels.

Enhancement financing/funding

Whilst some enhancement requirements might be included in the governments' HLOSs for CP6, projects might also be specified after the start of the control period under the 'investment framework'. A greater proportion of enhancements could be funded by grants (rather than being financed by Network Rail debt) than has been the case in the past. CP6 might also bring more opportunities for third party and private sector participation in enhancement delivery and financing/funding.

We will need to take these possibilities into account in developing our proposals for the financial framework for PR18. We will also need to consider:

- the treatment of enhancements that started in CP5 and will continue into CP6; and
- concerns about misalignments between the costs and benefits associated with enhancements that cross national borders and route boundaries.

Cost of capital

Even though Network Rail is now classified as a public sector arm's length body, there are good reasons why a five year control period and a building block approach are appropriate for CP6. A key feature of a building block approach is that the cost of the capital invested in the business, reflected in the value of the regulatory asset base (RAB) is included, on an appropriate basis, in the charges paid by the business's customers.

At our last periodic review (PR13) we used an adjusted weighted average cost of capital (WACC) approach for Network Rail's financing costs - effectively including the cost of Network Rail's interest payments in the revenue requirement. This gave Network Rail sufficient revenue to pay forecast interest costs on its debt, but no surplus, meaning that expenditure above assumed levels in CP5 is being financed by additional borrowing (which is now subject to a fixed limit).

It could be argued that this is the only approach to the cost of capital that needs to be considered for Network Rail given its status as a public sector arm's length body. However, other methods are possible for CP6 that would provide Network Rail with some surplus income, because they include a component of notional equity financing. These approaches might:

- allow Network Rail to manage financial risks more effectively and reduce its borrowing requirements;
- incentivise Network Rail, and improve transparency, by setting expected financial outcomes that are more in line with debt/equity financed businesses; and

- be more compatible with the possibilities for third party/private sector participation referred to above.

If Network Rail achieved a surplus it could potentially be:

- used to pay down Network Rail's debt;
- retained for future investment opportunities; or
- rebated to governments.

The choice of cost of capital approach would only have a limited impact on overall government borrowing requirements because:

- if interest costs alone are covered then, all else being equal:
 - governments' payments in respect of network grants would be lower;
 - access charges (and consequently governments' outflows under franchise arrangements) would be lower; but
 - Network Rail's borrowing limit would need to be commensurately higher;whereas
- under an approach that included a notional equity component, the effects in the preceding bullet would be reversed.

There could, however, be budgetary and cash flow implications resulting from the choice of cost of capital approach for the governments, which would need to be taken into account.

In any case, we will calculate a notional full WACC for Network Rail (the cost of capital it would face if financed by private sector debt/equity without UK Government support) for use in calculating the charges payable by third parties who commission enhancements, so that those parties do not receive an inappropriate subsidy.

Other financial issues

There are a number of other financial issues where we will need to consider whether to keep the approaches we used for CP5 or vary them for CP6. These include policies on:

- amortisation;
- early start provisions;
- inflation; and
- asset disposals.

Financial risks and financial sustainability

In PR18, as well as calculating the revenue requirement, we will assess the financial risks Network Rail faces in CP6, particularly those related to higher than expected expenditure. These risks will need to be allocated and managed in a way that safeguards asset renewal activity, network sustainability and safety.

We will consider using techniques such as Monte Carlo analysis to assess financial sustainability and required levels of income and borrowing capacity reserves. We will also take other financial risks into account, including those relating to interest costs and inflation.

Our PR18 determination will be set at a route and NSO level. We will therefore need to consider the provisions under which Network Rail could transfer financial resources amongst routes and the NSO. Our approach will need to balance the need to preserve the integrity of route and NSO financial settlements, with the need for Network Rail to be able to efficiently manage risks and exploit opportunities across its business as a whole.

The way we calculate the amount of money that Network Rail needs to operate its business (the revenue requirement) depends heavily on good quality expenditure forecasts. They are also critically important for assessing the financial risks it will face in CP6.

If the governments approve significant enhancement projects after the start of CP6, we would need to consider how this expenditure would be financed/funded and its impact on financial risk, because it would mean that:

- Network Rail's borrowing requirements for these projects and the associated interest costs;
- appropriate borrowing capacity reserves; and
- impacts on maintenance and renewals activities,

would be uncertain at the time of our PR18 determination.

It will be important to consider the long term financial sustainability of Network Rail when deciding on our approach to its financial framework, including whether its debt level is appropriate and sustainable for a business of its type.

Financial incentives and financial performance assessment

We will review approaches to financial incentivisation and performance assessment for CP6 as part of PR18.

In this document we consider existing incentive mechanisms and the scope for improvements for CP6. We also consider the financial performance and efficiency measures currently in use and discuss possible improvements. In particular we look at:

- whether financial performance or efficiency should constitute a formal regulatory output in CP6 and, if so, how it could be measured;
- whether our current financial performance measure (FPM), which compares adjusted outturn expenditure to baseline levels, could be simplified/improved;
- whether we should be able to change the efficiency assumptions used in our financial efficiency measure (but not our revenue requirement calculations) after the start of CP6, where that could be helpful in effectively holding Network Rail to account, i.e. if the assumption is no longer reasonable;
- whether we should look at Network Rail's financial performance in a wider industry outputs and funding context; and
- Network Rail's own financial performance reporting and its focus on route scorecards, developed with local stakeholders.

Next steps

We expect to publish an update on these issues in a further consultation on the financial framework for PR18 in September 2017, the outcome of which will be reflected in our draft determination in June 2018 and final determination in October 2018.

Introduction

The consultation is structured as follows:

- In chapter 1 we look at the financing/funding choices that will need to be made for the next five year control period (CP6) in the context of Network Rail's reclassification as a public sector arm's length body and our move to route-level regulation. We also describe the building block approach we will use in our PR18 review to calculate the revenue requirement for Network Rail.
- In chapter 2 we note the financial issues that have arisen during CP5 and outline some key financial issues that need to be considered for CP6.
- In chapter 3 we consider various possibilities for enhancement project financing/funding in CP6 and their implications for the financial framework. We also review the importance of a five year control period, building block approach, and outline several approaches to Network Rail's cost of capital that could be used in our revenue requirement calculations.
- In chapter 4 we set out a number of additional financial issues where our approach will need to be reviewed for CP6. Our policy on amortisation is an important example.
- In chapter 5 we consider financial sustainability and risk management issues in the context of the policy choices set out in the earlier chapters. We look at issues both for CP6 and for the longer term.
- In chapter 6 we look at existing financial incentive arrangements for Network Rail and consider whether new or improved approaches could apply in CP6.
- In chapter 7 we review our existing approaches to financial performance and efficiency assessment and outline possible developments for CP6.

We have posed key consultation questions for stakeholders at the end of each chapter, but we would welcome feedback on any of the issues referred to in this document.

There is a schedule of associated documents at Annex A, and explanations for key terms used in the document can be found in the glossary at Annex B.

Information on responding to this consultation is provided in chapter 8. The closing date for responses is 13 April 2017.

1. Network Rail's business structure and financing

Policy points in this chapter

- We propose to use a building block approach to calculate Network Rail's revenue requirement at a route and NSO¹ level for CP6.

Network Rail's business

- 1.1 Network Rail owns, operates, maintains and develops most of the railway network in Great Britain. It has around 37,500 employees, a track network totalling about 15,700 km, and turnover in 2015-16 of £6.1bn².
- 1.2 Network Rail is a not for dividend company, limited by guarantee. It has no shareholders or share capital and, since its reclassification as a public sector arm's length body in September 2014, its sole member has been the Secretary of State for Transport.
- 1.3 Network Rail is subject to companies legislation and its board is accountable to:
 - the UK and Scottish Parliaments in respect of the stewardship of the public funding it receives;
 - the Secretary of State for Transport, and the Scottish and Welsh governments in respect of the management of the business and the public funding it receives; and
 - the Office of Rail and Road (ORR) as the health and safety and economic regulator.
- 1.4 Since 2012, Network Rail has further devolved responsibility to its eight geographically based routes³, as well as the NSO. During 2016, Network Rail also introduced a Freight and National Passenger Operators (FNPO) route⁴ to address the needs of freight train operators, the Cross Country train operator, and the Caledonian Sleeper and charter service operators, who operate across the routes. The routes are not separate companies, but each has its own managing director, as well as other directors and staff.

¹ Further information can be found in our consultation on system operation in CP6: <http://orr.gov.uk/consultations/open-consultations/system-operation-consultation>

² Network Rail Limited annual report and accounts 2016 and DfT statistics.

³ <https://www.networkrail.co.uk/structure-and-governance/our-routes/>

⁴ Previously referred to as the virtual freight route.

Business financing/funding

- 1.5 We have included a diagram at Annex C that provides a high level illustration of Network Rail's current financing/funding arrangements.
- 1.6 Broadly speaking, the revenue requirement we calculated for Network Rail in our PR13 determination is used to pay:
- operating costs;
 - asset renewal costs; and
 - interest costs on borrowing.
- 1.7 Network Rail borrows money to pay for enhancements to the railway⁵. Since reclassification, all of Network Rail's new borrowing has been through a Department for Transport (DfT) loan facility, with separate components for England & Wales and Scotland.
- 1.8 Network Rail still has a significant amount of legacy private sector debt. As this matures it is repaid using fresh borrowing under the DfT loan facility.

Network Rail's revenue requirement

- 1.9 Before each periodic review, DfT and Transport Scotland each provide us with a:
- High Level Output Specification (HLOS) setting out what they want to be achieved by Network Rail and, where relevant, the rest of the rail industry during CP6; and
 - Statement of Funds Available (SoFA) that sets out the public funds that are, or are likely to be, available to secure delivery of the HLOS.
- 1.10 Network Rail will produce strategic business plans (SBPs) for England & Wales and for Scotland, and business plans at route-level and for the NSO, in response to the HLOSs and SoFAs.
- 1.11 We will challenge Network Rail's plans and determine our own view of efficient expenditure levels.
- 1.12 We will assess whether the outputs required by the governments in the HLOSs can be delivered with the money available in the SoFAs. We do this separately for England & Wales and Scotland because we have a statutory duty to have regard to the funds available to the Secretary of State and to the expenditure that is to be incurred by the Scottish ministers.

⁵ Where these are debt financed – see explanation in chapter 3.

Calculation of revenue requirement under the building block approach

- 1.13 We propose to use a building block approach to calculate Network Rail's revenue requirement at a route-level for CP6.
- 1.14 Building block approaches are used in setting revenue requirements for most types of regulated network business, for example water companies, although the specific approaches vary.
- 1.15 The building block approach for Network Rail deals with expenditure requirements falling into two broad categories:
- operating expenditure; and
 - capital expenditure.
- 1.16 We include our assumption of efficient operating costs in the revenue requirement for the year they are expected to be incurred.
- 1.17 Capital expenditure is added to the RAB and is remunerated on a different basis. For Network Rail, capital expenditure comprises expenditure on renewals and enhancements⁶. Some capital expenditure remuneration is included in the revenue requirement for each year as an amortisation allowance. This is based on long-run average efficient renewals expenditure⁷. Further information on amortisation is provided in chapter 4.
- 1.18 In addition, we provide an amount for the cash costs of forecast interest payments.
- 1.19 We refer to the way we remunerated interest payments in CP5 as the adjusted WACC approach. This approach, together with other possible approaches to the cost of capital for CP6, is explained further in chapter 3.
- 1.20 The approach to amortisation we used for CP5 means that the debt incurred for enhancements by Network Rail is not being paid down⁸ and total debt has risen over time. However, over the long-run, expenditure on asset renewals should be matched by the amortisation allowance.
- 1.21 The sum of the annual amounts calculated under the building block approach for the remuneration of operating and capital expenditure and interest payments gives the gross revenue requirement for the year concerned. A provisional schematic of the financial model for PR18 is shown at Annex D and notes on opening balances for the model are included in Annex F.

⁶ Where enhancements are debt financed – see explanation in chapter 3.

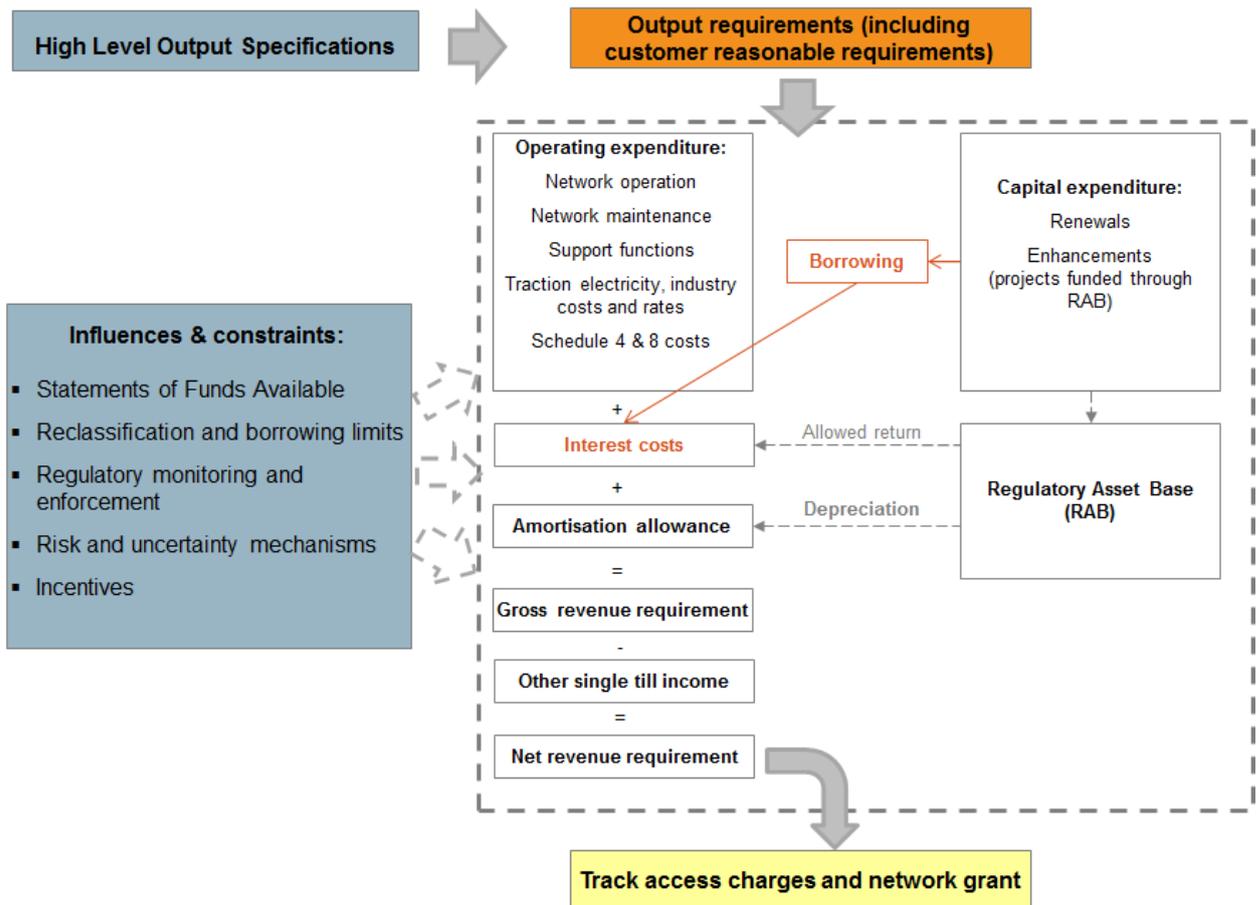
⁷ If necessary, additional amortisation allowances could be included to ensure the overall approach is financially sustainable – see paragraphs 3.40 and 4.8.

