

Competition in passenger rail services in Great Britain

A policy document

8 March 2016

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1. Summary

Introduction

- 1.1 Great Britain's railway sector has undergone a remarkable renaissance. In the immediate post-war period, there was a sharp decline in rail usage: the number of rail passenger journeys per year in Great Britain had fallen from about 1 billion in 1950 to barely over 600 million by the mid-1980s. Since the mid-1990s, there has been a steady rise. Over the past ten years, passenger numbers have increased by 60% and by 2014–2015, over 1.6 billion rail passenger journeys were being made annually in Great Britain, significantly outpacing the growth seen in other major EU countries.¹
- 1.2 Passenger satisfaction has also improved in recent years. The National Rail Passenger Survey, conducted by Transport Focus, shows that passenger satisfaction improved from an overall satisfaction rating of 72% in spring 2002 to a rating of 83% in autumn 2015.²
- 1.3 This suggests that the arrangements for passenger rail services in Great Britain in place since the mid-1990s have yielded broadly successful outcomes, in spite of well-known difficulties such as the collapse of Railtrack in 2001–2002, the failure of the private sector East Coast franchisee in 2009³ and the failure of the West Coast franchise letting competition in 2012.
- 1.4 The Competition and Market Authority (CMA)'s statutory duty is to promote competition for the benefit of consumers.⁴ In addition, the government's current 'strategic steer' to the CMA, published in December 2015, states that CMA 'should use its knowledge to actively challenge central and local government and encourage the use of effective competition to improve delivery and to promote more diversity and choice for UK consumers'.⁵
- 1.5 In January 2015 we launched a policy project to consider the role of competition in passenger rail services, and the extent to which the broad success of passenger rail services since the mid-1990s might be enhanced – to the benefit of passengers, the industry and the country as a whole – by introducing a greater degree of competition.

¹ Department for Transport, Rail Executive, [Rail trends factsheet, Great Britain: 2014/15](#).

² Office of Rail Regulation (April 2014), *Rail Passenger Satisfaction Benchmarking: Report on ONS Opinions and Lifestyle Survey*, paragraph 2.1 and Transport Focus (Autumn 2015), *National Rail Passenger Survey*.

³ The failure of the East Coast franchisee resulted in a state-owned operator of last resort running the service for the subsequent five years.

⁴ Enterprise and Regulatory Reform Act 2013, section 25(3).

⁵ Department for Business, Innovation and Skills (December 2015), [Government's response to the consultation on the strategic steer for the Competition and Markets Authority](#).

- 1.6 Following the launch of the project, we engaged in discussion with a wide range of interested parties and industry experts. We liaised closely with the Office of Rail and Road (ORR). Jointly with ORR we hosted a ‘round table’ of franchised train operating companies (franchised TOCs) and a separate round table of open access operators (OAOs) and applicants. We also individually met representatives of OAOs, franchised TOCs, Network Rail, the rail freight industry, the consumer representatives Transport Focus and Which?, as well as academics and other experts specialising in the sector. We engaged extensively with the Rail Group at the Department for Transport (DfT) and with officials at Transport Scotland, the Department for Business, Innovation & Skills, HM Treasury and with international rail regulators.
- 1.7 In July 2015, we published a discussion document for consultation.⁶ The discussion document suggested that, while the existing system of competition ‘for’ the market was working well, a material increase in on-rail competition would result in benefits for passengers and improve efficiency in the sector.
- 1.8 We proposed four options for increasing on-rail competition in passenger rail services, which we considered most likely to deliver benefits on the three main intercity routes in Great Britain – namely the East and West Coast main lines and the Great Western route. To protect against risk for existing and imminent franchises, we stated that we did not envisage any of these options coming into effect until after the end of the current rail franchise terms (or, where new franchise tenders are imminent, after the terms of those franchises about to be tendered), which would mean 2023 at the earliest.
- 1.9 We invited comments on the four options as well as on potential barriers to greater on-rail competition including funding the network and operational impact.

Consultation on the discussion document

- 1.10 During the consultation period, we engaged with a wide range of stakeholders through bilateral meetings and held an industry-wide ‘round table’. We also presented our work at a number of industry forums and conferences.
- 1.11 Over 50 consultation responses were received including from the DfT, ORR, the Rail Delivery Group, Network Rail, Transport Scotland, franchised TOCs and their owner groups, OAOs, Transport Focus, Which?, regional transport

⁶ CMA (17 July 2015), [*Competition in passenger rail services in Great Britain: A discussion document for consultation*](#).

partnerships and industry experts. Individual responses are published alongside this policy document.

Independent impact assessment of the four options for greater on-rail competition

- 1.12 In order to inform our further assessment of the four options for greater on-rail competition set out in our discussion document, ORR commissioned Arup and Oxera to undertake an impact assessment of the options.⁷
- 1.13 The impact assessment focused on three main areas:
- an assessment of the legal and operational feasibility of each option;
 - the impact of each option on market outcomes, including the benefits and costs for passengers, social objectives, wider benefits and externalities, industry costs and efficiency; and
 - the impact of each option on government funding of the rail network.
- 1.14 ORR published the impact assessment on 4 January 2016.⁸ The CMA invited any further consultation responses in relation to the four options for greater on-rail competition in light of this impact assessment. Twelve responses were received, including from the DfT, Rail Delivery Group, Network Rail, Transport Scotland, franchised TOCs and OAOs. The responses are published alongside this policy document.

The rationale for the project

- 1.15 This project is intended as a contribution to public policy debate by an independent competition authority that is not a participant in the rail industry. We examined whether it would be desirable and feasible to increase the degree of competition ‘in’ the market for passenger rail services in Great Britain – that is, competition between operators of passenger rail services, also called ‘on-rail’ competition.
- 1.16 Downward pressure on fares, upward pressure on service quality and innovation and greater efficiency are – in theory at least – benefits delivered by competitive markets. As a competition authority, we have explored claims

⁷ Arup is an engineering and transport consultancy and Oxera is an economic consultancy with expertise in both competition and transport.

⁸ ORR (31 December 2015), [Impact assessment of the CMA's options for increasing on-rail competition: Final Report](#).

made in recent years⁹ (by regulators, think tanks and commentators) that, in Great Britain's passenger rail sector, these objectives could be better achieved through greater competition between passenger train operators.

1.17 The following points are important context for our work:

- In Great Britain we have an established industry structure that enables competition in passenger train operations, with full separation between train operators at the 'downstream' retail level and a wholly independent 'upstream' infrastructure manager, Network Rail.
- The franchising process, post-Brown Review¹⁰ (ie after 2012), is on a firmer footing than before, evidenced by the successful competition to award the East Coast main line franchise in 2014. At the same time, pressure is building on the system as increasingly ambitious open access applications are submitted and ORR must consider whether to accept them in circumstances where (unlike the options proposed in this report) there is no obligation on new entrants to pay fixed track access charges or otherwise compensate for any resultant shortfall in government revenues.¹¹
- Capacity to accommodate new entry may become available in the future through a combination of incremental enhancements of the existing network but, more significantly, through planned major new build (eg for High Speed 2 (HS2)) and technologies allowing more efficient use of the network (such as on-board digital signalling systems).
- The government maintains a central role in the market in order to ensure that the network delivers wider social, economic and environmental benefits. The government also has a key role as a funder of the industry – particularly in relation to socially valuable services and longer-term

⁹ See, for example: Martin Cave (CERRE) and Janet Wright (Indepen Consulting) (29 May 2010), *Options for increasing competition in the Great Britain rail market: on-rail competition on the passenger rail market and contestability in rail infrastructure investment – Final report to the Office of Rail Regulation*; Office of Rail Regulation (2011), *Consultation on the potential for increased on-rail competition*; Tony Lodge (March 2013), *Rail's second chance: Putting competition back on track*, Centre for Policy Studies; articles by Allister Heath, *Daily Telegraph*, 20 August 2014 and by Tony Lodge, *Daily Telegraph*, 28 August 2014; John Nelson (August 2015), *It's time to move beyond open access*, Passenger Transport; Nick Brooks (November 2015), 'Open access can replace long-distance franchises', *Railway Gazette International*.

¹⁰ Following the problems with the re-let of the West Coast franchise, the Brown Review examined the wider rail franchising programme, looking in detail at whether changes were needed to the way risk was assessed and to the bidding and evaluation process.

¹¹ The framework of track access charges is set by ORR, and if they are increased in a (five-yearly) periodic review, the government as franchising authority indemnifies the franchisee for much of the increase for the remainder of the franchise term.

network enhancements that might not otherwise be provided by the market.

- An increasing proportion of funding of the industry (now 68%) is, however, made by passengers through fares and other charges rather than by the government. This can be seen as strengthening the case for passengers to have greater choice through on-rail competition – particularly on commercial intercity services.
- ORR is reviewing the structure of track access charges, which is an important step in creating a level playing field between franchised TOCs and OAOs, addressing some of the distortions arising in the current funding structure which are impediments to increased competition.
- The trend in other major European countries, and the ambition of the European Commission, is for greater on-rail competition. There are examples of on-rail competition on key high-speed routes in countries including Austria, Czech Republic, Germany, Italy and Sweden. New train operators are continuing to enter a number of these markets and significant new on-rail competition is proposed for other key high-speed routes, including between Paris and Brussels, Stuttgart and Berlin, and between Madrid and Valencia.

Our goals

- 1.18 In undertaking this policy project, we engaged with the industry and passenger and consumer groups to identify possible ways to improve the railways in Great Britain, including by:
- securing better value for money – for passengers by way of downward pressure on fares, and for the wider economy through efficiencies that lead to lower operating costs of passenger train services;
 - enhancing service quality and encouraging innovation; and
 - unlocking efficiencies at the ‘upstream’ level of infrastructure operations/management, for example by giving Network Rail greater incentives to use capacity on the network more efficiently and to control costs.
- 1.19 In our view, any recommendations to adapt the current industry framework for the future must be capable of being implemented:
- without disrupting the current and forthcoming rounds of franchise awards;

- while maintaining the provision of socially valuable passenger rail services which may not be commercially viable;
- without jeopardising current and future investment in the network; and
- without any adverse operational impact.

Industry background: competition in the rail sector

1.20 The main features of the passenger rail sector in Great Britain, as currently configured, are as follows:

- Train services are provided to passengers by train operators – the vast majority of these passenger train operating services (representing some 99% of passenger miles) being provided under regional franchises awarded by the government for a specified period (typically around seven to 15 years), with a competitive bidding process for the award of each franchise.
- Franchise contract awards and major network enhancements are managed by the Rail Group at the DfT. Transport Scotland is responsible for managing franchises in Scotland and the Welsh government will take responsibility for the next franchise in Wales. There are plans for further devolution of regional franchises.
- The national rail infrastructure (the track, bridges, depots and major rail termini) is provided by an infrastructure operator, Network Rail, which is separate from the train operators. The train operators pay ‘access charges’ for the track and other infrastructure which are regulated by ORR, the independent economic regulator of rail and road.
- Rolling stock is acquired by the train operators, usually by way of lease, from private sector competing rolling stock companies, three of which (the ROSCOs) inherited the rolling stock of the pre-privatisation British Rail.

1.21 The competitive tendering of franchises is a form of competition ‘for’ the market in passenger rail services. There is also a small degree of competition ‘in’ the market – ie competition **between** train operators, also called ‘on-rail’ competition. This occurs in three ways:

- Overlapping franchises: where two or more franchised TOCs operate on the same route, and therefore compete against each other for passengers on that route.