⁸ Additional amortisation allowances of £2bn mitigated the increase in debt.

1.22 A forecast level of other single till income (OSTI) for each year is deducted from the gross revenue requirement to calculate the net revenue requirement to be recovered through a mixture of infrastructure access charges and network grants, the latter paid by DfT and Transport Scotland.

1.23 The building block approach is illustrated in Figure 1.1.

Figure 1.1- Building block approach



1.24 For CP6, we are proposing to calculate the overall revenue requirement for Network Rail from route-level upwards, with a building block calculation for each route. We will allocate key balances, including the regulatory asset base (RAB) and net debt to routes on an appropriate basis. We expect our calculations to be in 2017-18 prices.

1.25 The inputs required for calculating the revenue requirement for each route are:

Expenditure requirements

- national system operator expenditure – treated as:
 - operating expenditure in building block modelling; or

- capital expenditure in building block modelling, where the expenditure is in respect of a renewal or enhancement⁹ for the NSO business unit.
- network operating expenditure – treated as operating expenditure in building block modelling;
- maintenance expenditure – treated as operating expenditure in building block modelling;
- capital expenditure:
 - renewals expenditure¹⁰; and
 - enhancements expenditure¹¹;
- centralised functions and business support services expenditure;
- traction electricity expenditure;
- industry costs expenditure (over which Network Rail has limited control):
 - the British Transport Police¹²;
 - the Rail Safety and Standards Board¹²;
 - confidential incident reporting and analysis (CIRAS);
 - ORR’s licence fee and safety levy;
 - the Rail Delivery Group;
 - the Railway Heritage Trust; and
 - independent reporter costs;
- business (cumulo) rates;
- Schedule 4 and 8 expenditure (see glossary); and
- electricity used by Network Rail on the rail network.

Amortisation and non-capex depreciation allowances

- amortisation allowances; and
- non-capex depreciation allowances.

⁹ In the context of NSO expenditure, enhancements could include, for example, the procurement, replacement or significant upgrading of an IT or other system.

¹⁰ We consider an asset renewal to be the replacement of an asset that has deteriorated to the extent that it can no longer be maintained, but where the replacement does not result in an enhancement.

¹¹ We consider an enhancement to comprise construction or works that improve the capacity, capability or amenity of the rail network, including for the connection of new key infrastructure (such as Crossrail or HS2) to the existing rail network.

¹² Other industry participants also contribute towards these costs.

Cost of capital and other financial values

- opening RAB balances;
- opening debt balances for:
 - total legacy nominal debt;
 - total legacy RPI linked debt; and
 - total DfT loan facility debt;
- opening corporation tax liabilities and tax pool balances;
- opex memorandum account balances;
- other single till income (OSTI) forecasts:
 - freight operator and charter access charges (gross)¹³;
 - open access operator charges (gross);
 - long term charges for managed stations (gross);
 - qualifying expenditure recharges for managed stations (gross);
 - lease income for stations owned by Network Rail but operated by train operators (gross);
 - long term charges for stations repaired and renewed by Network Rail but operated by train operators (gross);
 - depot charges (gross);
 - property letting (net);
 - facility charge income - for example relating to network enhancements commissioned by train operators and Network Rail debt financed (gross);
 - HS1 (net);¹⁴
 - any other income not derived from regulated charges; and
 - asset disposal proceeds;
- the cost of capital value or percentage;
- forecasts of other income including from traction electricity charges to train operators;
- forecast interest rates;
- RPI inflation values;

¹³ Some income is counted on a gross basis because the associated costs are included in the expenditure requirements set out at the start of the list (so netting them off OSTI would mean double counting them).

¹⁴ Network Rail (High Speed) Ltd, a subsidiary of Network Rail maintains and operates the high speed railway infrastructure between St Pancras and the Channel Tunnel under contract for HS1 Ltd.

- corporation tax rates;
- efficiency assumptions (see chapter 7); and
- targeted financial metrics¹⁵.

1.26 Costs incurred centrally by Network Rail will be recharged to routes on an appropriate basis and included in their business plans.

1.27 Network Rail's pension funding costs are included in the labour costs associated with activities.

1.28 We will need to forecast some input values for 31 March 2019 because our determination will take place in the second half of 2018. We will also need to take account of uncertainties regarding the level of debt financed enhancements to be approved after the start of CP6 and associated borrowing costs.

Consultation questions

- Do you have any views on our proposed use of a building block approach to calculate Network Rail's revenue requirement at route-level for CP6?

¹⁵ References to 'financial metrics' in this document mean commonly used financial ratios and measures that are used to indicate the financial health and sustainability of a business and, where relevant, to compare those factors with those of other businesses.

2. Financial policy issues

Financial issues arising during CP5

2.1 The following key financial issues have arisen during CP5:

- increasing costs and timescales for enhancement projects - the Hendy report in November 2015¹⁶ identified a £2.5bn overspend forecast;
- underperformance and deferral of renewals – our 2015-16 Annual Efficiency and Finance Assessment (AEFA)¹⁷ highlighted a forecast by Network Rail of deferrals valued at £3.1bn by the end of CP5; and
- a forecast efficiency measure¹⁸ shortfall for operations, support, maintenance and renewals of £3.9bn for CP5 noted in our AEFA.

2.2 The figures above are for Great Britain as a whole, and it should be noted that:

- there can be complex interactions between different types of activity (for example, the deferral of a renewal project could have a knock-on effect on maintenance requirements); and
- performance has varied from route to route, depending on a range of factors.

2.3 In essence, Network Rail's activities in CP5 have cost more than expected and some of its delivery forecasting has not been sufficiently accurate. Because it has limited additional borrowing capacity through its DfT loan facility (it can no longer access private capital markets) it has had to manage increased costs by cutting some planned activities and deferring others.

Financial issues for CP6

Key financial issues

2.4 The key financial issues we have identified for CP6 are:

- (a) the likelihood that DfT's approach to enhancement financing/funding for England & Wales could involve a greater proportion of:

¹⁶ <http://www.networkrailmediacentre.co.uk/resources/hendy-report-on-replanning-network-rail-s-investment-programme-november-2015>

¹⁷ <http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment>

¹⁸ See explanation of the efficiency measure in chapter 7.

- case-by-case specification of enhancement projects during CP6 (rather than including them in the HLOS);
 - direct grant funding (as opposed to Network Rail debt financing with associated RAB additions); and
 - private sector investment;
- (b) the need to assure financial sustainability under a route-level determination taking into account the points in subparagraph (a);
- (c) the risk that the medium to long term sustainability of the railway could be adversely affected if expenditure risks are managed primarily by the curtailment of activities to stay within budgetary limits (as has been the case in CP5); and
- (d) the need for transparent and effective financial incentives and financial performance assessment.

Other financial issues

2.5 We will also need to consider whether to keep or vary our CP5 policies for:

- (a) amortisation and associated revenue allowances;
- (b) inflation indexation;
- (c) corporation tax and VAT;
- (d) asset disposals;
- (e) the treatment of traction electricity costs, industry costs and rates;
- (e) grant disposal provisions;
- (f) innovation expenditure allowances; and
- (g) the use of financial outperformance.

Addressing the issues in this document

2.6 We address the issues outlined above in the following chapters:

- Chapter 3: Enhancement financing/funding, a five year control period, the building block approach and the cost of capital for CP6.
- Chapter 4: Other financial issues for CP6.
- Chapter 5: Financial sustainability and risk management under a route-level determination.
- Chapter 6: Financial incentives for CP6.
- Chapter 7: Financial performance assessment for CP6.

Consultation questions

- Have we identified all the important financial issues that need to be addressed in PR18?

3. Enhancement financing/funding, a five year control period, the building block approach, and the cost of capital for CP6

Policy points in this chapter

- DfT and Transport Scotland may specify a greater proportion of enhancement requirements after the start of CP6 than it did after the start of CP5.
 - Enhancement projects could be financed by Network Rail debt, but a greater proportion might be grant funded in CP6.
 - Enhancements could also be promoted by train operators and other parties.
 - The five year control period and the building block approach remain important.
 - There are several possible approaches to setting the cost of capital for Network Rail in CP6.
-

3.1 In this chapter we consider key policy issues for CP6 concerning:

- the financing/funding of enhancements;
- the on-going importance of the five year control period and the building block approach; and
- possible approaches for setting Network Rail's cost of capital.

Enhancement financing/funding in CP6

3.2 In chapter 1 we explain how capital expenditure on enhancements can be financed through the building block approach using Network Rail debt (if Network Rail has the required borrowing capacity) with:

- Network Rail borrowing the money to undertake projects;
- efficient expenditure added to the RAB; and
- interest costs on the borrowing included in the revenue requirement.

3.3 In chapter 2 we note that, for England & Wales, DfT might specify a greater proportion of enhancement requirements for CP6 on a case-by-case basis, and fund more projects with dedicated grants – a form of “upfront funding”.

3.4 Both debt financing and upfront funding approaches can, under different frameworks and arrangements, provide for:

- the specification of enhancements by governments outside the HLOS/after the start of CP6;
- the promotion of enhancements by various parties (in addition to governments);
- the funding of enhancements by various parties (in addition to governments); and
- the recovery of costs from rail users/taxpayers generally or from particular parties.

Enhancement projects commenced in CP5

3.5 DfT, ORR and Network Rail have agreed on the treatment of DfT financed/funded enhancement projects in England & Wales for the remainder of CP5, so that respective responsibilities are clear and so that common objectives can be achieved.

3.6 The CP5 enhancements cost adjustment mechanism (ECAM) will be discontinued in England & Wales meaning that, for the remainder of CP5, project efficiency and affordability will be determined by DfT as an outcome of:

- the improved client and supplier relationship between DfT and Network Rail covered by the memorandum of understanding between them on enhancements;
- the benefits from Network Rail's cost planning improvement plan achieving improved consistency and capability in its cost estimating and risk evaluation;
- Network Rail addressing the recommendations set out in the independent assurance report, published alongside the Hendy report;
- determining value for money through business case investment decisions; and
- independent (external) challenge of Network Rail's cost estimates on a case by case basis, overseen by DfT.

3.7 Key points of the agreement between DfT, ORR and Network Rail are that:

- expenditure levels set out in the Hendy report should constitute a revised baseline, with:
 - management of the baseline and any change control requirements carried out by a joint Network Rail and DfT enhancements portfolio board; and
 - significant programme changes subject to a value for money review/refresh of the business case by DfT;
- only scope changes agreed through the formal change control process should be reflected in baselines where either:
 - new scope is required to deliver a new or changed output; or

- a change in scope is required to deliver an output to a higher specification than assumed previously;
- the new baselines will be used for the purposes of CP5 RAB additions and ORR’s financial performance assessment for CP5; and
- ORR will continue to monitor the achievement of project milestones.

On-going enhancement projects (continuing from CP5 into CP6)

- 3.8 Some enhancement projects will be on-going at the time of our PR18 review. Governments could refer to the remaining phases of such projects in their HLOSs and they could be grant funded or Network Rail debt financed in CP6.
- 3.9 If on-going enhancement projects are included in HLOSs it might mean that they could be more fully factored into:
- Network Rail’s SBP; and
 - our view on borrowing limit requirements (if they are to be debt financed).

Specification and financing/funding of enhancements by governments outside the HLOS/after the start of CP6

- 3.10 DfT and Transport Scotland might decide to specify more enhancement requirements outside the HLOS/after the start of CP6, in which case they could make arrangements for:
- upfront funding through grant payments; or
 - debt financing through borrowing by Network Rail (assuming that sufficient borrowing capacity was available).
- 3.11 In either case, the arrangements might be progressed under the Investment Framework Policy & Guidelines¹⁹ or other arrangements.
- 3.12 If debt financing were to be used, the associated interest costs could be provided at the time of the investment or logged up (see glossary) for inclusion in Network Rail’s revenue requirement at the next periodic review. Network Rail would still need to be able to access sufficient funds during the control period to pay for interest costs on the additional borrowing.
- 3.13 The costs and benefits of an enhancement project could be:
- recovered from a particular party - for example from a train operator through the terms of its franchise or through facility charges; or

¹⁹ The investment framework may be updated as part of PR18. The current documents can be viewed on our website: <http://orr.gov.uk/what-and-how-we-regulate/investments>.

- logged up by Network Rail and factored into future network grant payments or access charges and ultimately borne by rail users and taxpayers.

Promotion/funding of enhancements by train operators or third parties

3.14 Train operating companies (TOCs) and other parties can propose an enhancement to the railway at any time²⁰. If taken forward outside the periodic review process, the proposal would probably be considered under the investment framework. The proposer would need to say how the project could be financed/funded because, for this type of enhancement proposal, the principle is that the party benefitting ought to pay the costs.

3.15 The promoting party could propose to pay for the projects upfront. However, a train operator would only be likely to do this if it could enter into, for example, a back to back arrangement with DfT/Transport Scotland, because of the limited length of train operator franchises.

3.16 The promoting party could also propose that the enhancement should be financed through Network Rail debt²¹. If taken forward, the promoter would probably be subject to an on-going facility charge to recover:

- the original capital cost of the project through an amortisation component (normally reflecting an asset life of 15 to 30 years); and
- the associated financing costs, using the weighted average cost of capital we have calculated for Network Rail (in most cases).

Enhancement partnerships

3.17 There are a number of existing examples of partnerships between Network Rail and other parties to develop the railway including route-level alliances with TOCs.

3.18 In future, there may be more opportunities for third parties and/or private sector businesses to participate in railway development in CP6 by, for example:

- contributing financially to a railway enhancement that will bring an economic benefit to them;
- making an equity investment in an income generating enhancement; and
- operating infrastructure under a concession or other arrangement.

Financial contribution

3.19 A third party could offer to make a financial contribution towards a railway enhancement (without the prospect of any direct remuneration) where it would bring

²⁰ To date in CP5 around £1bn has been spent by Network Rail on these enhancements.

²¹ If Network Rail has the required borrowing capacity.

an economic or financial benefit to them. For example, a property developer might make a contribution towards the construction of a new station if it would add value to the properties being built.

Equity investment

3.20 A third party could provide the finance for a new railway enhancement where it would receive a revenue stream to provide a return on its investment. The income stream could come from, for example:

- leasing assets to Network Rail;
- payments from governments; or
- facility charges paid by a TOC.

Concessions and other arrangements

3.21 A concession or other arrangement could involve the management/operation of a part of the railway by a third party and could include commitments to maintain, renew and enhance the infrastructure involved.

3.22 A concession could include an equity investment where, for example, the concessionaire purchases the right to receive an income stream from access charges (as in the case of High Speed 1²²).

3.23 Alternatively, an arrangement could provide for the concessionaire to receive a fee for managing and operating the infrastructure.

East West Rail

3.24 East West Rail²³ provides an example of third party participation in the delivery and funding of a railway scheme. The DfT recently announced²⁴ that a new East West Rail organisation will deliver the design, construction and operation of a railway link between Oxford and Cambridge. Whilst most of the financing/funding is expected to come from DfT, the East West Rail Consortium (of local authorities and strategic partners) is making a contribution towards the cost of the scheme.