- Parallel franchises: where two or more franchised TOCs operate services between the same city pairs, although on different routes, and so compete for passengers travelling between those cities.¹²
 - OAOs: these are operators of passenger services authorised by ORR to have access to the network on certain routes for a specified time.
- 1.22 The extent of overlapping and parallel franchises has fallen in recent years, following a policy decision in 2001 by the then franchising authority, the Strategic Rail Authority, to reduce the number of franchises – a trend that has continued in recent years.
- 1.23 There are currently just two OAOs, Grand Central and First Hull Trains, both of which are owned by larger companies with franchise operations in Great Britain.¹³ These operate a small number of services on specified routes in competition to the franchisee on the East Coast main line. Together they represent less than 1% of passenger miles. In the past, there had been other OAOs, and applications have recently been made to ORR for more substantial passenger services on intercity routes.¹⁴
- 1.24 The scale of ‘open access’ operations is currently limited by ORR’s assessment criteria. There is concern that competition from OAOs might pose a risk to the revenue streams of franchisees, which could deter potential franchisees from bidding for franchises or could induce them to submit ‘lower’ bids, reducing the revenues available to the government for funding the network and for subsidising public service operations.
- 1.25 ORR needs to achieve an appropriate balance between its 24 statutory duties, which include not only an obligation to promote competition in the provision of railway services for the benefit of users, but also duties to act so as not to render it unduly difficult for network licence holders (ie Network Rail) to finance regulated activities and to have regard to the funds available to the government for its functions in relation to railways and railway services.¹⁵
- 1.26 In practical terms, ORR balances its duties through the application of a ‘not primarily abstractive’ (NPA) test, under which ORR would not expect to

¹² An example is travel between London and Birmingham, which is served by two franchised TOCs on the West Coast main line and on a different route by Chiltern Railways.

¹³ Grand Central is owned by Arriva UK, which is itself a subsidiary of the German national rail operator Deutsche Bahn (which also operates certain franchises in Great Britain). First Hull Trains is a subsidiary of FirstGroup which also has franchise operations in Great Britain. ORR is currently considering applications by Alliance Rail and FirstGroup to run open access services in competition with the incumbent franchised TOC on the East Coast main line.

¹⁴ In August 2015, Alliance Rail was granted access rights to operate six daily return services between London and Blackpool from 2018.

¹⁵ Railways Act 1993, section 4.

approve open access applications unless they generate at least 30 pence of new revenue for every £1 abstracted from existing operators.

- 1.27 Train operators often face a further degree of competitive constraint from other modes of transport, depending on the particular routes they serve. For example, on routes from London to Scotland, train operators face competition from airlines. On many long-distance flows there is competition from coach transport and, on local flows, operators may face competition from local bus services.
- 1.28 In contrast to passenger rail services, which are the focus of this report, rail freight operations are entirely 'open access', with a number of private sector operators competing freely on the network.

The potential benefits of greater on-rail competition

- 1.29 We have examined whether incremental measures to improve the process of competition 'for' the market by way of the competitive award of franchises are the best way to improve services for the passenger – or whether more significant improvements could be achieved on key intercity routes by introducing a greater degree of on-rail competition.

Potential passenger benefits

- 1.30 Since on-rail competition does not currently exist on a significant scale in Great Britain, we cannot draw definitive conclusions on the magnitude of the benefits that greater on-rail competition would deliver in the future. Nonetheless, we have engaged extensively with industry experts and examined detailed evidence from the current examples of on-rail competition in Great Britain and, by way of analogy, from other markets including on-rail competition in other European countries and other markets where there is in-market competition, including Great Britain rail freight, the experience of EU airline deregulation and the introduction of new competition between London's airports.
- 1.31 The following key points emerge from existing on-rail competition in Great Britain and Europe:
 - On-rail competition in Great Britain from open access shows that OAOs, notwithstanding their current limited role:

- compete with franchised TOCs on price, frequently offering lower dedicated fares both for ‘walk-up’ and advance tickets;¹⁶
 - have developed improvements to service levels and introduced innovations, including selling a wider range of tickets on-board, free wi-fi and new information systems – which is reflected in high passenger satisfaction compared to the majority of franchised TOCs; and
 - appear to have generated some growth in the market for rail travel and delivered a number of wider economic benefits.
- On-rail competition in Great Britain from overlapping and parallel franchises shows that:
 - there are examples of on-rail competition between franchised TOCs leading to price competition (within the constraints of the ticketing regulation framework), with competing franchised TOCs offering lower fares than the ‘lead operator’ on many routes across a range of season, ‘walk up’ and advance tickets – although sometimes for a slower service; and
 - Franchised TOCs are generally restricted to competing on price because of franchise specifications. However, where franchise agreements are less specified by government (such as the Chiltern Railways franchise), on-rail competition between franchised TOCs also appears to have led to improved service quality and innovation.
 - On-rail competition in other European countries, including Austria, the Czech Republic, Germany, Italy and Sweden shows that, while there are some differences with the market structure in Great Britain:
 - on-rail competition has delivered benefits for passengers, including lower fares, increased service frequency and customer service innovations;
 - the introduction of on-rail competition has taken place on some of the most geographically important routes in each country, indicating the

¹⁶ Interavailable fares are set by the lead operator for a journey, which is normally the operator with the greatest commercial interest in that particular journey. Other operators are required to honour these interavailable fares once they have been set by the lead operator, but other operators or groups of operators can set ‘dedicated’ fares for travel only on their own trains, generally at a lower price than the interavailable fare. The lead operator can also set dedicated fares in certain circumstances. For example, it can set discounted advance fares for travel only on its own services.

trust placed in the ability of on-rail competition to deliver benefits that outweigh the risks;

- The trend towards introducing greater on-rail competition is continuing in Europe, with on-rail competition set to be introduced in countries including France, Belgium, Finland and Spain;

1.32 The following conclusions may be drawn from our assessment of the introduction of competition in other transport markets:

- In rail freight in Great Britain, competition 'in' the market developed strongly after privatisation, with new entrants successfully winning market share from incumbents. Benefits included improved staff productivity and investment which enables prices to be kept down and service standards to improve. While there are differences between the structure of the freight and passenger rail sectors, the case study illustrates how competition 'in' the market can realise benefits in the rail sector.
- The experience of the airline industry in Europe illustrates that a greater degree of competition 'in' the market can lead to a reduction in costs and lower fares, while also leading to improved services, the development of innovative business models and growth in the market overall.
- The example of competition between London's Gatwick and Heathrow airports demonstrates that innovation, service quality improvements and lower prices may materialise over a number of years when dynamic competition is increased.
- In local bus services, sustained head-to-head competition where it exists has delivered benefits to customers, as a result of bus operators competing on the basis of service frequencies, in addition to fares and service quality. The process of competition has sometimes resulted in periods of intense short-lived rivalry, leading to the exit of one operator, and discriminatory behaviour by incumbents against new entrants. However, we do not consider that the issues in the local bus sector are directly relevant to the long-distance intercity rail sector.

1.33 We recognise that it is not possible to test comprehensively the effects of introducing a significantly increased degree of on-rail competition in passenger train services. There are, inevitably, material differences between different transport sectors, and between different operators. However, making due allowances for differences between the structure of the rail sector in Great Britain and other countries, and between transport sectors, we consider that these examples illustrate the significant benefits that could be obtained from

greater on-rail competition in addition to the benefits delivered by competition 'for' the market.

Potential efficiency gains

1.34 We considered the potential for greater on-rail competition to deliver efficiency gains at both the retail level, where passenger train operators compete, and at the 'upstream' level of infrastructure operations/management.

1.35 At the retail level, we found that new entrants have achieved operational efficiencies in terms of (a) greater operational flexibility, (b) greater use of outsourcing, (c) efficiencies in ticketing, and (d) lower staff costs (often combined with higher employee engagement and satisfaction). This is supported by a range of empirical evidence:

- ORR found in 2011 that OAOs have costs which are 10 to 30% lower than franchised TOCs' costs for a given density of operation.¹⁷
- Empirical work we commissioned from Leeds University's Institute of Transport Studies found that OAOs' input prices were 29% lower than those of franchised TOCs operating intercity routes.¹⁸ Despite some uncertainty regarding the precise magnitude of the efficiencies, we note the following:
 - Using an econometric model that makes allowances for differences between OAOs and franchised TOCs, the study suggests that efficiency advantages offered by OAOs, which are able to adopt a more efficient business model than franchised TOCs, more than offset any cost disadvantages from the limited scale and density of their current operations.¹⁹
 - Expanding the role of open access has the potential to deliver greater efficiencies as operators would benefit from greater economies of scale and density, although the overall cost impact depends on the extent to which the incumbent loses economies of scale and density, and is route-specific.

¹⁷ See ORR (October 2011), [The potential for increased on-rail competition – a consultation document](#).

¹⁸ Rasmussen, T, Wheat, P and Smith, A (2015), [Do open access train operators exhibit inherent cost benefits compared to their franchised counterparts?](#)

¹⁹ Differences allowed for include access charges, density, scale, train length, station operations, average passenger loads and input prices.

- The incentives that dynamic competition would create for operators to reduce costs may generate further efficiencies over and above those reflected in the model.

1.36 At the ‘upstream’ level of infrastructure operations/management, we found that greater on-rail competition may create stronger incentives for franchised TOCs and OAOs to put pressure on Network Rail to use capacity more efficiently (to accommodate new entry and to control costs), with scope for reformed track access charges to further strengthen these incentives. For example:

- London Midland, Virgin West Coast and Chiltern Railways compete on the London to Birmingham route. Competition from other operators was a driver in London Midland undertaking a project to find new capacity to operate additional services. London Midland proposed a method for increasing capacity on the West Coast main line and worked closely with Network Rail to gain approval for its proposal. This led to a material increase in passenger seats both into and out of London Euston.²⁰
- When Grand Central launched its services from London to York, the additional capacity required by the incumbent franchised TOC to run services from London to York was identified by Network Rail partly as a result of the capacity questions raised by Grand Central in its open access application.

1.37 Evidence from other sectors also suggests that competition at the retail level can incentivise efficiency at the upstream level:

- As noted by the DfT in 2012, in the rail freight sector, the competitive environment has forced freight operators to find significant efficiencies over recent years, and it has encouraged Network Rail to do the same.²¹
- The air transport regulator, the Civil Aviation Authority, noted the positive impact that liberalisation of airline services had on the ‘upstream’ management of airports.
- In the Scottish water sector, the introduction of downstream retail competition in the past decade substantially increased the efficiency of the upstream wholesale water monopolist.

²⁰ Credo (March 2015), *Incentivising better capacity management on GB rail: Case study evidence from other industries*, ORR/CT/14-63.

²¹ DfT (March 2012), *Reforming our Railways: Putting the Customer First*, Cm 8313, p50.

- 1.38 In summary, there is evidence to suggest that greater on-rail competition has the potential to deliver benefits for passengers in addition to the benefits delivered by competition ‘for’ the market. We also found evidence to suggest that greater on-rail competition may have the potential to deliver efficiency gains at both the retail level and at the ‘upstream’ level of infrastructure operations/management.

The feasibility of greater on-rail competition: obstacles and opportunities

- 1.39 We considered the potential technical, economic and policy obstacles to greater competition in the passenger rail market in Great Britain and possible ways to overcome these obstacles, which fall into three broad categories:

- access to infrastructure, network capacity and rolling stock;
- funding the network and loss-making services, and the financial sustainability of operators; and
- operational issues and greater complexity arising from an increase in the number of operators.

We consider these potential obstacles in turn.

Access to infrastructure, network capacity and rolling stock

Access to infrastructure

- 1.40 In Great Britain, there is vertical separation between passenger train service operations and network infrastructure. Network Rail is not permitted to discriminate between train operators and has to consider all applications for access rights in an even-handed way. Therefore, the market fundamentals for on-rail competition are already in place in Great Britain.

Network capacity

- 1.41 On many parts of the rail network in Great Britain, there is very limited spare capacity available, particularly at peak times. In turn, this may limit the opportunity for new entrants to run services in competition with existing franchised TOCs.
- 1.42 In the shorter term, a number of capacity enhancements are planned, including electrification projects and station upgrades. However, while these projects may generate some increase in network capacity, we did not find that

these enhancements would generate new capacity on a scale that would facilitate significant new entry on the three main intercity routes.

- 1.43 In the longer term, the move from conventional signalling to on-board digital signalling as part of the European Rail Traffic Management System (ERTMS) is expected to allow for more trains to run safely over the same length of track. The construction of HS2, which will see high-speed services run between London Euston and Birmingham (and beyond) from 2026, will represent a step change in capacity between London and the North of England.
- 1.44 Although it is too soon to know how much capacity on-board signalling and HS2 are likely to create, they will clearly add some additional network capacity, helping to create additional opportunities for on-rail competition. ORR also told us that a reformed open access system would, alongside franchising, support the delivery of the government's objective of making the best use of step changes in capacity, such as HS2 and on-board signalling, by responding to changing circumstances and identifying opportunities for new services.
- 1.45 More generally, we note that new network capacity is not a prerequisite for greater on-rail competition in the future. First, greater on-rail competition could be achieved by reallocating existing capacity between operators at the time of franchise design. Second, even where there is no spare track capacity (ie in terms of train paths), there is still likely to be capacity available on trains – particularly in the off-peak period. Third, even where certain train services are at full capacity, strategies including product differentiation and yield management may enable train operators to compete for particular categories of passenger and to manage demand across their services.
- 1.46 Moreover, as discussed in paragraph 1.36, we note that on-rail competition has the potential to incentivise the identification of new capacity.

Access to rolling stock

- 1.47 We considered whether the availability and cost of rolling stock is a barrier to greater on-rail competition. We found that, while there is currently scarcity in the availability of rolling stock, this scarcity is likely to become less problematic in the coming years.
- 1.48 As part of the InterCity Express Programme, new rolling stock will enter service on the Great Western main line from 2017 and on the East Coast main line from 2018, releasing the trains currently utilised on these lines. If OAOs have an opportunity to access this rolling stock, this could improve

competitive conditions for re-leased (ie used) rolling stock, supplementing OAOs' ability to procure rolling stock.

- 1.49 Furthermore, where operators have sufficiently long access rights, there is evidence to suggest that obtaining rolling stock has not represented a barrier to entry. In Great Britain, we note that Alliance Rail is procuring new Pendolino units to operate its open access services from London to Blackpool, which will commence in 2018 under the Great North Western Railway brand. Grand Central and First Hull Trains have also procured new trains. In the international examples of on-rail competition that we have considered, OAOs have purchased new rolling stock and have not cited rolling stock procurement as a barrier to entry.
- 1.50 The impact assessment commissioned by ORR noted that the rolling stock market seemed to be reverting to operator – and ROSCO – led procurement, which is more compatible with a multi-operator railway.

Funding the network and loss-making services, and the financial sustainability of operators

- 1.51 Any consideration of competition in Great Britain's passenger rail services must take into account the complex mix of funding. As in other countries, rail services require a significant degree of government funding, reflecting:
- (a) the policy objective of providing socially valuable passenger rail services even if they are not commercially profitable (including public service obligation (PSO) operations²²); and
 - (b) the need for very significant ongoing investment in the rail network infrastructure, including future construction.
- 1.52 In 2013–2014, the industry's total income of £13.3 billion was broken down as follows:
- Passengers contributed £9.0 billion through fares and other charges.
 - The government contributed £3.8 billion through:

²² Article 2(e) of EU Regulation 1370/2007 defines a PSO as 'a requirement defined or determined by a competent authority in order to ensure public passenger transport services in the general interest that an operator, if it were considering its own commercial interests, would not assume or would not assume to the same extent or under the same conditions without reward'.

- £3.7 billion to Network Rail (significantly more than Network Rail received in track access charges) – by way of direct subsidy or ‘network grant’; and
 - £0.1 billion net contribution to franchised TOCs (franchised TOCs paid £1.9 billion in premiums to government, while franchised TOCs in receipt of subsidy received £2.0 billion).
- A further £0.5 billion of income came from other sources.²³

Impact of on-rail competition on government funds

- 1.53 The share of industry costs that is not met through passenger fares is financed through a mixture of direct government funding of infrastructure and cross-subsidisation between franchised TOCs through the franchise bidding process. An increased level of competition in the market is likely to reduce franchised TOCs’ overall revenues, because (a) consumers are partly transferred from the franchised operator to the competitor(s) and (b) fares decrease due to competition.
- 1.54 We recognise that a significant reduction in premium payments could threaten:
- (a) the funding of network infrastructure investment (ie new entrants ‘free-riding’ on incumbents’ investments – which could, in turn, undermine the business case for the government to make new investments²⁴); and
 - (b) the funding of services deemed socially valuable even if uncommercial (ie loss-making or of limited profitability), such as PSO operations (ie ‘cream-skimming’).
- 1.55 This risk is currently tackled by mapping the franchise area to limit franchise overlaps and competition and moderating open access competition, by allowing entry only if it is not expected to be primarily abstractive of revenue from the franchised TOC (ie the NPA test).
- 1.56 However, we found that the impact on government funding from greater on-rail competition may be mitigated by:
- on-rail competition increasing overall passenger volumes by lowering fares, improving service quality and targeting unmet demand. In this

²³ Income from other sources included property income, station retail and freight charges.

²⁴ The DfT told us that franchise premiums were a critical element of the business case for major investments such as the InterCity Express programme for new rolling stock.

regard, we note evidence that passenger numbers of East Coast main line routes served by OAOs grew faster than at stations with no competition. Moreover, in most of the European case studies considered, on-rail competition led to significant demand growth; and

- efficiencies from greater on-rail competition having the potential to partly offset any reduction in government funds.

1.57 We are conscious of the importance of government funds in financing network infrastructure and socially valuable services and therefore propose mechanisms in our options for greater on-rail competition for addressing the impact on government funds (eg through a levy on OAOs). However, we believe that it is important for policymakers to balance a potential increase in passenger benefits from greater on-rail competition with a potential reduction in government funds.²⁵

1.58 We note that the threat to government funds from on-rail competition is a feature of the current framework under which OAOs pay lower track access charges than franchised TOCs, with no mechanism in place to enable the government to recover reductions in franchise premiums. Moreover, the uncertainty created by current and future open access applications may have a significant impact on franchise premiums.²⁶

Impact of on-rail competition on investment

1.59 We considered the potential impact of greater on-rail competition on investment. We found that on-rail competition has the potential to enhance business cases for investment by generating growth in passenger numbers, developing innovations in the design of investment projects and incentivising private sector investment in the network. However, we note that it is important to ensure that safeguards are in place to avoid undermining public investment cases, including investment cases for schemes such as HS2 and rail electrification schemes.

Impact of on-rail competition on operators' finances

1.60 We considered the risk that on-rail competition, in driving down fares, would threaten the financial viability and sustainability of market participants. We

²⁵ For example, Which? told us that the goal of the regulatory system for rail should be to deliver the quality of service that consumers are willing to pay for at the lowest possible combined cost, whether that cost is funded by passengers or taxpayers.

²⁶ The DfT cited the 2014 competition for the East Coast franchise in which bidders were indemnified against 80% of any revenue loss from failing to obtain sufficient train paths on the network to deliver the franchisee's key specified services, eg as a result of new open access services commencing during the period of the franchise.

found that a number of factors are likely to mitigate this concern. In particular, product differentiation between operators and capacity constraints on the network may limit the extent to which prices would fall. Cost-reflective track access charges paid by incumbents and new entrants would also be likely to act as a 'price floor'.

Operational issues

- 1.61 Greater on-rail competition would be likely to lead to a higher number of train operators (either franchised TOCs or OAOs) using the network. It was put to us that this could create a number of operational issues, including:
- inefficient use of capacity as a result of more operators;
 - reduced interconnectivity;
 - an adverse impact on performance and greater difficulty in recovery from disruption; and
 - conflicting slot requests and timetabling issues, which may also affect strategically important changes to facilitate the provision of new services, such as HS2.
- 1.62 We also note that an increased number of competing operators could lead to greater complexity in the system, in particular in relation to ticketing.
- 1.63 We discussed operational issues with a wide range of stakeholders, including DfT, ORR, Network Rail, franchised TOCs and OAOs. Operational issues were also considered in the impact assessment commissioned by ORR.
- 1.64 **Efficient use of capacity:** Increasing the number of operators on a route may affect the total capacity available, although the effect will depend on the journey times and stopping patterns of the operators and the range of rolling stock used. There are already multiple operators on the network and there is a trade-off between the mix of services delivered (eg intercity, regional, 'metro' services and freight) and capacity maximisation. As noted above, on-rail competition has the potential to incentivise the more efficient identification and allocation of capacity and to help to provide the correct signals and information for deciding on trade-offs between capacity maximisation and performance as compared to a centralised process.
- 1.65 **Interconnectivity:** In the current framework, there are many thousands of possible connections that passengers can make and the degree of interconnectivity that can be achieved is limited. However, interconnectivity is an important characteristic for passengers – particularly on regional routes – and

it is important that the ability to timetable services to ensure connections are maintained or enhanced is retained. We also note that where operators are competing more intensively for passengers, they may have greater commercial incentives to attract passengers from feeder services by ensuring good connections (and to offer onward connections to their own passengers).

- 1.66 **Performance:** We considered whether the complexity of coordinating the operations of multiple operators may adversely affect punctuality. We note that empirical evidence on the impact of multiple operators on punctuality is mixed and is dependent on the route and types of operators concerned. There is a degree of trade-off between service frequency and performance.²⁷
- 1.67 **Recovery from disruption:** The system is already designed to work with multiple operators. Network Rail actively manages the response to disruption and current rules provide arrangements for ticket acceptance across operators once a certain disruption threshold is reached. Part H of the Network Code²⁸ includes a requirement for operators to comply with the Railway Operational Code, which obliges operators to work together to recover from disruption, having regard to the needs of passengers and freight customers. Operators also have a range of obligations to provide passenger information during disruption and ORR is able to deal with inadequate responses to disruption through operators' licences. Network Rail also told us that greater on-rail competition could help performance and service recovery as OAOs are strongly incentivised to perform well in order to attract new customers.
- 1.68 **Slot allocation and timetabling:** This would become more complex, but evidence from other sectors and from a number of European countries where on-rail competition takes place suggests that it should be feasible. Network Rail already manages conflicting slot requests using the criteria set out in Part D of the Network Code. ORR is currently undertaking work with a view to improving Network Rail's performance as a system operator²⁹ and we note that reforms to access rights have increased flexibility in slot allocation and timetabling. Moreover, there is potential to adopt alternative slot allocation mechanisms in the future should this deliver benefits.
- 1.69 **Ticketing complexity:** Greater on-rail competition would give operators the opportunity to match their ticket offering more closely to passenger preferences, increasing the choice of tickets available to passengers. In the current

²⁷ It was also put to us that the 'Schedule 8' indemnity included in track access agreements incentivises operators to plan their services in a way that will not disrupt those of other operators.