Cross-border enhancement issues

3.25 If a TOC benefits from an enhancement, the value of the benefit might be taken into account in the terms of its franchise with DfT or Transport Scotland. However, it is

²² <http://highspeed1.co.uk/>

²³ <http://www.eastwestrail.org.uk/>

²⁴ The East West Rail organisation will be a new integrated rail operation that will be separate from Network Rail: <https://www.gov.uk/government/news/transport-secretary-puts-passengers-at-the-heart-of-the-railway>

possible that the benefits from enhancement expenditure in one location could arise in another location, creating a mismatch between the accrual of:

- franchise benefits on the one hand; and
- costs (in terms of grant payments, access charges or debt liabilities) on the other hand.

3.26 Work to remodel infrastructure at Carstairs Junction²⁵ is a case in point, because, under the current devolution settlement for Scotland, Transport Scotland would finance/fund the project (because the infrastructure is located in Scotland), but the majority of the benefits could be expected to flow to DfT-franchised train operators.

3.27 There is a real risk that this issue could act as a deterrent to the development of enhancement projects with cross-border aspects.

3.28 In principle, the costs and benefits associated with enhancement projects should be aligned. There may be practical difficulties in achieving this, but we could consider addressing the issue by, for example:

- supporting the development of agreements between governments on approaches to enhancement financing/funding where there are cross-border aspects; and
- taking cross-border (and cross-route boundary) issues into account in any future reviews of charging arrangements.

The importance of a five year control period and the building block approach for CP6

3.29 We set out in our initial consultation document on PR18 that *we had not identified any convincing reasons to depart from a five year control period over which to set the revenue requirement.*

3.30 We think there are good reasons why a five year control period and a building block approach are appropriate for CP6, notwithstanding Network Rail's reclassification as a public sector arm's length body, and the possibility of a new approach to enhancement funding in England and Wales by DfT. The key reasons are set out below:

- It provides certainty on financing/funding arrangements over an extended period, meaning that:

²⁵ See reference in Network Rail's network specification 2016 - Scotland:
<https://www.networkrail.co.uk/wp-content/uploads/2016/11/Network-Specification-2016-Scotland.pdf>

- business managers can take a long term view of asset management and optimise the interactions between different operating, maintenance, renewals and enhancement activities (including grant funded enhancements);
- supply chain security and commercial terms can be optimised; and
- mechanisms can be developed if appropriate to handle uncertainty.
- It is supportive of route-level business management and regulation because it facilitates bottom up business planning. This in turn should support the development of alliances between Network Rail routes and TOCs.
- It supports comparability between Network Rail’s routes, and between Network Rail and other regulated utilities.
- It could facilitate some private sector financing/funding possibilities, especially equity investment because it:
 - is compatible with arrangements to provide a risk sharing return on efficient investment as in other regulated industries; and
 - provides investors with the certainty of arrangements associated with independent economic regulation.
- It provides for the financing of enhancement projects with Network Rail debt (and associated RAB additions) where that:
 - is preferred by the UK government or the Scottish Government; and
 - is the best approach to take forward TOC or third party promoted enhancements.
- It provides for enduring RAB based financial performance incentives (such as the RAB roll forward incentive we outline in chapter 6).
- It allows for flexibility on amortisation policy (see chapter 4).
- It encourages financial rigour and transparency by making Network Rail responsible for the debt balance in its accounts, as well as the assets financed by its borrowing, which is not the case for most public sector bodies.
- It supports a single till approach meaning that the full range of Network Rail’s activities can be considered together for regulatory purposes.

Network Rail’s cost of capital for CP6

3.31 As outlined in chapter 1, under the building block approach we used to calculate Network Rail’s revenue requirement for CP5, we used an adjusted WACC approach for the cost of capital, which meant that we included amounts in the revenue requirement to cover the projected cash costs of interest payments on Network Rail’s debt.

3.32 We could propose the same approach for CP6, but there are three other approaches we think could be considered in light of:

- Network Rail's reclassification;
- the possibility of a different pattern of enhancement financing/funding in CP6; and
- the possibility of more third party/private sector investment in the railway going forward.

3.33 It is important to note that the various options we consider below produce different cashflows that reflect different ways of managing financial risk.

3.34 The four possible approaches to Network Rail's cost of capital for CP6 that we have identified are:

- (a) an adjusted WACC approach (as used for CP5²⁶);
- (b) a full WACC/ring-fenced fund approach (as used for CP4);
- (c) a full WACC/rebate approach; and
- (d) an adjusted WACC approach with revenue reserve adjustment;

and we provide a description of each below.

3.35 Whichever approach to cost of capital we use for CP6, we will need to determine a weighted average cost of capital (WACC)²⁷ value for Network Rail because:

- it is used in the methodology for each approach;
- it could be needed to appraise proposals for enhancements under the investment framework and to calculate associated facility charges²⁸; and
- it could be relevant to the consideration of proposals for private sector partnerships and infrastructure financing/funding.

3.36 A WACC value for a business operating in the private sector and achieving an investment grade credit rating can be derived using:

- a notional gearing level (see glossary);
- an appropriate post-tax cost of equity; and
- an appropriate pre-tax cost of debt.

²⁶ See associated document 1 at Annex A.

²⁷ We use a real vanilla weighted average cost of capital - see glossary.

²⁸ In particular to ensure there is no inappropriate subsidy.

3.37 We are not considering detailed approaches for determining the component values for WACC at this stage.

Possible approaches for the cost of capital in CP6

Adjusted WACC approach

3.38 The adjusted WACC approach was used in PR13 to determine the revenue requirement for CP5 largely because, at a time of constrained funding, it reduced the 'up-front' financing/funding required from governments (versus the full WACC approaches outlined below). At that time, Network Rail was able to issue debt in the markets. We also considered the adjusted WACC approach could strengthen incentives on Network Rail to deliver its activities more efficiently.

3.39 Under this approach, only the cash interest costs due on Network Rail's borrowing would be included in the revenue requirement. Broadly, if Network Rail's financial performance was in line with our assumptions it should have neither a surplus nor a shortfall of revenue with respect to its costs. It would therefore have no revenue reserve to deal with cost shocks, unless it generated one by spending less than expected. If Network Rail spent more than expected on activities it would have to borrow additional money.

3.40 We recognise that this approach is broadly similar to the funding model preferred for 'conventional' public bodies, reflecting governments' general approach to avoid the perception of 'over-funding' a body. However, the adjusted WACC approach might undermine Network Rail's ability to adapt its plans to changes in its operating circumstances (because it provides no surplus income). If this approach were to be used again, we would need to consider including additional amortisation allowances in the calculation of Network Rail's revenue requirement, to safeguard its long term financial sustainability²⁹ as a business.

3.41 The steps used in an adjusted WACC approach are shown in Figure 3.1.

²⁹ In PR13 (for CP5) we provided £2bn of additional amortisation.

Figure 3.1 - Simplified illustration of adjusted WACC approach

Determine WACC percentage Network Rail would incur if financed by a mix of private sector debt and equity ³⁰	
Multiply WACC percentage by RAB to get £m component of revenue requirement, say:	100
Determine cash cost of debt interest, say:	60
Deduct 'equity surplus' ³¹ over cash cost of debt interest	(40)
Revenue reserve	0

3.42 At PR13 we confirmed that, in principle, if Network Rail's business were operated by an owner with a conventional debt and equity financing structure, we would expect to unwind the effects of an adjusted WACC approach if applicable. Without this confirmation the accounting valuation of Network Rail's assets could be affected.

Box 3.1 Comparison - Water Industry Commission for Scotland

3.43 Scottish Water is the government owned monopoly water utility in Scotland. As such it faces some financial challenges that are similar to those faced by Network Rail. In particular, it does not have access to market debt and borrows from the Scottish Government.

3.44 Scottish Water's regulated business is subject to incentive-based regulation by the Water Industry Commission for Scotland (WICS) which uses a building block approach to setting charge caps (with an inflation linked limit on charge increases within regulatory control periods).

3.45 In their determination for the period from 2015 to 2021³², WICS based its opening charge caps on assumed levels of:

- operating expenditure;
- capital maintenance expenditure;
- capital enhancement expenditure; and

³⁰ Without a guarantee from the UK Government.

³¹ We use the term 'equity surplus' to refer to the component of a full WACC value that is in excess of cash interest costs.

³² http://www.watercommission.co.uk/view_Determinations_2015-21.aspx

- interest payments.

3.46 WICS did not provide an explicit allowance to cover cost level risks. However, Scottish Water has scope to manage financial risk during the control period by controlling its expenditure levels, and by adjusting charges (within the inflation linked limit). Scottish Water was also forecast to enter the 2015 to 2021 period with about £248m of cash that could be used to finance its on-going capital enhancement programme (compared to assumed borrowing of £120m per year from the Scottish Government).

3.47 WICS also introduced a system of financial tramlines to monitor Scottish Water’s financial performance and to ensure that the company could maintain an appropriate level of financial strength over the medium to long term. This aspect of financial risk management is explained in its determinations.

Full WACC/ring-fenced fund approach

3.48 Under this approach, the notional full cost of debt/equity financing would be included in the revenue requirement. If Network Rail’s expenditure (other than amounts earmarked to pay for ring-fenced projects) were at or below our assumed levels, it would generate a revenue reserve. In the event of severe cost shocks, the deferral of one or more ring-fenced projects could free up additional funds.

3.49 The steps used in a full WACC/ring-fenced fund approach are shown in Figure 3.2.

Figure 3.2 - Simplified illustration of full WACC/ring-fenced fund approach

Determine WACC percentage Network Rail would incur if financed by a mix of private sector debt and equity	
Multiply WACC percentage by RAB to get £m component of revenue requirement, say:	100
Determine cash cost of debt interest, say:	60
Ring-fenced revenue for delivering specified HLOS outputs, say:	20
Revenue reserve available to absorb cost shocks, say:	20

Full WACC/rebate approach

3.50 Under this approach, the notional full cost of debt/equity financing would be included in the revenue requirement. If Network Rail's expenditure were at or below our assumed levels it would generate a revenue reserve.

3.51 The full WACC/rebate approach is arguably closer to the funding model for other regulated network businesses whose capital providers and income providers are fully in the private sector. Therefore, this approach might be more in line with Network Rail's aim to 'behave like a private sector business'³³.

3.52 The steps used in a full WACC/rebate approach are shown in Figure 3.3.

Figure 3.3 - Simplified illustration of full WACC/rebate approach

Determine WACC percentage Network Rail would incur if financed by a mix of private sector debt and equity	
Multiply WACC percentage by RAB to get £m component of revenue requirement, say:	100
Determine cash cost of debt interest, say:	60
Potential rebate to DfT/Transport Scotland (or to absorb cost shocks, or pay down debt)	40

3.53 The revenue reserve could subsequently be rebated to DfT and Transport Scotland (being the capital/income providers for the business) or used to pay down debt, if not needed to deal with cost shocks. There is, however, a risk that a requirement for the business to access reserve income could arise after a rebate had occurred.

3.54 If we adopted this approach our current policy on rebates would need to be reviewed as it presently applies to a situation where rebates are only occasionally made, whereas under this approach we would expect rebates to be made regularly.

3.55 Our current policy is that:

- rebate payments should only be made in exceptional circumstances, with applications by Network Rail to us explaining whether:
 - surpluses are attributable to cost timing issues that might reverse; and

³³ Network Rail's publication 'Delivering for our customers Transformation Plan Update July 2016': <http://www.networkrailmediacentre.co.uk/resources/transformation-plan-final>

- the availability of the surplus has been established under our financial performance monitoring guidelines;

and

- that any payment should:
 - be consistent with our statutory duties, including under section 4 of the Railways Act 1993³⁴ ('the Act') with respect to funding; and
 - not create risks to the financial sustainability of Network Rail's business.

Adjusted WACC with revenue reserve approach

3.56 Under this approach we would initially calculate the notional full cost of debt/equity financing to ascertain the total revenue reserve that could be available to address financial risk.

3.57 We would then determine an amount that should actually be included in Network Rail's revenue requirement to provide an appropriate level of revenue reserve. Having made that determination, we would deduct the excess amount.

3.58 The steps used in an adjusted WACC with revenue reserve approach are shown in Figure 3.4.

Figure 3.4 - Simplified illustration of adjusted WACC with revenue reserve approach

Determine WACC percentage Network Rail would incur if financed by a mix of private sector debt and equity	
Multiply WACC percentage by RAB to get £m component of revenue requirement, say:	100
Determine cash cost of debt interest, say:	60
Deduct 'excess surplus' over cash cost of debt interest, say:	20
Revenue reserve available to absorb cost shocks, or pay down debt, say:	20

Issues to consider

3.59 Issues that need to be considered in deciding on an approach to Network Rail's cost of capital for CP6 include:

³⁴ <http://www.legislation.gov.uk/ukpga/1993/43/contents>

- the effect on incentives and financial risk management;
- the effect on the governments' cash flows;
- the effect on financial sustainability;
- the facilitation of third party investment; and
- transparency - making the method as simple as possible.

Illustration of cash impacts of different approaches

3.60 In Annex E we include a table that provides a simple illustration of how cash is impacted by the adjusted WACC approach and the full WACC/rebate approach. Whilst the choice of cost of capital approach should have no substantive overall effect on government borrowing³⁵, there could be budgetary implications for the governments depending on whether Network Rail's expenditure is classified as resource or capital expenditure³⁶. We are currently discussing these issues with the governments.

3.61 The table in Annex E also illustrates the point that Network Rail's borrowing limit might need to be higher under an adjusted WACC approach than a full WACC/rebate approach, as there is no expected revenue reserve to help deal with operational and financial risks. However, because Network Rail's borrowing limits are set by governments and not by us, any change to its borrowing limits might not equate to differences in revenue between the approaches.

Consultation questions

- Do you have any views on the ways that enhancement projects should be financed/funded in CP6?
- Have we identified all of the possibilities for private sector partnerships and financing/funding arrangements that might arise?
- Which aspects of the financial framework do you think might be relevant to third party/private sector financial participation?

³⁵ Because Network Rail is a public sector arm's length body, cash transfers (whether by lending or by grant) are considered to be payments by one part of government to another, and so cancelled out in consolidated accounting terms.

³⁶ These terms are broadly analogous with references to operating expenditure and capital expenditure in business accounting. Further information is available at: <https://www.gov.uk/government/publications/how-to-understand-public-sector-spending/how-to-understand-public-sector-spending>

- What do you consider should be done to address cross-border funding/benefit mismatches with respect to enhancements?
- Do you agree with the reasons we have given for the continuation of the five year control period and the building block approach for calculating Network Rail's revenue requirement?
- Which cost of capital approach do you think should be used for Network Rail in CP6?
- Have we identified all of the issues relevant to the choice of cost of capital approach?

4. Other financial issues for CP6

Policy points in this chapter

- We will review our current (PR13) policy approaches for:
 - amortisation;
 - early start provisions;
 - inflation;
 - corporation tax and VAT;
 - asset disposals;
 - the treatment of traction electricity, industry costs and rates;
 - innovation expenditure allowances;
 - financial outperformance; and
 - grant dilution provisions,
- and consider whether any should be varied for PR18.

4.1 In addition to the key policy issues set out in chapter 3, there are a number of additional matters that we will need to consider for CP6 which we have outlined in this chapter.