²⁸ The Network Code is a common set of rules and industry procedures that apply to all parties with a contractual right of access to the track owned and operated by Network Rail.

²⁹ System operation covers how Network Rail operates the rail network and how decisions by Network Rail and others are made about the use of the system and its expansion over time.

system, the complexity of ticketing can be confusing, but many passengers have also benefited from new types of fare (eg cheaper advance and carnet tickets). We note that these issues are likely to reduce over time as new technology, including smart cards and mobile ticketing, is rolled out. We also note that many passengers purchase their tickets in advance on intercity routes and that operators have more ability to differentiate themselves, which would help to ensure that passengers are able to make informed travel choices.

Summary of feasibility considerations

- 1.70 We concluded that none of the potential barriers considered are insurmountable. This was supported by the legal and operational assessment of the options for greater on-rail competition undertaken in the independent impact assessment commissioned by ORR.
- 1.71 We note that greater on-rail competition may create some additional operational risks which, given the diversity of the network, may vary on a case-by-case basis. However, we consider that these are manageable and would not be significantly greater than in the current system. In designing the options for greater on-rail competition set out below, we have sought to address the relevant feasibility considerations.

Options for greater on-rail competition

- 1.72 Having concluded that there were likely to be benefits of increased on-rail competition, and that there were no insurmountable barriers, we consulted on four options for greater on-rail competition. We summarise these options below and set out the framework that we have used to assess the costs and benefits of each option.
- 1.73 Our assessment draws upon evidence obtained through engagement with the industry and passenger groups, from consultation responses, the impact assessment commissioned by ORR and the evidence of the benefits of, and potential barriers to, greater on rail competition set out above.
- 1.74 The baseline against which we assess the options is a continuation of the current system under which franchises are awarded in the framework adopted following the recommendations of the Brown Review, with incremental improvements made by the DfT over the coming years.

The scope of the options

- 1.75 We are mindful of the fact that the industry is continuing to evolve, particularly in terms of passenger demand, network enhancements and recent and ongoing reviews into the sector.³⁰
- 1.76 We have therefore set out some high-level options for increased on-rail competition. We have not attempted to set out the exact form which the options would take, nor the precise mechanisms by which the options would be implemented. We recommend that these questions are addressed through further discussions with government, the regulator, the industry and passenger groups.
- 1.77 We consider that the options are most likely to deliver benefits on the three main commercial intercity routes – namely the East Coast main line, the West Coast main line and the Great Western route. However, the framework could be applied on other parts of the network, with the Midland main line intercity route in particular being a potential candidate.³¹
- 1.78 There may be potential for the options to be implemented on HS2 given the premium nature of the product, the potential for service differentiation and the fact that many HS2 services will continue onward to different final destinations using the classic network. In this regard, we note that many of the examples of on-rail competition in other European countries are on dedicated high-speed lines.

The four options

- 1.79 Option 1 envisages OAOs playing a significantly increased role within the current market structure, alongside franchised TOCs. This could be achieved by new capacity being reserved for OAOs, or by reducing the scope of future franchises. The aim of this option is to generate larger-scale on-rail competition between franchised TOCs and OAOs while addressing the difficulties that arise in the current model of open access. Franchised TOCs and OAOs would compete on a level playing field, which would entail OAOs making a greater contribution to network costs through higher track access charges in return for more extensive access to the network. OAOs would also contribute to the funding of unprofitable but socially valuable services, which

³⁰ The Shaw Report will make recommendations in March 2016 on how the longer-term future shape and financing of Network Rail should be approached. ORR is reviewing both the structure of track access charges and Network Rail's system operator function. At the same time, DfT is reviewing ORR's role and responsibilities.

³¹ We are not suggesting options for commuter services, where capacity constraints and the particular desire of passengers for a 'turn up and go' service pose additional challenges for introducing greater on-rail competition.

would continue to be provided within franchises, through the payment of a PSO levy.

- 1.80 Under Option 2, there would be two successful bidders for each franchise. Routes currently operated by one franchised TOC would be split so that two franchised TOCs could provide services. This option could be implemented in different ways. Services could be equally split, such that each operator serves many of the same destinations. Alternatively, the two franchised TOCs could be asymmetric, for example with a 60:40 (or greater) division between services. This would reduce the extent of on-rail competition between the franchised TOCs but would reduce the risk of collusive behaviour. Another possibility would be for one of the operators to act as an 'anchor franchisee' with responsibility for the vast majority of unprofitable but socially valuable services, with the other operating primarily profitable services.
- 1.81 Option 3, like Option 2, involves increased competition between franchised TOCs. Under this option, the franchise map would be redesigned to encourage greater franchise overlaps on specific point-to-point flows for franchised TOCs operating on different routes. In contrast to Option 2, the franchises would not need to be tendered simultaneously. Option 3 would effectively reverse a policy decision taken in the early 2000s to reduce the number of overlapping franchises.
- 1.82 Option 4 is more radical in its approach, with multiple operators providing rail services in a fully commercial environment, subject to a licensing regime which would replace the franchising model in areas where the option was implemented. The licensing regime would include obligations to provide key unprofitable but socially desirable services and could be modelled on regimes that already exist in a range of other regulated sectors in the UK such as energy, water, telecoms and postal services. Operators could apply for, or bid to obtain, licences in order to offer services which, instead of being centrally specified, would be determined by market forces. There are a number of ways in which train paths could be allocated to operators, including an auction system for small bundles of paths. This would also allow the government to raise revenue in place of franchise premiums.

Assessment of the options

Framework

- 1.83 In assessing the options, we used a framework which took into account a range of quantitative and qualitative measures to compare the options with the baseline of a continuation of the current system. In particular, we took into account passenger benefits, efficiency and wider economic benefits, as well

as the potential barriers to competition identified by stakeholders, and the degree to which the options can overcome these potential barriers. The framework is summarised in Box 1:

Box 1: Options assessment framework

- 1. Passenger and efficiency benefits**
 - (a) Lower prices and fares
 - (b) Improved overall passenger experience, including service quality, choice and complexity
 - (c) Greater cost efficiency at the passenger services level
 - (d) Dynamic or innovation benefits
- 2. Funding and risk**
 - (a) Taxpayer funding – impact on government funds
 - (b) Impact on risk for government and operators
 - (c) Impact on investment incentives
- 3. Network considerations, including operational issues**
 - (a) Impact on coordination and the level of transaction costs
 - (b) Utilisation of capacity and interconnectivity
 - (c) Impact on efficiency at the upstream network management level
 - (d) Impact on safety
- 4. Wider social benefits**
 - (a) Externalities generated: regional economic growth and environmental benefits
 - (b) Impact on social inclusion and connectivity
- 5. Ease of implementation, including legal and operational feasibility**

Scale of policy and regulatory changes required

Assessment

- 1.84 In undertaking our assessment, we have taken into account evidence from stakeholders, including consultation responses, and the impact assessment commissioned by ORR. The following paragraphs highlight the key points raised by each option.

Option 1

- 1.85 **Passenger, efficiency and wider economic benefits:** Option 1 would introduce on-rail competition between two large-scale train operators. The OAO would have more scope to differentiate its service offering than the franchised TOC as it would be free from franchise specification. As discussed above, the OAO may also be able to achieve greater operational efficiencies

than the franchised TOC, in turn giving it greater scope to reduce fares. Together with the commercial freedom to tailor its service offering to market demand, this may lead to an overall increase in rail demand and its associated economic benefits (including reduced car usage).

- 1.86 **Funding and risk:** Option 1 would be expected to lead to some reduction in franchise premiums paid by franchised TOCs on the routes where it is implemented. This would be addressed through a combination of (a) a level playing field in the track access charges paid by franchised TOCs and OAOs; (b) a levy to enable OAOs to contribute to the cost of unprofitable but socially valuable services; and (c) reducing uncertainty in the franchise bidding process regarding the future level of on-rail competition.
- 1.87 While these mechanisms may not recover all the reduction in franchise premium, this risk should be seen in the context of the current system in which there is uncertainty regarding the level of franchise premiums and no mechanism for OAOs to provide a greater contribution to the funding of the network.
- 1.88 There is a risk that the PSO levy may unjustifiably deter OAO entry, although any levy could potentially be designed to reduce this risk (eg by gradual implementation as new entrants become established). Option 1 could reduce uncertainty for franchised TOCs regarding the future level of on-rail competition during franchise bidding by allocating paths to OAOs in advance of the bidding process. It may also generate additional entry opportunities, helping TOC owner groups to balance their portfolios.
- 1.89 **Operational issues:** By introducing an OAO competing with the intercity franchised TOC, Option 1 may create some additional operational risk. However, as discussed above, we found that this risk would be manageable and would not be significantly greater than in the current system in which multiple franchised TOCs, OAOs and freight services operate on the network.
- 1.90 **Implementation:** Option 1 would require a change to the structure of track access charges and the introduction of a PSO levy. The former is already under way but, as considered further below, the PSO levy would be complex to design and may possibly require primary legislation. A system for allocating paths to an OAO would also have to be designed. However, we have not received any evidence to suggest that these challenges are insurmountable.
- 1.91 **Impact assessment:** The impact assessment found that Option 1 was legally and operationally feasible, although further examination of the PSO levy would be required. The increase in competitive pressure was considered likely to lead to lower fares and service quality improvements. The indicative

quantitative modelling found that, under the central case assumptions,³² measured in terms of the net present value (NPV) of benefits,³³ Option 1 would generate £489 million of benefits over a 20-year appraisal period on the East Coast main line, £915 million on the West Coast main line and £262 million on the Great Western main line.³⁴

Option 2

- 1.92 **Passenger, efficiency and wider economic benefits:** Option 2 would also introduce on-rail competition between two large-scale train operators, significantly increasing the degree of competition relative to the base case. However, in contrast to Option 1, both operators would be franchised TOCs bound by franchise specification, which would limit their commercial freedom to compete on factors other than fares (eg service quality) and ability to achieve operational efficiencies.
- 1.93 **Funding and risk:** Option 2 may be expected to result in some reduction in government funds as a result of lower fares, although we note that more cost-reflective access charges and demand growth induced by greater on-rail competition may mitigate this effect to some degree. By creating smaller franchises, Option 2 would also reduce some of the financial risks associated with franchising.
- 1.94 **Operational issues:** In Option 2, the government would, though franchise specification, retain operational control over the competing franchised TOCs. As such, there would only be minor implications for operational control and performance.
- 1.95 **Implementation:** Option 2 could be delivered within the current legal framework, although a change to franchise policy and, potentially, franchise design, would be required.

³² The impact assessment modelled low, central and high cases to reflect uncertainty with respect to many of the key assumptions employed.

³³ These net present values comprise: (a) impacts on users due to changes in fares and journey times; (b) impact on non-users due to changes in car use; (c) impact on franchised TOCs due to changes in operating costs/efficiency and in passenger revenues; and (d) impact on government funds due to changes in franchise premium payments, in revenue from access charges PSO levy and indirect tax.

³⁴ The quantitative assessment aimed to consider the likely direction and broad magnitude of the impacts under a range of scenarios intended to be indicative of the type of service pattern and other impacts that could result under each of the options. Some respondents to the consultation raised questions about the methodology that was adopted. We also note that there are a number of considerations that were not modelled which would be expected to make the net benefits of the options greater, including the dynamic benefits of competition, increased service quality and the potential for improved efficiency of Network Rail as a result of increased pressure from operators. Other aspects which may be expected to have a negative impact were also not modelled. We take these factors into account in our assessment.

- 1.96 **Impact assessment:** The impact assessment found that Option 2 could be implemented within current industry structures and practices. As for Option 1, this option was expected to deliver net benefits overall. Although the extent of competitive responses would be limited by franchise agreements, the quantitative analysis found that it was possible to configure the option to deliver widespread competition across a route. Under the central case assumptions, Option 2 was modelled as producing £95–£236 million of benefits on the East Coast main line and £151–£166 million on the West Coast main line.³⁵

Option 3

- 1.97 **Passenger, efficiency and wider economic benefits:** Option 3 would be likely to deliver more marginal benefits from on-rail competition, both due to the more limited extent of overlaps between franchised TOCs compared with Option 2 and the possibility that the franchised TOCs providing overlapping services may be differentiated (eg a regional service and an intercity service).
- 1.98 **Funding and risk:** In Option 3, franchise bidders would not be aware of the future level of on-rail competition from other franchised TOCs, which may increase uncertainty in the bidding process. Moreover, the application of UK merger control to the award of franchises creates a risk in Option 3 as bidders with overlapping services would face detailed competition scrutiny, possibly reducing their appetite for bidding and, consequently, the intensity of competition for the franchise award.
- 1.99 **Operational issues:** In common with Option 2, the government would, though franchise specification, retain operational control over the competing franchised TOCs. As such, there would only be minor implications for operational control and performance.
- 1.100 **Implementation:** Option 3 could be delivered within the current legal framework, although a change to franchise policy and, potentially, franchise design, would be required.
- 1.101 **Impact assessment:** The impact assessment found that Option 3 could be implemented within current industry structures and practices. The degree of competition created was considered likely to be limited both by the geographic extent of overlaps and the possibility that franchises would serve differentiated markets. This is reflected in the quantitative analysis which suggested that the

³⁵ Figures for Option 2 are ranges under the central case as both symmetric and asymmetric sub-options were modelled. The impact assessment modelled Option 2 on the East and West Coast main lines only.

benefits are less significant than under Option 2, with the central case assumptions modelled as producing an NPV on the Great Western main line of £56 million.³⁶

Option 4

- 1.102 **Passenger, efficiency and wider economic benefits:** Option 4 would generate the strongest on-rail competition, with three or more operators competing on key flows. This option is therefore likely to deliver the largest reduction in fares of the four options. As each operator would be free from franchise specification, Option 4 is likely to generate the strongest incentives for operators to differentiate their products and to innovate in order to win market share – subject to the licence conditions imposed. Option 4 also provides the greatest scope for operators to achieve operational efficiencies as well as strong incentives for operators to engage with Network Rail to ensure that it delivers performance and enhancements in a cost-effective way.
- 1.103 **Funding and risk:** The impact of Option 4 on government funds is more difficult to predict given that the auctioning arrangements have not yet been determined. The extent of on-rail competition would act to reduce industry funds by driving fares down, although this would be mitigated to a degree by demand growth. Moreover, the auction of train paths could generate significant revenue for the government. However, there are a number of significant challenges to auctioning paths on the railway that would need to be overcome.
- 1.104 We also note that Option 4 may address some of the risks for franchised TOCs and government that exist in the base case, which include uncertainty regarding the future level of on-rail competition at the time of bidding for a franchise and the risk of there being an insufficient number of bidders in franchise competitions.
- 1.105 **Operational issues:** In Option 4, a strong system operator function would be required in order to manage the timetables of multiple intercity train operators. Changes to timetables and licences would have to be coordinated over time and with major projects. However, while the operational risk is higher than in the other options, we do not consider the issues to be insurmountable.
- 1.106 **Implementation:** Option 4 would require an overhaul of the current system in areas where it was implemented, including the design of licences and a mechanism for auctioning train paths. We summarise these issues below.

³⁶ The impact assessment modelled Option 3 on the Great Western main line only.

1.107 **Impact assessment:** The impact assessment found that there would be significant challenges in implementing Option 4, although these were not considered to be insurmountable. Option 4 was deemed too difficult to model quantitatively in the time available due to the uncertain nature of the service patterns and exact regulatory framework which it would entail. However, a qualitative assessment found that due to the intensity of competition between commercial operators free to adopt their own business models, Option 4 had the potential to offer significant benefits to consumers and should be considered further. Option 4 was also considered likely to drive significant improvements in efficiency.

Conclusion

1.108 We summarise our assessment in Box 2 below.³⁷

Box 2: Summary of options against assessment criteria

	1 – Greater open access	2 – Split franchises	3 – Overlapping franchises	4 – Licence system	0 – Base case
Passenger and efficiency benefits	✓✓✓	✓✓	✓	✓✓✓✓	-
Funding and risk	×	×	-	×	-
Considerations within the network, including operational issues	✓	-	-	✓	-
Wider social/economic benefits	✓✓	✓✓	✓	✓✓✓	-
Implementation ease	××	×	×	×××	-

1.109 Taking the above assessment into account, we conclude that while Option 4 has the potential to deliver the greatest passenger and efficiency benefits, it carries significant implementation risks, which have not yet been fully explored. Option 1 would also be likely to deliver significant benefits while addressing issues in the current open access model and, given that it retains franchising, raises fewer implementation issues.

1.110 We also consider that Option 2 could provide benefits by introducing on-rail competition on key routes. Although the scope of the benefits – particularly those arising from dynamic competition – may be reduced by both operators

³⁷ This representation, and in particular the use of 'ticks' and 'crosses', is indicative and intended as an aid to summarise our longer and more nuanced assessment.

remaining as franchised TOCs subject to franchise specification, Option 2 is implementable under the current legal framework. Given the diversity of the network in Great Britain, Option 2 may also have the potential to deliver benefits on parts of the network where Option 1 is less suitable.

- 1.111 We consider that Option 3 would not be likely to produce significant passenger and efficiency benefits given the limited degree of on-rail competition that it would generate.

Recommendations and next steps

- 1.112 In setting out next steps, we focus first on general recommendations to lay the foundations for a dynamic, competitive industry, and then on the key steps for implementation of our preferred options to introduce greater competition. We then set out the key stages required in implementing our preferred options.

General recommendations: laying the foundations for a dynamic, competitive industry

- 1.113 We make a number of general recommendations that we consider to be key to enabling full realisation of the benefits of greater on-rail competition. These may be summarised as follows:

- **Continuing to reduce the level of specification of franchise contracts on routes where there is on-rail competition** – this would allow franchised TOCs to compete on factors such as service quality instead of on fares only, therefore helping to realise the dynamic benefits of competition. In Option 1, reducing the specification of the franchised TOC's franchise agreement would increase its flexibility to respond to competition from the OAO.
- **Reforming the structure of track access charges** – reforming the structure of access charges would support more effective competition between different types of passenger train operator. As noted above, ORR is already proposing to address this as part of its review of the structure of track access charges. We also welcome the government's decision in 2015 to re-route the network grant paid by government to Network Rail via train operators as it will help to increase pressure from operators on Network Rail to deliver efficiency improvements.
- **Improving the 'system operator'** – a strong system operator is essential to ensuring that track capacity is effectively utilised and is therefore central to implementing greater competition between train operators. We

note that ORR is already undertaking a review of Network Rail's system operator function.

- **Encouraging the use of smart ticketing so that real passenger journeys are tracked within the system** – by replacing the current system which shares revenue between competing operators based on estimates of passenger numbers, this will strengthen the incentives for operators to compete for passengers where there is on-rail competition. We note that there are already positive developments in this area, with smart cards and mobile ticketing being rolled out in a number of areas.

1.114 Building on these general recommendations, we set out our preferred options for introducing greater on-rail competition below.

Recommended option: Option 1, a significantly greater role for open access on intercity routes

1.115 We consider that Option 1 is the lead option for introducing greater on-rail competition on key intercity routes for the benefit of passengers and wider society. This option could be piloted in one franchise area before being extended to other areas. The first intercity franchise for which an Invitation to Tender will be issued following the implementation of the new structure of track access charges – and which would allow time for the other necessary implementation steps – is the next East Coast main line franchise, which will commence in 2023. However, as set out below, in order to deliver greater on-rail competition in 2023, the implementation steps need to be taken soon.

1.116 It would also form the first step in any future transition into the licensing model proposed under Option 4. The key steps required to implement Option 1 are summarised below.

A level playing field in track access charges

1.117 The first stage of this process is already under way. ORR's review of the structure of track access charges has identified a potential inability to support effective competition between different types of passenger train operator as a gap in the current system. ORR is therefore consulting on proposals for OAOs to make a greater contribution to network costs, particularly where capacity is scarce and most valuable. In this regard, ORR's consultation notes that such changes might allow for a better allocation of capacity between OAOs and

franchised TOCs, which may lead funders to be relatively neutral between them in terms of the revenue impacts on the taxpayer.³⁸

- 1.118 ORR's review of the structure of track access charges will conclude in 2017 and the new charges will take effect from the start of the next five-year Network Rail Control Period in 2019. If a level playing field between the charges paid by franchised TOCs and OAOs is achieved, this will also help to address some of the funding risks associated with open access applications made under the current framework from 2019 onwards.

Designing and implementing a PSO levy

- 1.119 Primary legislation may be required to implement a PSO levy to mitigate the impact of greater on-rail competition on government funds, as the levy would be government imposed and distinct from the track access charges set by ORR.
- 1.120 EU legislation provides for member states to employ a levy to compensate for PSOs, but its imposition is discretionary, and the government has not transposed the relevant legislation into UK law to date.³⁹ Transposing the relevant EU legislation would be an alternative to making primary legislation in the UK. The levy would need to be designed carefully to ensure that it fits with EU legislation regardless of whether it is imposed by primary legislation or the transposition of EU legislation.
- 1.121 There are a number of questions to address in the design of the levy, including the charging mechanism and whether the levy would change over time. While OAOs responding to our consultation stated that they would be willing to pay a levy in return for greater access to the network, care would need to be taken to ensure that the levy did not act as an unjustifiable barrier to entry. It may also be appropriate to consider whether any levy should apply to current OAOs with small-scale operations focused on previously unserved destinations.
- 1.122 Any levy would need to be in place as soon as possible so as to inform OAOs' entry decisions. Moreover, given the links to the charging regime, the levy would ideally be in place by the time that the new structure of track access charges is implemented in March 2019.

³⁸ ORR (10 December 2015), [Network Charges: A consultation on how charges can improve efficiency](#).

³⁹ Article 12 of Directive 2012/34/EU allows the authority responsible for passenger rail transport in an EU member state to impose a levy on rail operators providing passenger services to contribute to the financing of public service obligations laid down in public service contracts that have been awarded according to European law.

Allocating train paths to an OAO

- 1.123 For open access operations to expand on the main intercity routes, the required train paths would need to be made available. Prior to the expiry of the current intercity franchises (eg East Coast main line), the DfT would need to reconfigure the franchises to allow capacity for OAOs to operate in competition with the intercity franchised TOC on certain routes.⁴⁰ For Option 1 to be introduced in 2023, this would need to be achieved in advance of the expression of interest documents being issued for the East Coast main line franchise in 2021.
- 1.124 In parallel, a system for allocating train paths to an OAO would need to be developed either by the DfT or ORR. There are a number of possibilities for allocating paths, including an economic assessment of OAOs' applications by ORR or a bidding or auction process for paths (in which the level of PSO levy that OAOs were willing to pay could be a factor).