Amortisation policy

- 4.2 Where a building block approach is used to set revenue levels for regulated network businesses a depreciation allowance (or, in the case of Network Rail, an amortisation allowance) is usually included in the calculations. Our building block approach is described in chapter 1.
- 4.3 For most regulated networks, a depreciation allowance is derived by dividing the value of the RAB (which represents historic investment in the network) by an appropriate asset life, to give an annual allowance to cover the 'using-up' of network assets. Qualifying network investment expenditure is added to the RAB and depreciation allowances are deducted and included in the revenue requirement.
- 4.4 For Network Rail we have, to date, used a different approach, basing our amortisation assumptions on the long-run (over 35 years in CP5) efficient average cost of renewals³⁷. This reflected a view that enhancement projects, such as

³⁷ The expenditure required to maintain the network in a steady state, such that the condition of the network, with respect to its overall capability, age, condition and serviceability, is neither getting better nor worse.

additional railway lines, give rise to infrastructure that is relatively permanent and brings long term economic benefits. The approach nonetheless has broadly the same economic effect of requiring customers to pay for assets as they are used up over their useful life.

4.5 Therefore, under the existing (CP5) approach for Network Rail, amortisation allowances have not been directly linked to the RAB balance³⁸. However, capital expenditure, on renewals and enhancements, is added to the RAB balance, and amortisation allowances are deducted from it.

4.6 The effect of this approach has been that:

- Network Rail's RAB balance has grown, because the asset base is being enhanced; and
- Network Rail's debt balance has risen commensurately because it is financing an expanding asset base.

4.7 The financing of Network Rail's enhancements and the associated increase in debt has become a bigger issue following Network Rail's reclassification, because it is now subject to fixed borrowing limits under its DfT loan facility. We comment on this further in chapter 5.

4.8 At our PR13 review we applied an incremental uplift of about £2bn to the amortisation allowances we calculated using long run renewals expenditure, to improve Network Rail's financial metrics.

4.9 We will review our amortisation approach for CP6 and could consider:

- keeping our existing approach (including a possible incremental uplift for financial sustainability purposes, depending on the approach to cost of capital that we use);
- increasing amortisation allowances to reflect that at least some enhancements are used up over a finite period, which could mitigate Network Rail's rising debt balance (but increase the revenue requirement); and
- adopting a significantly different approach, perhaps using a fixed asset life assumption to calculate allowances.

4.10 We would need to consider whether any new approach should apply to new capital expenditure only, or also to historical expenditure, including projects commenced or specified before the start of CP6, but continuing afterwards.

³⁸ An explicit amortisation charge may be used in the calculation of facility charges for certain enhancements promoted by third parties – see paragraph 3.16.

- 4.11 In any case we expect to determine amortisation allowances for each route separately for our route-level revenue requirement calculations for CP6.
- 4.12 Notwithstanding the point made in paragraph 4.7, it should be noted that the economic impact of changes to amortisation policy for Network Rail would be less significant than for a private sector utility. This is because, all else being equal:
- (a) Network Rail's borrowing would reduce; but
 - (b) its revenue requirement would increase by an equivalent amount;
- and both (a) and (b) affect cash outflows from the governments.

Non-capital expenditure elements in RAB

- 4.13 There is currently a non-capital expenditure element of around £4bn (in 2016-17 prices) in the RAB. At our PR08 review, we had calculated amortisation allowances for this element on a 30 year straight-line basis. However, because those allowances were set in constant 2012-13 prices, inflation uplifts of the overall RAB balance mean that the amortisation of this element will in fact take longer than 30 years. We will consider whether to amend the non-capex amortisation rate to address this.

Early start provisions

- 4.14 In the run up to our PR13 review, we allowed Network Rail to apply for confirmation of financing in CP5, for particular renewals and enhancements (that would commence in CP4) ahead of our determination. This process was referred to as the early start mechanism and it was subject to requirements that a scheme should be at a certain stage of development before it could be taken forward under the mechanism.
- 4.15 We will need to consider whether there should be an early start provision in the PR18 process, taking into account Network Rail's reclassification, the associated introduction of fixed borrowing limits, the current lack of headroom with respect to the borrowing limits, and the possible developments to enhancement financing/funding set out in chapter 3.

Inflation

- 4.16 There are two categories of inflation that we need to take into account for PR18:
- the general level of inflation in the economy; and
 - input prices effects³⁹ applicable to Network Rail as a whole and to its routes.
- 4.17 The general level of inflation for regulated businesses is usually represented by the RPI index, although some regulators are now considering the use of the CPI index

³⁹ Sometimes referred to as real price effects.

(see glossary). The Johnson review⁴⁰ has recommended regulators move away from RPI. However, as both rail fares and a significant proportion of Network Rail's market debt are RPI-linked, our emerging view is that it would not be appropriate to use CPI for CP6.

4.18 Input price effects refer to the incremental level of inflation actually experienced by a business (above or below the general level of inflation) because of the particular mix of goods and services that it purchases.

General inflation

4.19 In our PR13 determination, we took the view that Network Rail was not able to control the risks associated with the general level of inflation.

4.20 We did, however, note some concerns on some aspects of general inflation, for example in relation to RPI indexation factors included in contractual arrangements. We reflected these in our efficiency assumptions for CP5.

4.21 Two aspects of general inflation that we will consider for PR18 are:

- (a) the indexation⁴¹ of income under our revenue requirement determination; and
- (b) the indexation of the RAB balance, so that its value is not eroded by inflation.

4.22 Network Rail's income was indexed by RPI during CP5 using two mechanisms:

- (a) the deeds governing network grants included RPI indexation; and
- (b) track access contracts between Network Rail and train operators⁴² provided for the annual indexation of charges.

4.23 In reviewing the indexation of Network Rail's income for PR13, we noted that whilst track access contract indexation was based on a November to November historical change in RPI, indexation provisions in train operators' franchise agreements referred to a January to January change.

4.24 Because, under an adjusted WACC approach, we include Network Rail's actual cash interest costs (including the inflation element⁴³) in its revenue requirement, and as we

⁴⁰ <https://www.statisticsauthority.gov.uk/reports-and-correspondence/reviews/uk-consumer-price-statistics-a-review/>

⁴¹ Adjustment with respect to an index – in this case probably the Retail Prices Index.

⁴² Contracts relating to charges included in other single till income (OSTI) also include indexation provisions.

⁴³ The interest rate on nominal debt includes compensation for the use of the money that has been borrowed for the life of the debt. For example, if the real interest rate was 2% and the expected inflation rate was 3%, then the nominal rate would be approximately 5%. We expect to include the cash accretion costs of index linked debt in the revenue requirement as they fall due.

also want to keep the indexation of Network Rail's RAB as simple as possible, we inflate the whole RAB including the element of it that is associated with nominal debt. This additional amount was taken into account in our overall financial sustainability review for PR13.

4.25 We will consider whether our PR13 approach for general inflation is still appropriate for PR18.

Input prices

4.26 At PR13 we took the view that Network Rail had some control over input price effects through, for example, the management of contract terms and efficient procurement activity.

4.27 There are specialised inflation indexes that seek to track inflation in different industrial and commercial sectors. An inflation index could be applied to expected expenditure requirements on one of two bases:

- (a) an 'ex ante' or up-front basis using forecasts of changes to the index; or
- (b) an 'ex post' basis, where the effects are logged up for adjustment at the next periodic review.

4.28 For PR13, we did not use an inflation index to adjust expected expenditure requirements because:

- none of the available indexes provided a close match to Network Rail's expenditure profiles; and
- the absence of indexation was expected to incentivise Network Rail to manage inflation risk.

4.29 This meant that Network Rail was exposed to the risks associated with its management of input prices in CP5. We will consider whether our PR13 approach is still appropriate for PR18.

Corporation tax and VAT

4.30 For PR13 we modelled Network Rail's expected corporation tax liability under the adjusted WACC approach⁴⁴ for each year of CP5 using forecast corporation tax rates

⁴⁴As set out in chapter 3, an adjusted WACC approach notionally results in a zero surplus revenue outcome. However, corporation tax liabilities are calculated using specific tax rules so Network Rail could still have a liability for corporation tax. At PR13 we did not use a "tax wedge" approach in calculating Network Rail's revenue requirement. This would have involved grossing up a post-tax cost of equity to a pre-tax rate. This approach would have been very complicated for Network Rail as a whole because of its retained tax losses. However, we have used a tax wedge approach for investment framework schemes where we want the promoter to pay the full notional costs of the project.

and included equivalent allowances in Network Rail's revenue requirement. However, these allowances were relatively small because, in broad terms, they just needed to cover the corporation tax liability on Network Rail's asset sales.

4.31 In our modelling of corporation tax allowances for CP5, we used Network Rail's forecast for opening tax liability balances and did not provide for a subsequent adjustment to the actual levels at the end of CP4. We expect to propose the same pragmatic approach for our modelling of corporation tax allowance for CP6.

4.32 For PR18 we presently expect to model Network Rail's corporation tax liability for each year of CP6 at route-level, taking into account that:

- Network Rail Ltd's annual report and accounts for 2016 note that the business still has significant tax losses brought forward; and
- we might need to log up tax allowance changes to reflect:
 - the effects of any changes to legislation, including the reforms to corporation tax relief that HM Treasury and HM Revenue & Customs recently consulted on; and
 - any debt financed enhancements that are approved after HLOSs have been provided.

4.33 Other forms of taxation (including PAYE associated with labour costs) are considered to be part of the costs of the activity to which they relate.

Research and development expenditure and environmental expenditure

4.34 Because potential benefits from corporation tax credits on research and development (R&D) expenditure and enhanced capital allowances on environmental expenditure were uncertain for CP5, we decided not to include an estimate of them in our calculation of Network Rail's revenue requirement, nor to factor them into our calculation of Network Rail's financial performance.

4.35 Given the nature of these issues and our decision to assume zero income for them in CP5, we decided that:

- where Network Rail received a cash benefit from corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure it would retain 25% of the benefit; but
- bear 100% of any downside.

4.36 We will consider whether our PR13 approach is still appropriate for PR18.

Corporation tax implications of different approaches to Network Rail's cost of capital

4.37 Assuming all other factors were equal, each of the four possible approaches to the cost of capital for Network Rail that we outline in chapter 3 would be likely to give rise to different corporation tax liabilities. In very general terms:

- the adjusted WACC approach should give rise to the lowest liability because notionally there is no surplus income in the regulatory outcome, translating to the lowest level of profit chargeable to corporation tax;
- the adjusted WACC/revenue reserve and full WACC/ring-fenced fund approaches should give a mid-position liability because there should be some surplus income in the regulatory outcome; and
- the full WACC/rebate approach should give rise to the highest liability because there should be the most surplus income in the regulatory outcome, translating to the highest level of profit chargeable to corporation tax.

Value added tax

4.38 Network Rail's business is generally VAT neutral. The key factors are that:

- it is able to reclaim most of the VAT it incurs on purchases;
- its network grant income is outside of the scope of VAT; and
- its track access charges are standard rated.

4.39 For PR13 we did not take routine VAT payments/repayments into account in our financial modelling and we expect to adopt the same approach for CP6. However, in the past there have been some issues that have led to material rebates to Network Rail. The approach we used for rebates in CP5 was the same as set out above for corporation tax credits on R&D expenditure and enhanced capital allowances on environmental expenditure.

4.40 We will consider whether our PR13 approach is still appropriate for PR18.

Asset disposals

4.41 Our treatment of asset disposals by Network Rail in the normal course of business has, to date been:

- to consider net disposal proceeds to be other single till income (OSTI), with Network Rail incentivised to outperform our forecast as it retains some of the benefit of additional income; and
- not to make an adjustment to the RAB, even if the investment relating to the asset concerned was considered to have been included in the RAB.

4.42 We will consider whether this approach is still appropriate for PR18.

Hendy report disposals

4.43 The report from Sir Peter Hendy to the Secretary of State for Transport in November 2015 on the replanning of Network Rail's Investment Programme referred to the release of £1.8bn for investment through the sale of non-core assets by Network Rail. The assets comprise commercial estate properties (such as railway arches), freight sites and light maintenance depots.

4.44 We are reviewing our approach to the treatment of these asset disposals and considering:

- how the disposals should be treated in our calculation of financial performance; and
- whether we should deduct the proceeds from the RAB given the materiality of these disposals.

Treatment of traction electricity, industry costs and rates

4.45 At PR13 the treatment of traction electricity, industry costs and rates we set out involved a 'true-up' for some costs at the end of CP5 because of the limited control Network Rail has over them. A true-up involves applying an adjustment⁴⁵ in our PR18 modelling to:

- reimburse expenditure in excess of the PR13 modelled level; and
- claw-back expenditure below the PR13 modelled level.

4.46 The approaches we decided on for relevant cost categories at PR13 were:

- British Transport Police (BTP) costs - no true-up as we considered these costs were sufficiently controllable by Network Rail, so the risk of the actual outturn costs being different from our assumptions was borne by Network Rail.
- Rail Safety and Standards Board costs - no true-up for the same reasons as BTP costs.
- CIRAS costs - no true-up for the same reasons as BTP costs.
- ORR licence fee and safety levy - full true-up as we did not think these costs were sufficiently controllable by Network Rail.
- Rail Delivery Group and Railway Heritage Trust costs - no true-up for the same reasons as BTP costs.
- Independent reporter costs - partial true-up. In CP5 Network Rail retains 25% of any underspend but will bear 25% of any overspend.

⁴⁵ Where relevant, appropriate prospective adjustments are noted by Network Rail in the opex memorandum account.

- Business (cumulo) rates - full true-up provided Network Rail has negotiated effectively with the relevant valuation authorities.
- Traction electricity:
 - most costs passed through to train operators and other third parties via track access charges and other contractual arrangements; and
 - no true-up for other traction electricity costs (attributable principally to Network Rail's own traction electricity consumption) as we considered these costs were sufficiently controllable by Network Rail.

4.47 For PR18 we think the approaches set out above are still likely to be appropriate but we will consider respondents' views, in particular on the treatment of BTP costs and independent reporter costs.

Innovation expenditure allowances

4.48 Our PR13 determination, included two particular provisions relating to innovation:

- (a) a £50m innovation fund specified in the DfT HLOS ('the innovation fund'); and
- (b) a commitment to match well-justified expenditure on innovation and research & development by Network Rail with funding of up to £50m ('the strategic R&D fund').

4.49 Both provisions are financed through addition to the RAB, provided that governance requirements are met. Broadly, this means that the costs of justified incremental borrowing will be included in our revenue requirement calculations for CP6.

4.50 We will consider whether we should include any specific provisions for innovation expenditure in our route-level determination for CP6, taking account of any specifications regarding innovation that may be included in the DfT and Transport Scotland HLOSs and SoFAs.

Use of financial outperformance

4.51 In our PR13 final determination we said that amounts arising from financial outperformance by Network Rail could only be used to pay down debt, fund research and development projects (under the strategic R&D fund mentioned above) or fund other investments that would reduce the future costs of or improve the outputs of the railway in a way that provided value for money. We also said that rebate payments could be made, subject to the rebate policy outlined in chapter 3.

4.52 We will consider whether we should vary our position with respect to the use of any amounts arising from financial outperformance in CP6.

Grant dilution

4.53 In the unlikely event that the governments do not meet their funding obligations with respect to network grant payments, current track access contracts include a grant dilution provision that provides for increases in track access charges to match the schedule of required network grant payments.

4.54 We will consider whether this provision is still appropriate in light of Network Rail's reclassification as a public sector arm's length body.

Consultation questions

- Do you think we should change our approach to the calculation of amortisation allowances in light of:
 - Network Rail's reclassification and the likelihood of a fixed borrowing limit in CP6?
 - The possible developments to enhancement financing/funding set out in chapter 3?
 - Financial sustainability requirements?
- Do you think we should include an 'early start' mechanism in the PR18 process?
- Do you consider we should make any changes to our PR13 policies on inflation?
- Do you have any views on the corporation tax and VAT issues we have set out?
- Do you have any views on how we should treat the proceeds from disposals that
 - Are made in the normal course of business?
 - Are made in response to the Hendy report?
- Do you think we should make any changes to the treatment of traction electricity, industry costs and rates that we applied at PR13?
- Do you have any views on the use of any outperformance amounts that arise during CP6?
- Do you have any other views on the financial issues set out in this chapter?
- Do you think there are any other financial policy issues we should be considering for CP6?