A vision for the longer term: Option 4, a licensing system for operators on main intercity routes

- 1.125 Option 1 could be extended towards the model of competition in Option 4 in the future. For example, instead of a franchised TOC operating 70% of train paths for intercity services and an OAO the remaining 30%, three OAOs of a similar size could be licensed to operate all the paths. This is an ambitious proposal and would require an overhaul of the current system. In particular:
- Licences would need to be designed in such a way that socially valuable services were delivered and minimum service levels were provided, while not being overly prescriptive and unduly restricting commercial decisions.
 - The structure of the new licensing system would need to be defined in national legislation and also comply with the corresponding EU regulations.
 - A system would have to be established for allocating paths to operators, which would be likely to involve auctioning capacity.
 - A strong system operator would need to be in place with sufficient flexibility to coordinate timetables and the response to industry developments, such as major projects.

⁴⁰ Measures would need to be put in place to ensure that the franchise operator and OAO did not have commercial links, while also ensuring that the franchise bidding market is not undermined.

1.126 We note that Option 4 was advocated by a major TOC owner group and that the impact assessment commissioned by ORR did not consider that the challenges were insurmountable. However, given the questions associated with its design, we recommend that more detailed consideration is given to Option 4 once the steps required for Option 1 to be implemented are in place.

Our parallel recommendation: introducing Option 2 where it has the potential to deliver benefits on the network

1.127 In parallel to our main recommendations, we also recommend considering the introduction of Option 2 on areas of the network where it has potential to deliver greater benefits. This would allow policymakers a choice of tools as to how to achieve greater on-rail competition in the future.⁴¹ Option 2 would be implemented under the existing regulatory framework and no legal issues have been identified.

1.128 The franchises on which the option was implemented would need to be redesigned in order to ensure that there is appropriate competition between the two franchised TOCs on the selected routes, while retaining operational integrity.

Next steps

1.129 The publication of this policy document does not mark the end of our engagement in this area. The recommendations we have set out are for the long term and we will continue to engage with policymakers and regulators as appropriate to discuss how the benefits of on-rail competition can be harnessed on the network in the future.

1.130 We also encourage industry participants and stakeholders to continue to consider the benefits that greater on-rail competition could deliver, and to consider further ways in which opportunities to expand on-rail competition for the benefit of passengers and wider UK productivity may be pursued.

⁴¹ The Invitation to Tender for the Great Western franchise will be issued in January 2018 and may create an opportunity for policymakers to increase on-rail competition by splitting the franchise.

2. Context: industry background

- 2.1 This chapter sets out the current structure of the rail sector in Great Britain⁴² and describes the roles of the key industry players, including Network Rail franchised TOCs, OAOs, freight operators, the regulator and government. We set out the process by which franchised TOCs, OAOs and freight operators access the network and outline the complex system of funding the rail network.

Structure of the rail sector in Great Britain

Network Rail

- 2.2 Network Rail owns and manages the main rail network infrastructure in Great Britain, including the track and related infrastructure (eg depots, signalling and electrification systems) and virtually all the stations (Network Rail operates 19 stations itself and leases all the others to the franchised TOCs).⁴³ For management purposes, the network is divided into ten regional operating routes, each constituting a separate business unit with its own accounts to facilitate greater benchmarking of performance between operations. The ten routes are Anglia, Kent, London North East, London North West, East Midlands, Scotland, Sussex, Wales, Wessex and Western.⁴⁴
- 2.3 Network Rail is regulated by ORR under its network licence.⁴⁵ ORR has a range of statutory powers to set the contractual and financial framework within which Network Rail operates. There are six parts to Network Rail's licence covering: network management and timetabling; restrictions on activities;

⁴² Powers relating to transport in Northern Ireland were devolved as part of the Northern Ireland Act 1998. The railways in Northern Ireland are owned and operated by the state-owned company [NI Railways](#) rather than by a TOC selected in a competitive franchise tender process. Rail services in Northern Ireland are therefore excluded from the scope of this report.

⁴³ Network Rail was established in 2002 as a company limited by guarantee, taking over the assets and liabilities of Railtrack and its role as the network operator. The company was established on a 'not for profit' basis which means that, while it could make a profit, to do so was not its primary aim. Following a change in European reporting rules, on 1 September 2014, Network Rail was reclassified as a public sector body. Network Rail has retained commercial and operational autonomy to manage Great Britain's rail infrastructure within the framework of the relevant regulatory and control rules that apply, as an 'arm's length body' of the DfT. The most significant effect of the change was that the company's net debt (currently around £30 billion) appeared on the government's balance sheet.

⁴⁴ Network Rail also owns the land, rail infrastructure and assets on the Isle of Wight but these have been leased to Stagecoach South Western Trains Limited (under the Island Line brand) for a period of 25 years, commencing on 1 April 1994. This is a vertically integrated operation with Island Line being responsible for all railway operations and infrastructure maintenance. See Network Rail, [Network Statement 2016, December 2015-December 2016](#).

⁴⁵ [Network licence granted to Network Rail Infrastructure Limited](#).

dealings with third parties; information requirements; corporate requirements and standard industry obligations.

- 2.4 The level of access charges paid to Network Rail is regulated by ORR through a process of five-yearly periodic reviews and, where appropriate, interim reviews.⁴⁶ ORR assesses what Network Rail must achieve, the money it needs to do so and the incentives needed to encourage delivery and outperformance. Each review covers a five-year period, known as a 'control period'. The current period, Control Period 5 (CP5), runs from 2014 to 2019. The outputs and funding for this period were set during the Periodic Review 2013 (PR13).

Franchised TOCs

- 2.5 Franchised TOCs operating passenger rail franchises are awarded the right to run specific services within a specified area for a specific period of time, in return for the right to charge fares and, where appropriate, to receive financial support from the franchising authority (now the Rail Group in the DfT⁴⁷). Franchised TOCs generally lease stations from Network Rail and earn rental income by subletting parts of them, for example to retailers.
- 2.6 There are currently 16 franchises operating in England and Wales and two in Scotland. Table 1 sets out the current franchises and their operators and a map of train operators in Great Britain is included in the Appendix.

⁴⁶ More detailed information on the periodic reviews is provided on ORR's [website](#).

⁴⁷ As noted in paragraph 2.36 below, Transport Scotland is the franchising authority for the ScotRail and Caledonian Sleeper franchises. There are also specific arrangements in place for London Overground and Merseyrail.

Table 1: Rail franchises in Great Britain in 2016

<i>Franchise</i>	<i>Operating name (franchised TOC)</i>	<i>Franchisee (TOC owner group)</i>	<i>Duration</i>
<i>England and Wales</i>			
Chiltern	Chiltern Railways	Arriva	Mar 2002–Dec 2021
Cross Country	CrossCountry	Arriva	Nov 2007–Oct 2019
East Anglia	Abellio Greater Anglia	Abellio	Feb 2012–Oct 2016
East Coast	Virgin East Coast	Stagecoach/Virgin	Mar 2015–Mar 2023
East Midlands	East Midlands Trains	Stagecoach	Nov 2007–Mar 2018
Essex Thameside	c2c	National Express	Sep 2014–Nov 2029
Great Western	First Great Western	First Group	Apr 2006–Apr 2019
Northern	Northern	Serco/Abellio	Dec 2004–Apr 2016
South Eastern	Southeastern	Govia	Apr 2006–Jun 2018
South Western	South West Trains	Stagecoach	Feb 2007–June 2017
Thameslink, Southern & Great Northern	Thameslink, Great Northern, Southern, Gatwick Express	GoVia	Sep 2014–Sep 2021
TransPennine Express	First TransPennine Express	First Group/Keolis	Feb 2004–Apr 2016
West Midlands	London Midland	GoVia	Nov 2007–Oct 2017
West Coast	Virgin	Stagecoach/Virgin	Mar 1997–Sep 2017
Wales & Borders	Arriva Trains Wales	Arriva	Dec 2003–Oct 2018
<i>Scotland</i>			
Caledonian Sleeper	Caledonian Sleeper	Serco	Mar 2015–Mar 2030
ScotRail	ScotRail	Abellio	Apr 2015–Mar 2025

Source: ORR data and [House of Commons note \(14 December 2015\)](#), [Railways: passenger franchises](#).

- 2.7 Franchised TOCs bid for franchises on the basis of the amount of funding they would require – or the premium they would be prepared to pay – in order to run the services specified in the franchise. The winner is selected on the basis of a weighted scoring system taking into account factors including the subsidy required or premium offered and initiatives to enhance the quality of service for passengers. This competition ‘for’ the market, to run a franchise, is currently the principal form of competition in passenger rail services. Franchised services cover 99% of passenger rail miles.
- 2.8 In the event that a franchise is terminated or suitable bids are not submitted, the Secretary of State for Transport (in the case of England and Wales) has a responsibility to be the operator of last resort (see section 30 of the Railways Act 1993).⁴⁸
- 2.9 European law specifies that rail franchises may initially be awarded for a term of up to 15 years, but may be extended in certain circumstances for a further 7.5 years. This means that the maximum length of rail franchises cannot

⁴⁸ For example, this happened in the case of Connex South Eastern in December 2003 (at the time, operating the South Eastern franchise), GNER with respect to the East Coast franchise in December 2006 (although GNER continued to manage the franchise on behalf of the DfT under a temporary agreement until the new franchise became operational in December 2007) and National Express in November 2009 (for the East Coast franchise).

exceed 22.5 years.⁴⁹ The independent Brown Review into franchising, which was published in January 2013, recommended that franchise agreements should be concluded for an initial term of seven to ten years with a pre-contracted extension, in the event that agreed criteria are met, for a further three to five years giving a maximum term of up to 15 years.⁵⁰

- 2.10 Initial franchises were specified by the then Franchising Director, which produced a Passenger Service Requirement (PSR) setting out the minimum service levels for train services, based on the timetable historically operated by British Rail. Each PSR was (and, for the Chiltern Railways franchise, is still) specific to a franchise, but generally included requirements relating to first and last trains, frequency, journey time and stopping patterns. The Franchising Director had the responsibility for monitoring each franchisee's performance. If a franchisee did not deliver the proper timetable, the Franchising Director could impose penalties or, as a last resort, terminate the franchise agreement.
- 2.11 Under the Transport Act 2000 a body called the Strategic Rail Authority (SRA) inherited all the functions, property, rights, and liabilities of the Franchising Director. Under the Railways Act 2005, the functions relating to franchise agreements for England transferred from the SRA to the DfT, responsibility for the Scottish franchise transferred to the Scottish Executive and the Welsh government was granted a direct role for local and regional passenger rail services in Wales. Franchise specification became tighter (eg in relation to the frequency and timing of services and the provision of on-board facilities such as catering and cleaning) through the introduction of Service Level Commitments and Train Service Requirements.⁵¹
- 2.12 The rights and obligations of franchised TOCs are specified through a Train Service Requirement as part of the franchise agreement negotiated between the franchising authority and the franchisee. The Train Service Requirement includes obligations on franchised TOCs such as the number of daily calls at

⁴⁹ EU Regulation 1370/2007, Articles 4(3) and (4). If justified by the amortisation of capital in relation to exceptional infrastructure, rolling stock or vehicular investment and if the public service contract is awarded in a fair competitive tendering procedure, a public service contract may have a longer duration.