5. Financial sustainability and risk management under a route-level determination

Policy points in this chapter

- We need to allocate Network Rail the financial risks it is best able to manage.
- We will need to consider the following factors:
 - the borrowing limit applicable to Network Rail since reclassification;
 - the impact of any changes to enhancement specification and financing/funding in England & Wales; and
 - the sustainability of Network Rail's debt balance.
- There are a number of financial risks that we will need to take into account for PR18, including those around the forecasting and control of expenditure levels:
 - Network Rail will need to produce high quality plans and analysis;
 - we will need to set challenging but realistic baseline expenditure levels; and
 - financial performance will need to be managed and monitored effectively.
- Network Rail might need access to financial resources in CP6 from, for example:
 - revenue and borrowing capacity reserves;
 - asset disposals; and
 - third party investments.
- We will need to consider whether protocols are needed to govern financial resource transfers between routes.
- We will need to review the licence conditions that support financial sustainability and the re-opener provisions that apply to Network Rail.

Introduction and context

- 5.1 For Network Rail, 'financial sustainability' means having access to the financial resources it needs to discharge its obligations so that, in particular:
- it can take appropriate operational and investment decisions;
 - it does not exceed its borrowing limits or other financial limits; and

- its financial metrics are satisfactory with reference to its particular circumstances.

5.2 We need to make a determination at PR18 that provides Network Rail with the financial resources it needs. Network Rail's management needs to manage risks so that it can discharge its obligations with the resources available.

5.3 Network Rail's financial position during CP6 could turn out to be quite different from the one we forecast at PR18, reflecting a number of risks on the upside and downside, with the potential to affect financial sustainability. However, variances from financial forecasts are a risk that has to be managed by businesses of all types.

5.4 In this chapter we consider how these risks:

- should be allocated between Network Rail, its customers and its funders; and
- could be managed in the context of our move to route-level regulation⁴⁶.

5.5 We have, to date, applied the principle that Network Rail should bear the risks that it is best placed to manage, and not those that it has little ability to manage. However, the introduction of fixed borrowing limits has meant that Network Rail has borne some risks during CP5 that were not allocated to it. For example, Network Rail has little control over the business (cumulo) rates that it must pay. Accordingly, as noted in paragraph 4.45, for CP5 we adopted a full true-up approach for these costs. However, the true-up adjustment will only be applied in our calculation of the revenue requirement for CP6, meaning that Network Rail has had to manage the risk associated with increased costs in the meantime under its fixed borrowing limits.

5.6 The borrowing limit levels will be an important factor for risk management in CP6 as well, because Network Rail is not allowed to exceed the borrowing limits it has been set. For example, if there were to be a significant increase in inflation, indexation of Network Rail's revenue requirement should compensate it for an increase in the cost of goods/services⁴⁷, but it would not fully compensate for:

- extra interest costs associated with additional borrowing; and
- the resulting increase to the interest rates (except fixed rates) paid by Network Rail.

In this scenario, all else being equal, Network Rail might exceed its borrowing limits if there were insufficient headroom.

5.7 As outlined in chapter 4, the approach to financial risk management in CP6 could include:

⁴⁶ It will also be appropriate to consider financial risk for the national system operator business unit.

⁴⁷ In respect of the general level of inflation.

- indexing Network Rail's allowed revenue by general inflation, as we have done in previous access reviews, which means Network Rail is not exposed to general inflation risk on operations, support, maintenance⁴⁸, finance costs⁴⁹ and other single till income; and
- only exposing Network Rail to variances in traction electricity, industry costs and rates where we think the cost is sufficiently controllable by Network Rail.

5.8 We also consider the use of re-openers to deal with exceptional risks that are material. This is because providing Network Rail with a surplus within allowed revenues (a revenue reserve), or a borrowing capacity reserve that is sufficient for it to manage all possible risk is not realistic. We comment further on re-openers below.

Reclassification and financial performance in CP5

5.9 As noted in chapter 2, Network Rail's expenditure across a range of activities was higher than we had assumed in our PR13 determination. Some of these variances were due to:

- increases in cost levels at the start of CP5 (between our PR13 forecast and the end of CP4) of about 2.5%;
- the occurrence of risks including some high impact low probability events, (for example the storm damage at Dawlish in 2014) which cost Network Rail around £60m;
- overspending on enhancement projects⁵⁰; and
- an efficiency deficit of around 8% (mainly relating to renewals) in the first two years of CP5, compared to an assumed gain of around 10%⁵¹.

5.10 Until its reclassification in September 2014, Network Rail was able to borrow from the markets to finance higher expenditure with those amounts being added to the RAB⁵². A debt-to-RAB ratio limit in Network Rail's licence provided control over total borrowing.

⁴⁸ Network Rail is not exposed to general inflation risk on the component of actual renewals spend that is consistent with the long run average spend levels.

⁴⁹ The interest cost amounts we include in the revenue requirement are indexed in line with general inflation. However, movements in inflation will also affect the nominal component of interest costs and Network Rail is not protected from this risk.

⁵⁰ As noted in paragraph 2.1, the Hendy Report in November 2015 identified a £2.5bn overspend forecast

⁵¹ See Figure 1.3 in associated document 10 at Annex A. Our CP13 efficiency measure approach is explained in chapter 7.

⁵² Subject to adjustments for output achievement and a 25% 'pain' factor.

5.11 Since reclassification, however, there have been two significant developments:

- Network Rail has become subject to fixed borrowing limits under the DfT loan facility; and
- the Hendy report on the replanning of Network Rail's Investment Programme was published in November 2015 and proposed:
 - new baselines for enhancement outputs and expenditure for CP5 (for a portfolio of projects in England & Wales);
 - an overall expenditure limit on the portfolio⁵³; and
 - non-core asset divestments totalling around £1.8bn.

5.12 The Hendy report was accepted by DfT.

5.13 These developments mean that, at present, increasing expenditure levels are chiefly being managed through output reductions, asset disposals and, particularly in respect of asset renewals, activity deferral.

5.14 There is still considerable uncertainty around the planned non-core asset disposals, in respect of both timing and proceeds ahead of our PR18 determination. In addition, some of Network Rail's forecasting for CP5 has not been sufficiently accurate.

5.15 Other effects of higher expenditure levels in CP5 have been:

- additional cost burdens for the governments and users of the railway;
- business and asset management disruption (because of the need to reset budgets and output plans); and
- impacts on Network Rail's procurement effectiveness and its supply chain partners.

Approach to managing financial risks for PR18

5.16 In addressing the management of financial risks for CP6, we will need to consider:

- the likelihood that:
 - fixed borrowing limits will continue to apply; and
 - some enhancements in England & Wales and Scotland could be specified on a case-by-case basis and either grant funded or debt financed;
- the need for Network Rail's expenditure forecasts to be as accurate as possible; and

⁵³ Presently at £15.3bn.

- different approaches to on-going expenditure level risks, including alternatives to responses that involve output reductions (in particular the deferral of renewals).

5.17 If a greater proportion of enhancement projects in England and Wales were to be grant funded in CP6:

- there might be less risk that higher than expected expenditure on them would impinge on operation, maintenance and renewals activities (to the extent that the enhancements and their funding are ring fenced); but
- an associated reduction to Network Rail's borrowing limit (the amount of cash it can draw down) might leave it with less overall financial flexibility.

5.18 As indicated above, a key risk to Network Rail's financial stability relates to its on-going expenditure levels and it will need to set out well-founded expenditure assumptions for each of its routes in its business plans and provide its analysis of financial risks and their possible impacts.

5.19 In setting out our approach to managing financial risk we will:

- use our own risk modelling to better understand possible ranges of expenditure⁵⁴;
- consider whether financial reserves should be proposed, and if so whether they would be best made available through:
 - a revenue reserve generated under some of the cost of capital approaches set out in chapter 3, or as a separate (contingency) allowance for financial risk separate from the calculation of cost of capital; or
 - a borrowing capacity reserve, where Network Rail's borrowing limits (which are set by the governments) include some headroom;

and

- continue to develop incentives and financial performance assessment mechanisms⁵⁵ so that during CP6 we can:
 - identify issues at an early stage; and
 - challenge on-going performance.

⁵⁴ This will include scrutiny and challenge of projected expenditure levels and efficiency plans, as well as cost sensitivity modelling.

⁵⁵ We discuss our approach to financial performance management in chapter 7.

Managing financial risks in PR18

5.20 Network Rail will need to manage financial risk by:

- using good quality management information to identify costs and output pressures as early as possible;
- using on-going sensitivity analysis and stress testing techniques;
- considering the terms of procurement arrangements for goods and services;
- planning for safe and effective activity plan changes such as, where appropriate, switching from asset renewals to life extension programmes or additional maintenance activity; and
- optimising advantages from devolving management decisions to routes.

5.21 Even if expenditure forecasts are well founded, and residual risks are well managed, Network Rail might need to access financial reserves if it experienced cost shocks during CP6. Additional financing/funding could be accessed in appropriate cases by considering:

- further asset disposals; and
- third party and private sector financing/funding as outlined in chapter 3.

Route-level aspects

5.22 As noted in chapter 1, we will calculate the overall revenue requirement for Network Rail from route-level upwards, with a building block calculation for each route. This should help route management teams to manage risks for their businesses in the ways described above.

5.23 In this context, however, it should be noted that:

- as sub-divisions of Network Rail's business, the routes' capacity to manage risk will be lower than for the company as a whole; and
- routes will be dependent on centralised business support services for some aspects of budgetary risk control.

5.24 To support route-level settlements we will consider the need for protocols that:

- allow Network Rail flexibility to reallocate financial resources if necessary to manage risk and exploit opportunities; but
- ensure that resource reallocations do not undermine route-level business and risk management approaches, incentive mechanisms and financial performance assessments.

5.25 In this context, financial resources could also include the allocation of the available borrowing limits.

5.26 We will also consider whether a strategic reserve should be held and managed centrally by Network Rail, to reduce the potential requirement for reallocations between routes.

Other financial risks

5.27 As well as the risk of higher expenditure, there are some other financial risks that we will need to consider for PR18⁵⁶:

- Higher levels of general inflation than assumed when borrowing limits are set could cause cash flow issues especially in relation to enhancements.
- Input prices could be higher than expected, and Network Rail's ability to manage this risk might be limited by the nature of its supply chain.
- Macro-economic factors could have an impact on Network Rail if they affect infrastructure funding decisions or affect its supply chain.
- Interest rates applicable to the DfT loan facility could rise higher than expected (unless a predetermined fixed rate is used)⁵⁷.
- Poor operational performance by Network Rail might lead to high levels of payments.
- Other single till income levels could be lower than assumed.
- Network Rail's corporation tax liabilities might differ from allowances we include in revenue requirement calculations if, for example, there were changes to tax legislation during CP6.
- Network Rail could be exposed to additional counterparty risk if it enters into more commercial partnerships during CP6.

Network Rail's debt level as a financial sustainability issue

5.28 We make the following points about Network Rail's debt in this document:

- (a) Until its reclassification in September 2014, Network Rail was able to borrow from the markets.
- (b) Since reclassification, Network Rail has been subject to fixed borrowing limits under its DfT loan facility.

⁵⁶ This list considers risks to financial sustainability, noting that most of these factors could also move in a direction beneficial to Network Rail.

⁵⁷ Network Rail is no longer allowed to obtain new hedging instruments to manage interest rate risk.

- (c) Our historical approach to amortisation policy has meant that Network Rail's debt has increased over time, but its RAB has also increased, and a debt to RAB ratio limit has been applied to encourage financial rigour.
- (d) Network Rail's debt is consolidated into government borrowing at a national level.

5.29 We expressed a view, in chapter 3, that Network Rail's responsibility for its debt, and its inclusion in its accounts, encourages financial rigour and transparency. However, in our long term regulatory statement⁵⁸ (published in July 2013, before reclassification) we sounded two warning notes:

- the UK Government's guarantee of Network Rail's debt meant that disciplining pressure from creditors in respect of default risk might be absent; and
- the cost of servicing Network Rail's debt, as a proportion of its overall costs, would rise over time (and presently stands at about 50% of Network Rail's operating and maintenance cost total).

5.30 We will take the impact of Network Rail's debt level on its financial metrics into account at PR18.

Licence conditions and re-opener provisions

Licence conditions

5.31 There are a number of provisions in Network Rail's network licence⁵⁹ that specifically support financial sustainability:

- Condition 3 (Financial indebtedness) imposes restrictions on Network Rail's debt-to-RAB ratio.
- Condition 4 (Financial ring-fence) sets out requirements relating to:
 - non-core activities;
 - sufficiency of resources;
 - credit rating;
 - ultimate controller undertakings; and
 - dividend payments and payments to funders.
- Condition 7 (Land disposals) imposes restrictions on land disposals.
- Condition 11 (Regulatory accounts) sets out requirements relating to:

⁵⁸ <http://orr.gov.uk/publications/policies-and-statements/opportunities-and-challenges-for-the-railway-orr-s-long-term-regulatory-statement>

⁵⁹ See associated document 5 at Annex A.

- statements on sufficiency of resources; and
 - the provision of information (improving transparency on Network Rail's financial position).
- Condition 15 (Governance) requires Network Rail to follow best practice corporate governance.

5.32 We will need to consider whether any licence modification proposals should be made in the context of PR18 to:

- address any of the financial risks we have identified;
- underpin our route-level approach to regulation; and
- update or improve existing wording.

5.33 Our regulatory accounting guidelines (RAGs) are updated regularly and we will carry out a full review and produce a new edition for PR18.

Re-opener provisions

5.34 We use the term re-opener to refer to mechanisms that allow changes to the revenue requirement that Network Rail can recover through access charges and network grants in extreme circumstances⁶⁰. A re-opener is a formal process to vary the terms of our regulatory determination.

5.35 For CP5 we included provisions in track access contracts for there to be a re-opener in two scenarios:

- (a) A material change in the circumstances of Network Rail or in relevant financial markets.

Under this provision we would consider whether there were compelling reasons to initiate an access charges review, having regard to our duties under section 4 of the Act. This re-opener applies to events in England & Wales and Scotland.

- (b) If expenditure in Scotland is forecast to be more than 15% higher than our determination over a forward-looking three year period.

This provision applies to Scotland only.

5.36 We presently consider that it could be appropriate to retain these re-opener provisions for CP6, possibly with some changes. For example, the reference to financial markets might not be necessary following Network Rail's reclassification and

⁶⁰ A re-opener can also change other aspects of our determination.

it may be appropriate to consider having a version of the specific Scotland re-opener for England & Wales.

Consultation questions

- Do you think we have identified the important financial risks applicable to Network Rail in CP6 and that the main risk relates to expenditure levels?
- Do you agree with the approaches we have identified for managing expenditure level risks?
- What protocols do you think might be necessary to govern the reallocation of financial resources between routes during CP6?
- Do you think that the level of Network Rail's debt is a financial sustainability concern?
- Do you consider that any changes will be needed to financial licence conditions or re-opener provisions?

6. Financial incentives for CP6

Policy points in this chapter

- We need to consider whether we should retain and develop:
 - a RAB roll forward incentive; and
 - a spend to save mechanism.
- We comment on the possibility of financial incentives linked to Network Rail's route scorecards.
- We ask whether there are new financial incentives we could consider for CP6.

6.1 If a company's revenue is limited to the level necessary to cover its costs and it does not face competition, it might have limited incentives to control costs. Therefore, we need to include mechanisms in our determination to incentivise Network Rail and the routes to outperform, which should bring benefits to stakeholders. Most of these incentives (including Schedule 4, Schedule 8 and REBS⁶¹), are covered in our separate charges and incentives consultation⁶². This chapter only covers the specific financial incentives applicable to Network Rail.

6.2 Unlike other regulated utility businesses operating in the private sector, Network Rail does not have shareholders who would benefit from financial outperformance. However, it is a critical infrastructure business, in the national spotlight, with a prominent board of executive and non-executive directors. Therefore, reputational factors are important to Network Rail's managers and to the organisation as a whole. It is therefore important that our financial incentives appropriately reflect organisational performance.

RAB roll forward incentive ('pain/gain' mechanism)

6.3 Our PR13 determination included a RAB roll forward incentive, which shares some of the risks and rewards associated with expenditure levels between Network Rail, its funders, and its customers. Hence it is sometimes referred to as a 'pain/gain' mechanism.

⁶¹ The Route-level Efficiency Benefit Sharing mechanism (REBS).

⁶² http://orr.gov.uk/_data/assets/pdf_file/0019/23482/charges-and-incentives-consultation-document.pdf

6.4 To incentivise Network Rail to make savings on capital expenditure where possible during CP5, we adjust the expenditure⁶³ amounts added to the RAB balance so that Network Rail benefits from an underspend by 25% and bears 25% of the cost of an overspend⁶⁴. We take into account the effect of any rescheduling of activity so that Network Rail does not retain/bear the finance cost of the rescheduling.

6.5 The RAB roll forward incentive does not apply to:

- some specific enhancement projects that were included in the HLOS for PR13 (as set out in paragraph 4.31 in the regulatory accounting guidelines⁶⁵);
- enhancement projects authorised during CP5 under the investment framework (see glossary); and
- directly funded and grant funded enhancements.

6.6 Even though, at PR13, we did not use the RAB balance directly in our building block calculation of the revenue requirement, in broad terms a pound included in the RAB can be considered to have the same economic value to Network Rail as a pound of cash funding. Therefore, if Network Rail avoids spending a pound on capital expenditure, but 25% of that pound is still included in the RAB, it will have made an economic gain with respect to its RAB balance. Conversely, if Network Rail spends an extra pound on capital expenditure, but only 75% of that pound is included in the RAB, it will have suffered an economic loss.

6.7 The RAB roll forward incentive can increase the incentive on Network Rail to control its expenditure and record it accurately but ultimately the incentive properties are limited at the moment because it:

- has no direct impact on revenue requirement calculations for Network Rail under an adjusted WACC approach; and
- is a fairly complex regulatory mechanism and, as such, might not influence the behaviour of managers responsible for operational and expenditure decisions, especially where they are having regard to internal periodic budgets.

6.8 In addition, there is some risk that the RAB roll forward incentive could distort Network Rail's choice between opex and capex solutions for particular issues, because it would bear 100% of an overspend on opex but only 75% of an overspend on capex.

⁶³ Renewals and enhancements are subject to the same treatment to avoid incentivising one above the other.

⁶⁴ A 25% factor is approximately the same as five years allowed return at 4.31% (the weighted average cost of capital value we determined for PR13).

⁶⁵ See associated document 7 at Annex A.

6.9 We will need to consider whether to retain a RAB roll forward incentive at PR18, taking account of the factors outlined above and emerging views on the cost of capital approach for CP6. The RAB roll forward incentive already operates at route-level.

Corporation tax effects on the RAB roll forward incentive (see chapter 4)

6.10 In basic terms, with all other things being equal:

- (a) lower than expected expenditure (outperformance) set against a given income level would feed through into a higher level of business profit and a higher corporation tax charge; and
- (b) higher than expected expenditure (underperformance) set against a given income level would feed through into a lower level of business profit and a lower corporation tax charge.

6.11 This means that the outcomes of the RAB roll forward incentive for CP5, described in chapter 5, will be on a 'net of tax basis', with the benefits of outperformance abated by an increased corporation tax charge and the costs of underperformance mitigated to a similar degree. We presently consider that the same approach should apply in CP6 if the RAB roll forward incentive mechanism is retained.

Scorecards and staff remuneration incentives

6.12 Network Rail includes its own performance monitoring information (see chapter 7) in its route score cards, together with other categories of performance information. The scores achieved by each route feed into staff remuneration. Scorecards and quarterly performance summaries are published on the Network Rail website⁶⁶.

6.13 ORR writes to the chair of Network Rail each year⁶⁷ setting out information on Network Rail's performance, including its financial performance, so that the information can be taken into account by its remuneration committee with respect to the Network Rail management incentive plan.

6.14 We could consider developing financial incentives for Network Rail, including at route-level, linked to its scorecards. For example, we could include an adjustment in FPM to take scorecard outcomes more directly into account. However, given the number and type of local outputs that might be on route-level scorecards this could be difficult to implement.

⁶⁶ <https://www.networkrail.co.uk/who-we-are/publications-resources/quarterly-reports/>

⁶⁷ http://orr.gov.uk/_data/assets/pdf_file/0004/22693/network-rails-performance-in-2015-16.pdf

Spend to save

6.15 In PR13, we excluded expenditure covered by ‘spend to save’⁶⁸ arrangements from our financial performance measure and amended our RAB roll forward incentive for spend to save schemes to incentivise Network Rail to invest in them.

6.16 To address the lack of incentives on Network Rail to undertake investments towards the end of control period (because it might spend more money on the investment in the control period than it saved)⁶⁹, a greater proportion of expenditure was added to the RAB in recognition of the shorter period of time remaining to benefit from savings. An explanation of this approach is provided in the note included at Annex G.

6.17 In fact, very little expenditure has been classified as spend to save to date in CP5 because Network Rail has had limited capacity for discretionary expenditure as a result of:

- reclassification which introduced fixed borrowing limits; and
- significant additional expenditure by Network Rail leaving little borrowing headroom.

6.18 Whilst we presently have limited information on which to assess the mechanism, we think it still has the potential to incentivise Network Rail to develop ways to reduce its costs and increase its income. We are therefore considering whether we should retain it for CP6 (possibly with amended parameters), but need to take into account the impact of fixed borrowing limits.

Consultation questions

- Should we retain the RAB roll forward incentive mechanism for CP6 – could it be improved?
- Could we develop incentives linked to Network Rail’s route scorecards?
- Should we develop the spend to save mechanism for CP6?
- Are there any other financial incentives you think we should consider?

⁶⁸ Expenditure that could reduce the cost of the network or generate additional income.

⁶⁹ The investment may still provide Network Rail with more savings than in total over the life of the investment which would be higher than the investment cost. But savings achievable after the end of the control period are taken into account in setting future revenue requirements, meaning that Network Rail would not benefit from them.

7. Financial performance assessment for CP6

Policy points in this chapter

- The principal methods we presently use to assess Network Rail's financial performance have some strengths, but they also suffer from limitations and complexity. We are considering how we can improve our approach for CP6.

-
- 7.1 Network Rail's ownership, compared to other regulated network companies, means there are fewer relevant financial incentives. As a result, reputational incentives are very important and it is therefore essential that we monitor Network Rail's performance to hold it to account. By publishing our findings we promote transparency and show whether Network Rail is delivering what its users and funders require.
 - 7.2 Network Rail's financial performance is directly related to its performance on output delivery and service provision because its funding is used to deliver a safe network, train performance outputs and long-run asset sustainability.
 - 7.3 In this chapter, we set out our current approach to financial performance assessment and how that could evolve for CP6.

Our current approach to financial performance assessment

- 7.4 During CP5 we have used a financial performance measure approach to assess how well Network Rail is performing. This is set out in our RAGs⁷⁰.
- 7.5 This is a more sophisticated approach than just assuming that underspending by Network Rail is a good thing and overspending a bad thing. This is because, as shown below, we take into account the outputs that have been delivered and the timings of expenditure.
- 7.6 All other factors being equal, if a business carries out more activities than expected, it will spend more than was expected and vice versa. However, it could also:
 - (a) spend less than expected on planned activity levels;
 - (b) spend more than expected on planned activity levels;

⁷⁰ See associated document 7 at Annex A.

- (c) spend the expected amount but carry out more activity; and
- (d) spend the expected amount but carry out less activity.

7.7 The outcomes in subparagraphs 7.6(a) and (c) could represent financial outperformance, whilst the outcomes in subparagraphs 7.6(b) and (d) could represent financial underperformance.

Financial performance measurement in CP5

7.8 Our overall approach to FPM for Network Rail in CP5 uses the following approach:

- (a) Actual income and expenditure totals are listed for each expenditure category that is in the scope of FPM.
- (b) PR13 baseline expenditure levels (as used in our calculation of required revenues for CP5) are listed for each category.
- (c) The variance between actual and baseline expenditure levels is calculated for each category.
- (d) The variance figures are adjusted to exclude expenditure which is not within the scope of the financial performance monitoring regime.
- (e) Adjustments may be applied to the variance figures, where appropriate under the RAGs to take account of:
 - (i) differences between expected and actual activity levels, e.g. resulting from an advancement or deferral of activity; and
 - (ii) the non-delivery of outputs, including performance outputs.
- (f) A 25% cap is applied to the variance figures for renewals and HLOS-specified enhancements categories.

7.9 The 25% adjustment referred to in subparagraph 7.8(f) reflects the RAB roll forward incentive adjustment mechanism that we describe in chapter 6. That adjustment allows 75% of an efficient overspend on renewals and HLOS-specified enhancements to be included in the RAB, signifying that it will be reimbursed in future. To be consistent with this, such an overspend is also reduced by 75% (i.e. capped at 25%) in FPM reporting in CP5.

7.10 Network Rail also monitors its own financial and activity volume performance as part of its internal management reporting system. This system also uses FPM but is prepared on a different basis to the financial performance reporting for ORR described above insofar that Network Rail uses updated budget figures, agreed with DfT, as benchmark expenditure levels in place of the PR13 baselines. This is intended to provide contemporary benchmark levels for performance management and staff incentive schemes.

Efficiency measure for operations, support, maintenance and renewals

7.11 The PR13 baseline expenditure levels we used for modelling the revenue requirement for CP5 included efficiency improvement assumptions, applied to the cost levels being experienced by Network Rail at the time of our PR13 review. We therefore also refer to the baselines as ‘post efficient cost levels’.

7.12 The efficiency improvement factors in CP5 were based on an assumption that there were financial inefficiencies in Network Rail’s business that could be tackled by its managers. There was a degree of judgement in deciding pre-efficient cost levels (the cost levels observed towards the end of CP5) and in setting the efficiency factors, especially in respect of forecasts for the latter part of CP5.

7.13 For operations, support, maintenance and renewals activities (a subset of activities that excludes enhancements) we produced an efficiency measure that shows how much of the assumed efficiency improvement is actually being achieved. For example:

- Say the cost level being experienced at the time of our PR13 review (the ‘pre-efficient cost’ level) was £100.
- Say our efficiency improvement assumption was 10%.
- The PR13 baseline expenditure level (the ‘post-efficient cost’) for revenue requirement calculations and for FPM purposes would be £90.
- Say adjusted actual expenditure was £94.
- In this simple example, we would say there had been a 6% efficiency improvement, even though actual expenditure is £4 higher than the PR13 baseline level - an underperformance outcome.

Use of financial performance information in CP5

Network Rail

7.14 Network Rail produces and publishes audited regulatory accounts⁷¹ each year which include FPM information for the year and cumulatively for elapsed years in CP5.

7.15 In its annual report, alongside its statutory accounts, Network Rail includes financial performance information under its own financial performance monitoring approach.

⁷¹ See associated document 8 at Annex A.

ORR

7.16 We report on Network Rail's financial performance in the financial sections of our Network Rail Monitor⁷² and include financial performance information from:

- FPM;
- Network Rail's own financial performance monitoring; and
- our efficiency measure.

7.17 We also report on Network Rail's financial performance in our efficiency and finance assessment of Network Rail⁷³ and include financial performance information from:

- FPM; and
- our efficiency measure.

7.18 Adapted FPM information is also used for the purpose of the REBS mechanism (referred to in chapter 6).

7.19 Table 7.1 provides a summary of the usage of financial performance information in CP5.

Table 7.1 – Summary of usage of financial performance information in CP5

	Regulatory Accounts	ORR Monitor	AEFA	REBS	Network Rail Annual Report	Network Rail management accounts	Network Rail route scorecards	Staff incentive schemes
ORR FPM	Yes	Yes	Yes	Yes	-	-	-	-
Network Rail FPM	-	Yes	-	-	Yes	Yes	Yes	Yes
Efficiency measure	-	Yes	Yes	-	-	-	-	-

Concerns around financial performance monitoring

FPM

7.20 As outlined in paragraph 7.8, our current FPM regime is conceptually straightforward. However, some of the adjustments (to take account of outputs and expenditure timing) are technically complex and not easy for stakeholders to understand and use. We will seek to make our approach simpler and more transparent for CP6.

⁷² See associated document 9 at Annex A.

⁷³ See associated document 10 at Annex A.

7.21 Some particular issues we will need to address in relation to FPM for CP6 are whether:

- the range of income and expenditure included in the measure will ensure that:
 - only controllable items are measured; and
 - income and expenditure types that have relationships with each other (in terms of performance) are all included or excluded⁷⁴;
- enhancements approved through the investment framework should be included (especially because more enhancements could be specified in this way for CP6);
- the 25% adjustment for renewals and enhancements (see paragraph 7.9) should be removed to improve transparency (noting that we did not use the RAB balance directly in calculating the revenue requirement for CP5 – see paragraph 6.6);
- we should continue to make output value adjustments;
- we should treat output performance more symmetrically – giving the same amount of credit for improved outputs as the deduction for non-delivery of outputs; and
- we should make special adjustments for windfall gains and losses like the Dawlish landslip in 2014.

Efficiency measure for operations, support, maintenance and renewals

7.22 As for our FPM reporting, the concept behind our efficiency measure for operations, support, maintenance and renewals is relatively straightforward, but the adjustments we need to make can be complex. For example, we have to make adjustments to take into account the deferral or acceleration of work programmes.

7.23 At the same time, we are aware that, at present, our measure does not necessarily take into account valid network management choices. For example, Network Rail could decide to optimise network availability at certain times, instead of minimising the unit costs of works.

7.24 We will seek ways to make the efficiency measure more reflective of efficient management choices, whilst reducing its complexity. We will also need to ensure that the relationship between the efficiency measure and the FPM (which have different scope and baselines) are clear and reconcilable where practicable.

⁷⁴ An example of this is that for consistency we include both station expenditure and station income.

Why the reporting of FPM and efficiency is complex

7.25 As we noted above, the basic concepts for FPM and efficiency are straightforward. It is the adjustments we make to expenditure variances that make the overall calculations complex. Therefore, as part of our review of the use of FPM and the efficiency measure we need to question whether the benefit each of our current adjustments brings in making the FPM and efficiency calculations more representative of performance, is worth the additional complexity. Difficulties associated with adjustments include:

- identifying that particular activities (work done) have not been completed⁷⁵, when our price control is outputs based, for example referring to operational performance requirements;
- assessing the effect of activity variances on the safety and long-run sustainability of the network;
- placing a value on activity variances; and
- presenting the effect of adjustments in our published findings.