⁵⁰ The review of the rail franchising programme was conducted following problems with the award of the West Coast franchise in 2012. Certain of the current franchises have a term exceeding 15 years: these are Chiltern Railways (19 years) and West Coast (20 years; due to multiple extensions). See House of Commons note by Louise Butcher (8 January 2015), [Railways: fares](#), Business and Transport (SN1904).

⁵¹ The DfT told us that the greater level of financial risk borne by the franchising authority over time has led to a greater level of franchise specificity. The DfT also told us that franchise specification is critically important in ensuring the delivery of socially and economically important services, which would otherwise not be provided, and in securing other vital characteristics for those services which the market would not provide, but which are of importance to passengers and the wider economy (eg additional capacity to prevent overcrowding on commuter routes, higher frequencies, faster journeys). It therefore considers that there is a legitimate and principled role for specification within franchises.

stations and the timing of first and last trains. Each franchise has its own specific Train Service Requirement.

- 2.13 Following the problems with the re-let of the West Coast franchise,⁵² the Brown Review examined the wider rail franchising programme, looking in detail at whether changes were needed to the way risk was assessed and to the bidding and evaluation process.⁵³ During the hiatus in the bidding process, a number of direct awards were made to extend franchises. The nature of these awards varied but, in effect, the government negotiated directly with the incumbent operator and there was no competition for the award. The DfT worked with technical advisers to build a comparator model based on the current and projected performance of the franchise. The submissions from the incumbent for the direct award were then compared with this model. The franchise bidding process restarted in 2013, leading to the subsequent award of the Essex Thameside, Thameslink, Southern & Great Northern and Virgin East Coast main line franchises.

Open access operators

- 2.14 Franchised TOCs face a degree of competition 'in' the market from non-franchised operators, which are granted the right, by ORR, to compete on certain routes as OAOs.
- 2.15 OAOs operate on a commercial basis with no subsidy and are required to apply to ORR and Network Rail for the necessary access rights to run their proposed service. Network Rail will advise a current or potential rail operator on the likelihood of train paths being available on the relevant part of the network for running a proposed service based on the timetable in operation at the time. Network Rail may then either support an application to ORR under section 18 of the Railways Act 1993 or not, in which case the procedure under section 17 for 'disputed' applications is followed.
- 2.16 Fares set by OAOs are not subject to fare regulation.⁵⁴ However, OAOs have the same general ticketing obligations as franchised TOCs, other than with respect to ticket offices.⁵⁵

⁵² In August 2012, the DfT awarded the West Coast franchise to FirstGroup. Virgin Trains judicially reviewed the DfT's decision and, in October 2012, the DfT announced that it would no longer contest the judicial review, stating that it had discovered technical flaws in its bidding process.

⁵³ DfT (January 2013), *The Brown Review of the Rail Franchising Programme*.

⁵⁴ ATOC press release (21 November 2008): [ATOC Announces 2009 Rail Fares Changes](#).

⁵⁵ Ticketing regulation refers to the industry-wide agreements which all train operators are required to adhere to as a condition of their operating licence issued by ORR.

- 2.17 Of a total of 19 proposals for open access services received by ORR between 2000 and 2014, only four were successful.⁵⁶
- 2.18 There are currently just two OAOs:
- First Hull Trains, which commenced services between London and Hull in 2000. Currently, First Hull Trains runs seven services per day between London and Hull on weekdays and five on weekends.⁵⁷
 - Grand Central Railway, which commenced services from London to Sunderland in 2007 and from London to Bradford in 2010. The company runs five trains per day from London to Sunderland on weekdays/ Saturdays, four on Sundays and four trains per day from London to Bradford throughout the week.⁵⁸
- 2.19 Another OAO, Wrexham and Shropshire, used to operate open access services between London Marylebone and Wrexham. It commenced operations in April 2008 but was unsuccessful financially and exited the market in January 2011.

Freight operating companies

- 2.20 Freight operating companies operate freight train services in Great Britain on an entirely open access basis, ie there is full competition 'in' the market, rather than 'for' the market. Services are not specified by government.
- 2.21 Freight operators may either own or lease locomotives and wagons. They are allocated train paths on the network by Network Rail, alongside franchised TOCs and OAOs. Rail freight operates in sectors including bulk (eg coal, construction and petrochemicals), intermodal (eg shipping containers) and automotive.
- 2.22 There are currently seven separate freight operators in Great Britain: Colas Rail, DB Schenker, Devon & Cornwall Railways, Direct Rail Services, Europorte, Freightliner and GB Railfreight.

⁵⁶ Other operators such as those running the Heathrow Express and the North Yorkshire Moors Railway can be considered to be OAOs but they do not run long-distance high-speed services in competition with franchised TOCs and their access agreements pre-date the current regime.

⁵⁷ See [First Hull Trains timetables](#).

⁵⁸ See [Grand Central timetables](#).

Rolling stock leasing companies

- 2.23 The three major ROSCOs operating in Great Britain are Angel Trains, Eversholt and Porterbrook. ROSCOs own fleets of trains and lease them to franchised TOCs, OAOs, freight operators and train building companies.⁵⁹ When rolling stock is replaced by newer stock on a given route, it is often re-let to other routes operated by different companies. The ROSCOs work with train operators to determine the sorts of rolling stock required to deliver the desired customer services.
- 2.24 Although constrained by the availability of rolling stock and the rolling stock's interoperability with train operators' requirements, there is a degree of competition between ROSCOs. A new competitor, QW Rail Leasing, entered the market in 2008 and currently leases trains to London Overground.
- 2.25 In recent years, the government has procured large rolling stock orders directly from the train manufacturers, including the rolling stock for schemes such as the InterCity Express Programme (replacing the original diesel InterCity 'High Speed Trains'), Thameslink and Crossrail. The rationale for this was to ensure the delivery of large-scale investment and to align the procurement and delivery of the new rolling stock with the specification and delivery of major infrastructure upgrades to parts of the network on which the new rolling stock will be used.
- 2.26 The Competition Commission reviewed the rolling stock leasing market in 2009 and concluded that competition in the market for the leasing of rolling stock was restricted by the limited number of alternative fleets available to franchised TOCs when bidding for franchises and a number of other factors such as the costs and risks involved in switching rolling stock.⁶⁰ The Competition Commission made several recommendations and imposed the Rolling Stock Leasing Market Investigation Order, which placed certain obligations on rolling stock lessors.⁶¹

⁵⁹ The main companies involved in building existing passenger trains for the market in Great Britain are Alstom Power, Bombardier Transportation, Hitachi Europe Ltd and Siemens Transportation Systems Ltd.

⁶⁰ Competition Commission (7 April 2009), [Rolling Stock Leasing market investigation final report](#).

⁶¹ This required ROSCOs to provide TOCs with a set list of information, with a view to increasing the comparability of competing offers. In April 2015, ORR consulted on how well the Order was working and on whether any other important changes had taken place since the Order came into force in 2010. It concluded that the Order has, in at least the large majority of cases, been complied with and been broadly successful on its own terms. There were mixed views on the extent of market changes since 2010. ORR (April 2015), [The Rolling Stock Leasing Market Investigation Order 2009, review findings](#).

The role of the regulator and government

2.27 Unlike many other privatised industries, government plays a major role in all aspects of the rail industry from access to the network to the operation of passenger rail services. As described in paragraph 2.45 below, the government accounts for 29% of the rail industry's funding. The following paragraphs set out the roles of the key government departments and agencies involved.

Office of Rail and Road, the industry regulator

2.28 ORR is an independent regulator, which operates within the framework set by UK and EU legislation and is accountable through Parliament and the courts. It is the main safety and economic regulator of railways in Great Britain. In exercising its functions under the principal legislation, the Railways Act 1993, ORR must consider and achieve an appropriate balance between its 24 statutory duties, one of which is to 'promote competition in the provision of railway services for the benefit of users of railway services' and another of which is to 'have regard to the funds available to the Secretary of State for the purposes of his functions in relation to railways or railways services'.

2.29 ORR's statutory responsibilities include:⁶²

- monitoring the efficiency and performance of Network Rail and other main line rail infrastructure providers (including HS1 and the UK end of the Channel Tunnel), to hold them to account on performance for users within a long-term framework;
- regulating and enforcing health and safety on the railways, to protect passengers, workers and the public;
- regulating access to the rail network for passenger services and freight, to maximise capacity and ensure fair and equal treatment of operating companies and the charges that they pay;
- licensing and authorising rail activities and technical standards, to ensure safety, accessibility and interoperability of rail infrastructure and vehicles across the network, and internationally;
- ensuring fair and efficient markets for customers and across the sector including the supply chain; and

⁶² As from 1 April 2015, ORR is also the independent monitor of Highways England.

- protecting and promoting passenger interests, including under consumer law.

Department for Transport

- 2.30 The DfT, acting under the authority of the Secretary of State for Transport, is responsible for preparing the government's long-term strategy for the rail industry, defining the level of passenger services expected to run and specifying the level of funding required.
- 2.31 The DfT is now (through its Rail Group) the franchising authority responsible for the majority of franchise agreements entered into with respect to services on the rail network in England, Wales and cross-border routes.⁶³ In addition, it is responsible for fare regulation and other consumer protection aspects such as safeguarding the provision of services for disabled people.

Rail Group

- 2.32 In 2014, the DfT created a Rail Executive within it to support the drive to strengthen its focus on passengers, to build an enhanced culture of commercial expertise and innovation and to ensure greater coordination of improvements to track and trains. The role covers:
- passenger rail services, including franchise contract award and franchise management;
 - major projects, including Crossrail, Thameslink and the InterCity Express Programme for rolling stock procurement;
 - integrated delivery of projects;
 - whole industry strategy and funding; and
 - Network Rail sponsorship.

- 2.33 The Rail Executive was renamed the Rail Group in January 2016.

Devolution of franchises

- 2.34 As set out below, Transport Scotland is now responsible for managing the ScotRail franchise and the Welsh government will take responsibility for

⁶³ The franchising authorities for the London Overground and Merseyrail operations are Transport for London and Merseytravel respectively.

managing the next Wales & Borders franchise. There are also proposals for further devolution of franchises.

Transport Scotland

- 2.35 Transport Scotland was created in 2006 to carry out the transport functions of the Scottish Executive, including responsibility for devolved powers over rail franchising. Transport Scotland carries out appraisals of capital investment projects in the rail sector, advises on rail investment decisions and provides the specification of railway outputs to the Scottish government.
- 2.36 Transport Scotland is responsible for managing the ScotRail franchise in Scotland, which is worth around £2.5 billion over its ten-year term. FirstGroup ran the ScotRail franchise from 2004. The ten-year franchise was awarded to Abellio in October 2014 and commenced operations on 1 April 2015. At the end of the old ScotRail franchise, the Caledonian Sleeper (which operates overnight services from London to Scotland in both directions), became a separate franchise operated by Serco. The specifications of both franchises were built around a detailed analysis of how rail can support broader economic growth and social cohesion across Scotland.⁶⁴
- 2.37 Scotland's rail strategy is determined by Scottish Ministers and includes responsibility for defining the level of public expenditure required to support Network Rail's operations and the ScotRail franchise. The DfT is obliged to inform and take full account of the views of the Chief Executive of Transport Scotland prior to approving any new commercial transactions that have a material impact on the Scottish network, while each body has to bring to the attention of the other, as a matter of urgency, any matter which has the potential of materially impacting upon the operation of rail services in Scotland or the planned investment programme.⁶⁵
- 2.38 In May 2015, Abellio ScotRail and Network Rail entered into a formal agreement to encourage, through an alliance, greater organisational integration and operational alignment.⁶⁶

Welsh government

- 2.39 The Welsh government was given more powers with respect to passenger services in Wales under the Railways Act 2005. In November 2014,

⁶⁴ Transport Scotland consultation response.