7.26 It is also important that the adjustments we make are consistent with our aim for the relationship between the efficiency measure and the FPM to be clear and reconcilable where practicable.

Financial performance assessment in CP6

7.27 We expect that our main financial performance measure for CP6 will involve a comparison of outturn expenditure levels to the baseline levels established in our PR18 determination at route and national levels. The baseline expenditure levels will reflect our scrutiny and challenge of the costs set out by Network Rail in its business plans. We will also report on Network Rail's efficiency in CP6 on an appropriate basis.

7.28 We will also consider:

- establishing principles for the assessment of Network Rail's financial performance;
- whether financial performance measures could be given formal output status;
- whether to introduce mechanisms to update efficiency assumptions;
- route-level considerations;

⁷⁵ For example, an underspend of £10m would not represent genuine outperformance if an essential piece of work, in respect of which Network Rail had received £10m funding, had not been done.

- how we could improve our financial monitoring in order to more effectively challenge Network Rail’s performance where appropriate; and
- whether we could set our review of financial performance in a wider industry context.

Principles for assessing financial performance

7.29 We consider that the following principles could apply to our approach to financial performance assessment:

- (a) be consistent with our objective of a safer railway;
- (b) be consistent with the overall objectives for PR18 and our regulatory framework, and any financial incentives included in it;
- (c) support route-level business management and regulation;
- (d) be as straightforward and transparent as possible;
- (e) focus on outcomes that are controllable;
- (f) make comparisons on a like with like basis as far as possible;
- (g) support incentives that:
 - bring demonstrable benefits to stakeholders; and
 - allow Network Rail to support a high quality diverse workforce and management.
- (h) avoid creating perverse incentives;
- (i) take into account qualitative as well as quantitative information; and
- (h) allow key messages and trends to be extracted from facts and figures in respect of both medium and long term issues.

Possible classification of financial performance as a regulated output

7.30 Our PR18 working paper 4 on the outputs framework for PR18⁷⁶ referred to the possibility of financial performance measures being given regulated output status in the same way that operational performance measures are, and specified as such in our PR18 determination.

7.31 Under Condition 1.2 of Condition 1(Network management) of its licence, Network Rail has a general duty to “.....*achieve the purpose in Condition 1.1 to the greatest extent reasonably practicable having regard to all relevant circumstances including the ability of the licence holder to finance its licensed activities.*”

⁷⁶ <http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/how-we-regulate-network-rail/periodic-review-2018/publications/working-paper-4-outputs-framework>

7.32 The purpose set out in Condition 1.1 is:

.....to secure

- (a) the operation and maintenance of the network;*
- (b) the renewal and replacement of the network; and*
- (c) the improvement, enhancement and development of the network,*

in each case in accordance with best practice and in a timely, efficient and economical manner so as to satisfy the reasonable requirements of persons providing services relating to railways and funders, including potential providers or potential funders, in respect of:

- (i) the quality and capability of the network; and*
- (ii) the facilitation of railway service performance in respect of services for the carriage of passengers and goods by railway operating on the network.*

7.33 Setting formal output requirements for CP6 that refer to financial performance measures could provide an additional basis for testing whether Network Rail had complied with the duty, referred to in paragraph 7.31 with respect to securing requirements in an efficient and economical manner. It might also help to:

- provide a greater focus on efficiency issues;
- improve transparency on financial performance; and
- incentivise Network Rail to deliver its activities efficiently.

7.34 It does not appear that there would necessarily be any inconsistency with the existing requirement for Network Rail to have regard to its ability to finance its licensed activities (under Condition 1.2).

7.35 However, we would need to carefully consider:

- (a) whether output status would be consistent with the principles set out in paragraph 7.29;
- (b) interactions with other output requirements;
- (c) how outputs could be set and potentially enforced at route-level;
- (d) the incentive/motivational effects that could be achieved;
- (e) the complexities noted above in respect of efficiency and FPM reporting;
- (f) levels of regulatory burden;
- (g) whether it might be better to propose the inclusion of a new licence requirement, with specific reference to financial performance; and

- (h) the extent to which enhancement projects could be included.

Updating efficiency assumptions

- 7.36 Forecasting the efficiencies achievable by any company over a five year period is difficult. For Network Rail this is especially the case, given the backdrop of Network Rail's negative efficiency⁷⁷ in recent years and not meeting targets agreed with DfT.
- 7.37 In order to address this issue we are considering whether there should be a mechanism for us to update our PR18 efficiency assumptions during the CP6 control period⁷⁸. We would consider doing this if we thought that, to a material extent, the original assumption was no longer reasonable and hence was not providing an appropriate incentive for Network Rail to improve its efficiency in the year concerned.
- 7.38 This might arise if, for CP6, we were to base our initial efficiency assumptions on Network Rail's 2018-19 exit position (i.e. the cost levels it experiences in the last year of CP5). We will need to forecast this position because when we publish our determination in October 2018 we will not have financial performance data for 2018-19⁷⁹. In order to take account of this issue, we could consider updating our efficiency assumptions using actual outturn information for 2018-19.
- 7.39 An updating mechanism might therefore allow us to set more appropriate efficiency benchmarks during CP6, but it might also add to the complexity of the efficiency measure regime.
- 7.40 Updates to the assumptions used for our efficiency measure would not, in any case, affect the baseline expenditure levels used to calculate:
- Network Rail's revenue requirement; and
 - RAB roll forward or other specific incentive adjustments.

Route-level considerations

- 7.41 Our approach to financial performance and efficiency measurement in CP6 would apply at route-level and in aggregate for Network Rail. As noted in chapter 5, there could be circumstances in which Network Rail needs to transfer some financial capacity amongst routes and the NSO to address a risk or exploit an opportunity. Any transfers would need to be clearly tracked in Network Rail's regulatory reporting, so that transparency is maintained, and so that we can take them into account in our financial performance assessments.

⁷⁷ Where expenditure is higher than pre-efficient baseline cost levels.

⁷⁸ This might be similar to the change control we are considering in respect of outputs, referred to in our PR18 working paper 4 on the Outputs Framework.

⁷⁹ This was a particular problem for PR13.

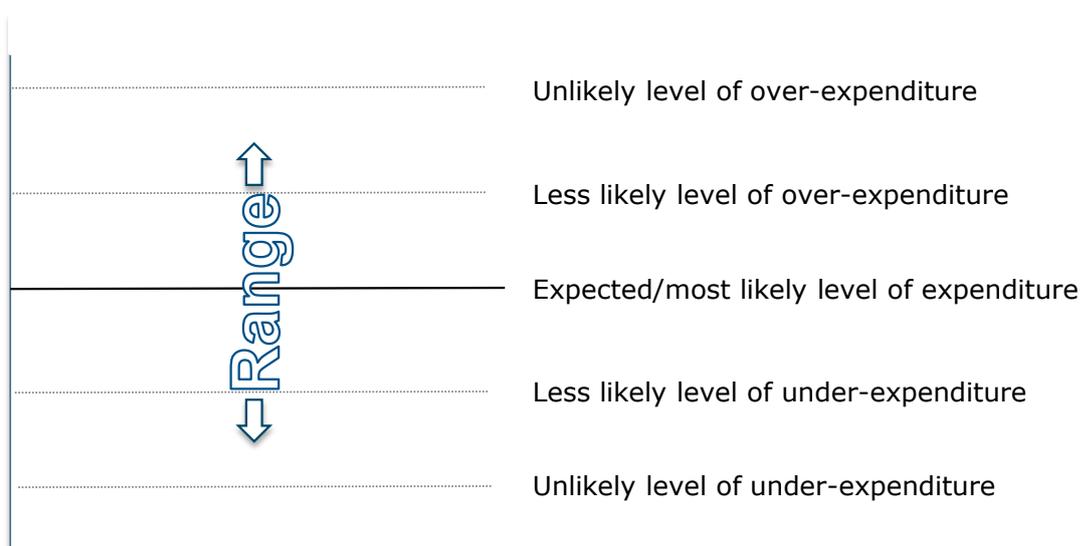
7.42 Our route-level approach will need to:

- avoid distracting route management teams and staff from running their business by creating unnecessary regulatory burden;
- avoid duplicating processes and associated costs;
- promote best practice and innovation sharing between routes; and
- preserve valid measurements at route-level even where there have been resource transfers between routes during the period.

Improving financial performance assessment

7.43 For the modelling and analysis of financial risk that we carry out as part of our PR18 review (see chapter 5) we will derive a range of possible expenditure outcomes associated with risk factors as illustrated in Figure 7.1.

Figure 7.1 – Illustration of baseline expenditure range



7.44 When we report on Network Rail's actual expenditure levels we could refer back to these ranges and risk factors when assessing its performance, in light of risks that have/have not materialised. To assist us doing this Network Rail's commentary in its regulatory accounts would need to identify:

- the anticipated risks/opportunities that had materialised;
- any unanticipated risks/opportunities that had arisen including high impact events; and
- the way that risks and opportunities were managed.

Financial performance in a wider context

- 7.45 At the moment our FPM approach compares Network Rail's actual performance to the baselines included in our determination. However, we do not, in our annual reporting⁸⁰ compare the performance of the wider railway industry to the assumptions in the governments' statements of funds available (SOFAs).
- 7.46 We are considering whether it could be useful to make such comparisons, which might allow us to show how, at a high-level, Network Rail's expenditure decisions affect the rest of the industry.
- 7.47 If this is too complex to implement then in our annual reporting we could use the information in a more limited way to provide additional context.

Consultation questions

- Have we identified the key limitations and possible improvements for financial performance assessment in CP6?
- If the RAB roll forward incentive mechanism is retained, should we continue to apply the 25% adjustment to FPM?
- Have we identified the key principles that should apply to the assessment of Network Rail's financial performance?
- Should financial performance measures be treated as a regulated output in CP6?
- Should we introduce mechanisms to update efficiency assumptions during the control period?
- How could we develop our FPM reporting to reflect our move to route-level regulation?
- Would it be helpful to provide more context for Network Rail's financial performance in our annual reporting, by comparing the performance of the wider railway industry to the assumptions in the governments' SOFAs?
- Are there any other approaches we should consider so that we can effectively assess Network Rail's financial performance and hold it to account?

⁸⁰ Rail industry financial information: http://orr.gov.uk/data/assets/pdf_file/0015/21039/gb-rail-industry-financial-information-2014-15.pdf

8. Next steps and provisional PR18 timetable

Responding to this consultation

- 8.1 This consultation closes on 13 April 2017. Please submit your responses, in electronic form, to our PR18 inbox: pr18@orr.gsi.gov.uk. You may find it useful to use this pro forma: http://www.orr.gov.uk/data/assets/pdf_file/0005/23936/pr18-financial-framework-consultation-pro-forma-for-responses.pdf.
- 8.2 We plan to publish all responses to this consultation on our website. Accordingly, when sending documents to us, we would prefer that you send your correspondence to us in Microsoft Word format or Open Document Format. This allows us to apply web standards to content on our website. If you do email us a PDF document, where possible please:
- create it from an electronic word processed file rather than sending us a scanned copy of your response; and
 - ensure that the PDF's security method is set to "no security" in the document properties.
- 8.3 Should you wish any information that you provide, including personal data, to be treated as confidential, please be aware that this may be subject to publication, or release to other parties or to disclosure, in accordance with the access to information regimes. These regimes are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations (2004). Under the FOIA, there is a statutory code of practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.
- 8.4 In view of this, if you are seeking confidentiality for information you are providing, please explain why. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on ORR.
- 8.5 If you are seeking to make a response in confidence, we would also be grateful if you would annex any confidential information, or provide a non-confidential summary, so that we can publish the non-confidential aspects of your response.
- 8.6 In the section below, we set out the current key milestones relating to PR18 and the financial framework. A full and up-to-date version of the PR18 timetable is maintained on our website⁸¹.

⁸¹ <http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/how-we-regulate-network-rail/periodic-review-2018/timetable-and-process>

Current PR18 timetable

- February 2017 – ORR publishes formal notices to commence the periodic review (requesting HLOSs and SoFAs from the governments).
- February 2017 – ORR guidance to Network Rail on its strategic business plans.
- 13 April 2017 – Initial consultation on financial framework for PR18 closes.
- By May/June 2017 – The governments publish their HLOSs and SoFAs.
- July 2017 – ORR consultation on the proposed overall framework for regulating routes and NSO, including incentives and NSO outputs.
- September 2017 – Update publication on financial framework.
- December 2017 – Network Rail publishes its strategic business plans.
- June 2018 – ORR draft determination published for consultation.
- October 2018 – ORR final determination published.
- December 2018 – ORR issues review notices setting out changes to access contracts and the network licence.
Governments issue network grant documentation (if applicable).
- March 2019 – Network Rail delivery plans.
- April 2019 - CP6 commences.

Annex A – Associated documents

- (1) ORR - Periodic review 2013 (PR13) publications
<http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/how-we-regulate-network-rail/periodic-review-2013/pr13-publications>
- (2) ORR - Periodic review 2008 (PR08) documentation
<http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/how-we-regulate-network-rail/previous-control-period/periodic-review-2008/all-documents>
- (3) Shaw report: final report and recommendations (March 2016)
<https://www.gov.uk/government/publications/shaw-report-final-report-and-recommendations>
- (4) Department for Transport - Network Rail loan facility agreement (July 2014)
<https://www.gov.uk/government/publications/network-rail-loan-agreement>
- (5) Network Rail Infrastructure Ltd – Network Licence
<http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/network-licence/network-licence-conditions>
- (6) Network Rail Ltd - Annual Report and Accounts 2016
<http://www.networkrail.co.uk/annual-report/>
- (7) ORR CP5 Regulatory accounting guidelines
<http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/network-licence/regulatory-accounts>
- (8) Network Rail Ltd – Regulatory Accounts
<https://www.networkrail.co.uk/who-we-are/publications-resources/financial/>
- (9) ORR's Network Rail Monitor
<http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/monitoring-performance/network-rail-monitor>
- (10) ORR's 2015-16 Efficiency and finance assessment of Network Rail
<http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment>

Annex B – Glossary

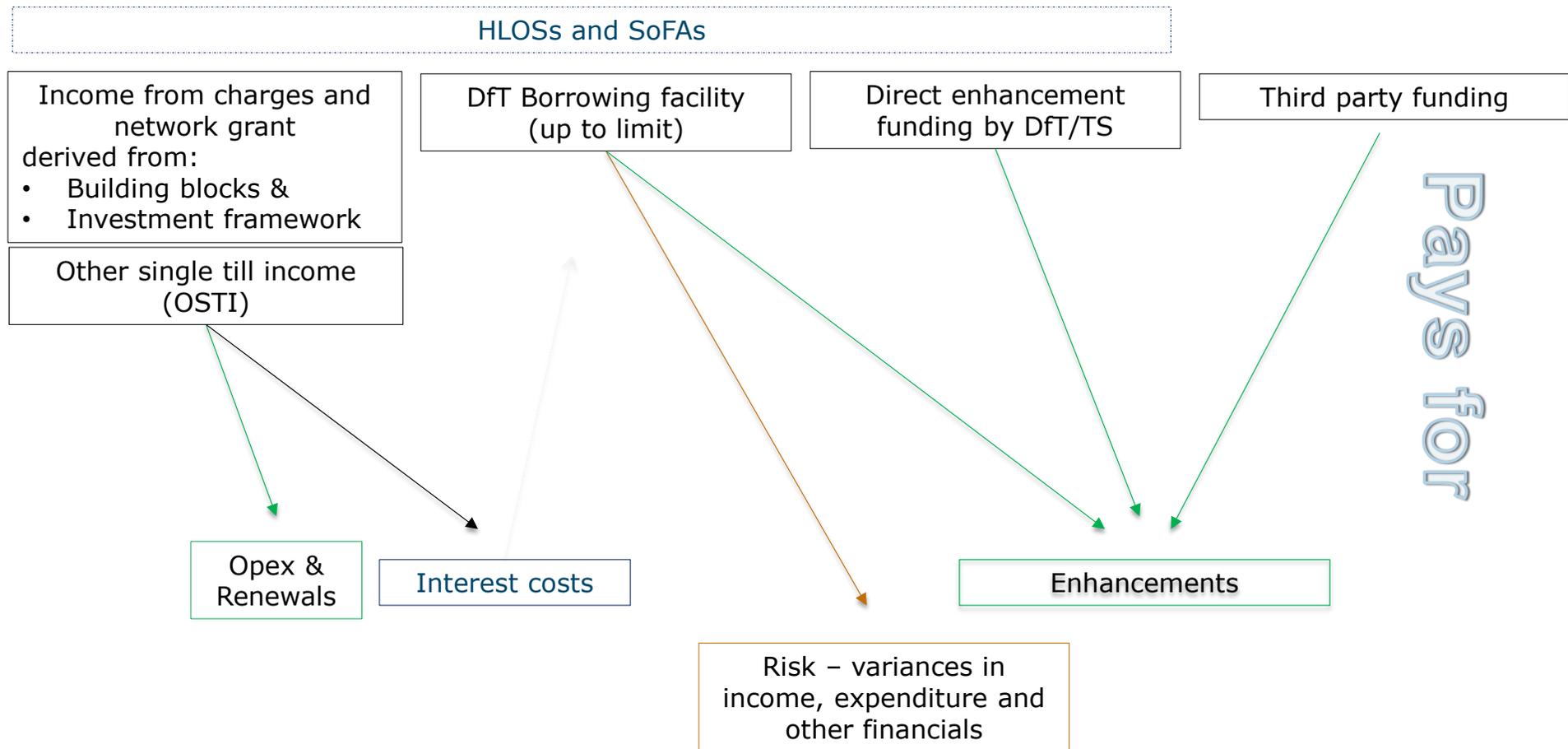
AEFA	ORR's Annual efficiency and finance assessment of Network Rail.
Building block approach	The approach to calculating the revenue requirement for Network Rail explained in chapter 2.
Capex	Capital expenditure.
CIRAS	Confidential incident reporting and analysis system.
Constant prices	Financial values all expressed in the price base of a specified year, even if those values are attributable to a range of years and which therefore may need to be inflated or deflated for other purposes.
CP5	The control period for Network Rail that runs from 1 April 2014 to 31 March 2019 under a settlement resulting from the PR13 process.
CP6	The control period for Network Rail that is expected to run from 1 April 2019 to 31 March 2024 under a settlement resulting from the PR18 process.
CPI	Consumer Price Index – a measure of changes in the prices of a basket of consumer goods and services purchased by households.
DfT	The Department for Transport.
ECAM	Enhancements cost adjustment mechanism.
Enhancement	<p>Construction or works that improve the capacity, capability or amenity of the rail network, including for the connection of new key infrastructure (such as Crossrail or HS2) to the existing rail network.</p> <p>Enhancements are classed as capital expenditure. Expenditure in respect of enhancements that are Network Rail debt funded is added to the RAB.</p>
Facility charge	A charge set to recover the costs of an enhancement and paid by the promoter of a scheme.
FNPO (route)	Freight and National Passenger Operators route (previously referred to as the virtual freight route).

FPM	Financial performance measure – the measure used by ORR to monitor Network Rail’s financial performance in CP5.
Gearing	A ratio showing the level of debt financing in a business often expressed as a percentage of total financing (from debt and equity).
HLOS	High level output specification by the Department for Transport and Transport Scotland setting out what they want to be achieved by the rail industry during the review period.
Independent reporter	Independent reporters provide us with professional advice on Network Rail’s activities. They are appointed by Network Rail with our approval.
Initial consultation	The initial consultation on PR18 published by ORR in May 2016.
Investment framework	<p>A mechanism under which investments by Network Rail can be approved during a control period. The associated costs may be:</p> <ul style="list-style-type: none"> - logged up for addition to the RAB; or - covered by grant payment(s) or charges. <p>The finance costs for the project will be remunerated, either from the time of the investment through a charge or at the next periodic review through the revenue requirement.</p>
Logging up	<p>An approach under which adjustments that need to be made to Network Rail’s revenue requirement or RAB, are deferred until our next periodic review. The opex memorandum account (see separate entry) is often used for this purpose.</p> <p>Where an adjustment is logged up in respect of money due to Network Rail, it will still need to be able to access funds in the current control period to cover the costs or liability concerned.</p>
Monte Carlo analysis	A probability simulation technique that can help to understand the effects of risks and uncertainty in financial forecasting.

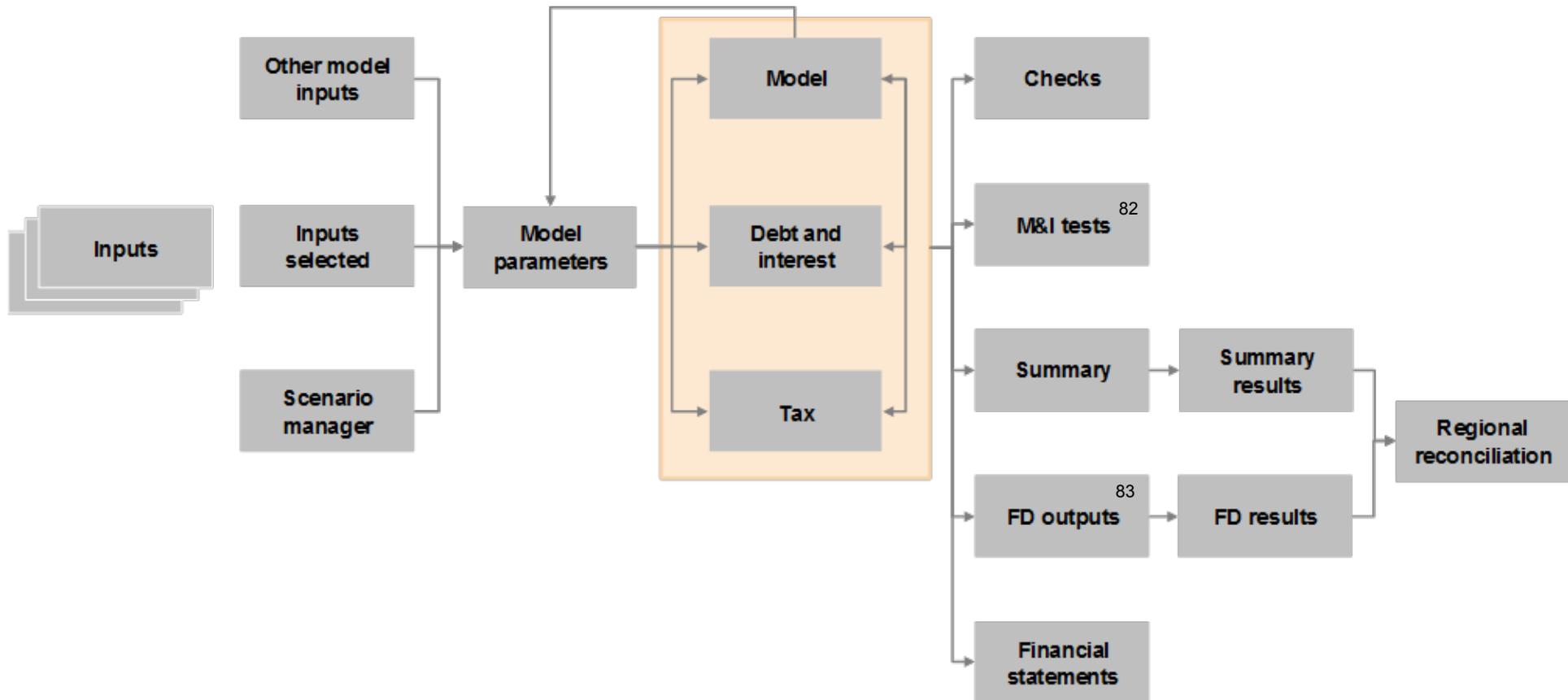
NSO	National system operator - refers to the parts of system operation that are carried out as a Network Rail central function as distinct from the parts that are carried out by routes.
Opex	Operating expenditure.
Opex Memorandum Account	An account, maintained by Network Rail during CP5, of adjustments expected to be applied by us in the determination of the revenue requirement for CP6.
ORR	Office of Rail and Road – In this document, we say ORR, “we” or “us” depending on the context.
OSTI	Other single till income.
PR13	ORR’s last periodic review of Network Rail which resulted in the determination for CP5.
PR18	ORR’s periodic review of Network Rail which will culminate in a final determination in October 2018.
RAB	Regulatory asset base. A regulatory value representing investment in Network Rail’s business.
RAGs	Regulatory accounting guidelines.
REBS	Route level efficiency benefit sharing (mechanism).
Renewal	The replacement, of an asset that has deteriorated to the extent that it can no longer be maintained, but where the replacement does not result in an enhancement. Renewals are classed as capital expenditure and expenditure is added to the RAB.
Route	Any of the eight geographical sub-divisions of the Network Rail business plus the Freight and National Passenger Operators (FNPO) route.
RPI	Retail Prices Index – a measure of changes in the prices of a representative sample of retail goods and services.
Single till	A regulatory approach where all of the costs and revenues of a regulated business are considered together, under a single economic settlement.
SBPs	Strategic business plans produced by Network Rail. Each route will also produce a business plan for consideration in

	the PR18 review.
Schedule 4	The schedule included in track access contracts between Network Rail and train operators that sets out the arrangements for compensation paid to operators when Network Rail takes temporary possession of the network (e.g. for engineering purposes).
Schedule 8	The schedule included in track access contracts between Network Rail and train operators that sets out the arrangements for compensating train operators for unplanned service disruption caused by Network Rail and other train operators.
SoFA	Statement of funds available – sets out the public funds that are, or are likely to be, available to secure delivery of the HLOSs.
TOC	Train operating company
WACC	<p>Weighted average cost of capital.</p> <p>We use a ‘real vanilla’ weighted average cost of capital. The term ‘vanilla’ indicates that an allowance for Network Rail’s corporation tax costs is separately included in the revenue requirement calculation, meaning that we only have to factor in:</p> <ul style="list-style-type: none"> (a) a pre-tax cost of debt – i.e. the percentage charge that could be levied by lenders; and (b) a post-tax cost of equity – i.e. the percentage return equity investors might expect to actually receive; <p>weighted according to our notional gearing assumption.</p> <p>The term ‘real’ indicates that this form of WACC gives a lower percentage than a nominal WACC would (when inflation is positive) because inflation isn’t included in the percentage value.</p>

Annex C – Summary of financing and funding flows for Network Rail in CP5



Annex D – Provisional schematic of the financial model for PR18



⁸² Market body and investment tests – may not be applicable for PR18

⁸³ Final determination

Annex E – Illustration of cash impact of cost of capital choices

The table below illustrates in a simple way the cash impact of the cost of capital choices on Network Rail and the UK and Scottish Governments by comparing the two choices that provide the highest and lowest revenue to Network Rail. It also shows the possible relationship between revenue levels and borrowing limits.

	Full WACC/ Rebate	Adjusted WACC	Notes
Network Rail			
Total revenue	1,000	700	Revenue is higher in the full WACC/rebate approach as the cost of capital is higher even though amortisation is lower as explained in chapter 3.
Total costs	600	700	Costs are higher in the adjusted WACC approach as nominal cash interest costs (i.e. including inflation) are funded not real interest costs.
Surplus	400	0	
Rebate to the governments	400	0	Simple assumption that all the surplus is paid back.
Cash at end of year	0	0	
Borrowing limit	100	400	The limits have not been accurately scaled but illustrate the point that the borrowing limits would need to be higher under an adjusted WACC approach, as there is no expected surplus to help deal with financial risk.
Total effect on UK government borrowing/debt	600	600	The 600 is an estimate.

Annex F – Notes on opening balances for PR18 financial modelling

Opening RAB balances for CP6

Indicative RAB totals during CP5 (and values for each route) are shown in Network Rail's regulatory accounts⁸⁴. They are updated from our forecast opening position at 1 April 2014 by:

- (a) adjusting, where appropriate, for actual expenditure in 2013-14;
- (b) adding actual renewals expenditure in each year;
- (c) adding actual enhancements expenditure in each year (including relevant expenditure approved under the investment framework – see glossary);
- (d) deducting amortisation allowances for each year; and
- (e) applying an RPI indexation factor each year.

Updated RAB balances will differ from the projected RAB balances shown in the PR13 determination because they will reflect actual expenditure levels and the effect of the 25% RAB roll forward adjustment. We will need to forecast the balance at 31 March 2019, because our determination will take place in October 2018.

Forecast corporation tax rates and opening tax pool balances

The following values will be required for the calculation of tax allowances in the PR18 financial model:

- (a) forecast corporation tax rates; and
- (b) opening tax pool balances for various writing down allowance pools and tax losses.

Our modelling will take into account:

- (b) the tax treatment of accounting profits; and
- (c) the use by Network Rail of available tax allowances and reliefs.

There is necessarily a degree of approximation in our modelling of tax allowances.

Debt balances

The following opening debt balances will be required for the PR18 financial modelling process:

- (a) the total for legacy nominal bond debt;

⁸⁴ See associated document 8 at Annex A.

- (b) the total for legacy RPI linked bond debt; and
- (c) the total for DfT loan facility debt.

Opex memorandum account

We will need an opex memorandum account value for each route that includes logged up amounts for:

- (a) error corrections (e.g. schedule 8 payment rate corrections)⁸⁵;
- (b) industry cost true-ups relating to:
 - the ORR licence fee and safety levy;
 - independent reporter costs; and
 - business (cumulo) rates; and
- (c) HS1 income⁸⁶ - to the extent different from OSTI forecasts.

We expect that Network Rail will propose an allocation of the CP5 opex memorandum account total to individual routes in its SBPs.

Forecasting requirement

The balances referred to above will include a forecast element relating to movements during 2018-19, because our determination is in October 2018.

⁸⁵ For example, ORR's published letter of 14 September 2015 refers:

http://orr.gov.uk/data/assets/pdf_file/0020/19019/error-in-cp5-schedule-8-passenger-train-operator-payment-rates-2015-09-14.pdf

⁸⁶ Network Rail (High Speed) Ltd, a subsidiary of Network Rail maintains and operates the high speed railway infrastructure between St Pancras and the Channel Tunnel under contract for HS1 Ltd.

Annex G – Background to the spend to save scheme

This note provides an example of issues in CP4 that led us to introduce a spend to save scheme in CP5.

An example of the problem with the CP4 RAB roll forward incentive was that, in simple terms, if Network Rail spent £100 on an investment in year three of the control period, £75 was added to the RAB (incentive rate of 25%), i.e. it bore £25 of the cost. If the investment generated savings of £15 by the end of the control period, then Network Rail was worse off by £10 ($£15 + £75 - £100 = -£10$) and so it was not incentivised to make the investment.

By changing the incentive on the RAB in CP5, so that £90 is added to the RAB (incentive rate of 10%), then the net benefit to Network Rail in CP5 (using the example above) is £5 ($£15 + £90 - £100 = £5$) and Network Rail has stronger incentives to make this investment, which should improve efficiency in the following control period.



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