⁶⁵ See paragraphs 22 and 24 of the Memorandum of Understanding between the Scottish Ministers and the DfT entered into in September 2014 following Network Rail's reclassification.

⁶⁶ [Alliance framework agreement between Network Rail Infrastructure Limited and Abellio ScotRail](#).

agreement was reached to devolve rail franchising functions to the Welsh government effective from 2017. This will enable the Welsh government to specify and award the next Wales & Borders franchise, for which the Invitation to Tender will be issued in August 2017 so that the new franchise may commence in October 2018.

Proposals for further devolution of franchises

- 2.40 A number of regional rail franchises are expected to be devolved in the coming years.
- 2.41 On 20 March 2015, the Secretary of State for Transport signed a Partnership Agreement with Rail North for the management of the Northern and TransPennine Express franchises from 1 April 2016. Rail North is a government body based in Leeds, which was set up to support railways in the North of England and represents 29 Local Transport Authorities from across the region.⁶⁷ Although there remain a number of ‘reserved matters’ for the Secretary of State, the responsibilities of Rail North will include developing the Train Service Requirements and train plan, implementing changes to the train fleet, undertaking performance management and enforcement, while, also, applying fare increases to fare baskets.
- 2.42 In addition to this, and as part of the ‘Northern Powerhouse’ programme,⁶⁸ the government entered into a devolution agreement with Greater Manchester in November 2014, outlining the powers to be transferred to the area as it moves towards having a directly elected mayor in 2017.⁶⁹ The powers and resources that the mayor will receive include a devolved transport budget as well as responsibility for franchised bus services, railway stations and ‘smart ticketing’ (following the example of London’s Oyster card) in Greater Manchester.⁷⁰ Furthermore, Greater Manchester will work closely with the DfT and Rail North in order to contribute to rail franchising policy.⁷¹

⁶⁷ For further information on the Rail North – DfT Partnership, see Rail North’s website. Available at: www.railnorth.org.

⁶⁸ The aim of the ‘Northern Powerhouse’ programme is to close the north-south economic divide by investing in infrastructure, including major transport projects.

⁶⁹ The Greater Manchester devolution agreement was supplemented by a further agreement in July 2015. See House of Commons (7 October 2015), [Devolution to local government in England \(SN07029\)](#).

⁷⁰ Ibid.

⁷¹ See HM Treasury and Great Manchester Combined Authority (November 2014), [Greater Manchester Agreement: Devolution to the Greater Manchester Combined Authority and transition to a directly elected mayor](#), paragraph 15.

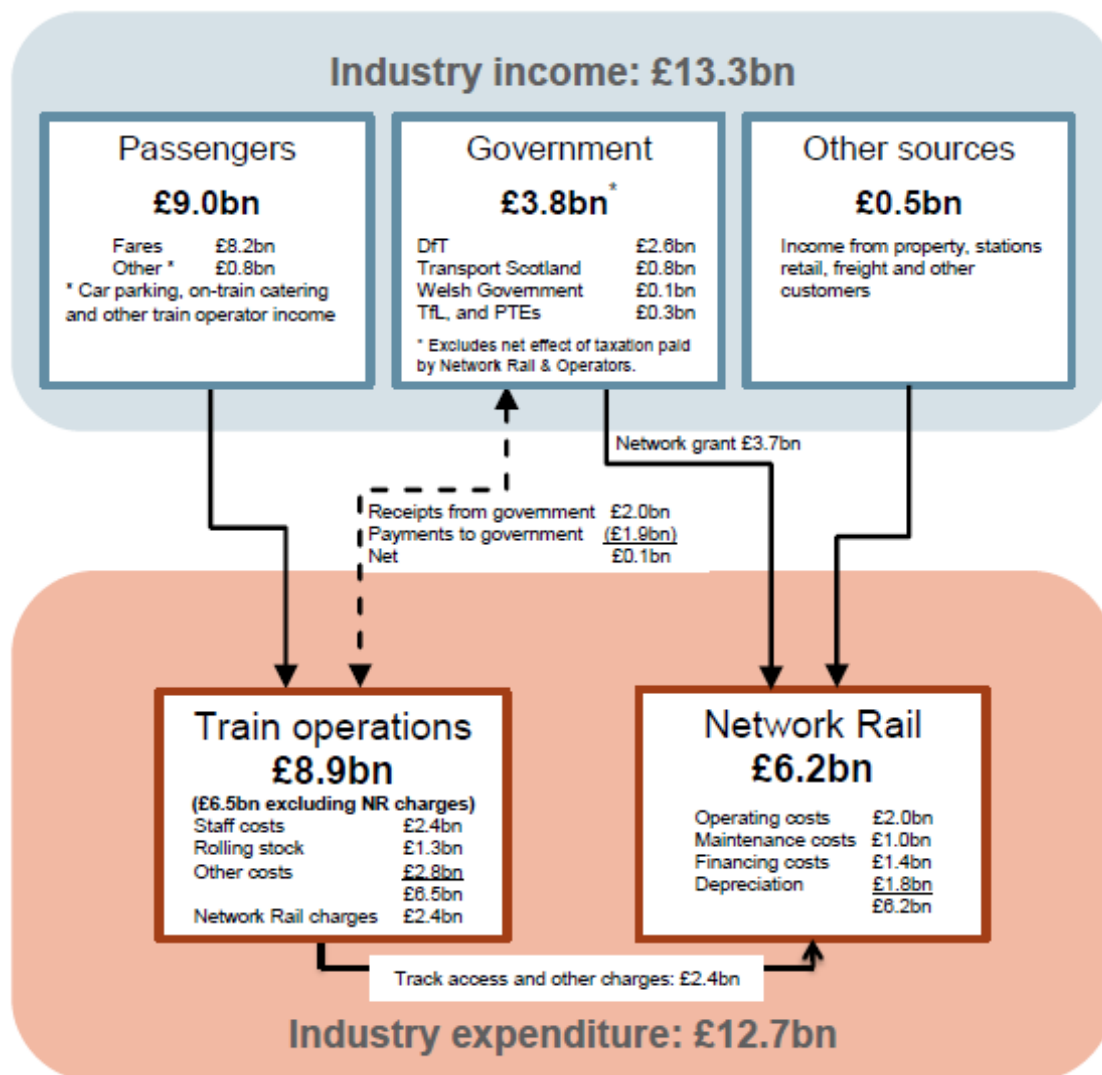
2.43 The *Cities and Local Government Devolution Act 2016* puts in place the legal framework to enable other areas to follow the lead of Greater Manchester.⁷²

Funding of the rail industry

The rail industry's income and expenditure

2.44 Figure 1 sets out the rail industry's income and expenditure in 2013–2014.

Figure 1: Rail income and expenditure in 2013–2014



Source: ORR (February 2015), GB rail industry financial information 2013-14.

⁷² [Cities and Local Government Devolution Act 2016](#). Devolution deals have been announced for Sheffield (December 2014 and October 2015), West Yorkshire (March 2015) and Cornwall (July 2015), which contain elements of control over transport policy being devolved to these regions.

Passenger revenue

- 2.45 In 2013–2014, the rail industry in Great Britain received £13.3 billion in income, of which 68% was from passengers (from fares, car parking and on-train catering), 29% from government and 4% from other sources such as property, retail and freight.⁷³
- 2.46 Passenger fares contributed 61% (£8.2 billion) of the industry's total income, of which unregulated fares accounted for 64% and regulated fares (ie fares capped under franchise agreements) for 36%. In both categories, discounted fares (eg advance, off peak and super off-peak) accounted for 42% (£3.3 billion). Passengers contributed another £0.8 billion through the payment of charges such as car parking and on-train catering.⁷⁴
- 2.47 The proportion of the rail sector's funding paid for by passengers is increasing. ORR analysis, adjusted for inflation, shows that:
- funding from government sources decreased by 16.4% between 2010 and 2014. This equates to a 28.3% decrease in the government's financial contribution per passenger journey; and
 - income from passengers increased by 10.8% during the period between 2010 and 2014. This largely reflected the 16.6% increase in passenger journeys with the average fare per passenger journey decreasing by 5.0%.
- 2.48 We note that passengers (rather than the government) are now responsible for funding the largest share of the industry's costs. This can be seen as strengthening the case for passengers rather than government having an increasing say in services by allowing greater passenger choice through on-rail competition – particularly on commercial intercity services.

Government funding

- 2.49 Different parts of government contributed a total of £3.8 billion (29%) to the funding of the network. The main sources of government funding were the DfT (£2.6 billion), Transport Scotland (£0.8 billion) and the Welsh government (£0.15 billion). On a per journey basis, there were higher levels of government funding in Wales and Scotland than in England, varying from £1.88 per

⁷³ See ORR (February 2015), [GB rail industry financial information 2013-14](#).

⁷⁴ Ibid.

passenger journey in England to £7.77 per journey in Scotland and £9.18 per journey in Wales.

- 2.50 As a whole, the government contributed £3.7 billion to Network Rail through the network grant.⁷⁵ Network Rail also received £2.4 billion in income from track access and other charges levied on train operators and £0.5 billion in income from other sources.

Franchises

- 2.51 In 2013–2014, franchised TOCs paid £1.9 billion in premiums to government, while TOCs in receipt of subsidy received £2.0 billion. The government therefore made a net contribution of £0.1 billion to franchised TOCs.⁷⁶ In effect, for the franchises operated by the DfT, the franchises received a total subsidy of 6.8 pence per passenger mile in 2013–2014.⁷⁷ This includes the subsidy paid directly to the franchised TOCs by government and an allocation of the network grant (ie payments made directly to Network Rail).
- 2.52 During the period 2013–2014, three franchises (Thameslink, Southern & Great Northern, South Western and East Coast) paid government a larger premium than the subsidies they received (ie they had a negative subsidy per passenger mile). Northern Rail received the highest subsidy per passenger mile of 51.5 pence.
- 2.53 Franchised TOCs' main costs are the track access charges that they pay to Network Rail, the costs of leasing stations and rolling stock and of employing staff. Under the terms of each franchise agreement, the government indemnifies each franchisee, for the duration of the franchise term, against any rise in the rate of track access charges payable by the franchised TOC to Network Rail, typically following a periodic review by ORR (see above, paragraph 2.4), that occurs during the franchise term. Franchised TOCs may do light maintenance work on rolling stock themselves or contract it out to private companies. Heavy maintenance is normally procured for TOCs by ROSCOs, according to the contracts between them.

⁷⁵ The government signalled its intention in the summer 2015 Budget to change the way in which it channels public money through the industry, directing funding through the TOCs instead of through the network grant, with the aim of encouraging customers of the railway to demand efficiency and the best use of scarce capacity on the rail network.

⁷⁶ TOCs bidding for franchises normally indicate whether they would be in a position to pay a premium to the franchising authority for the service awarded (or, in the alternative, if a subsidy payment would be required).

⁷⁷ See [Department for Transport Business Plan input indicator](#).

- 2.54 Franchised TOCs' revenues are primarily derived from the sale of tickets but also include other income from ancillary activities such as car parking, on-board catering and advertising.⁷⁸

Network Rail

- 2.55 At present, Network Rail's income is derived from the following sources: (a) grants received from the DfT and from Transport Scotland (64% of its income); (b) its commercial property income (10% of its income); and (c) track access charges paid by passenger and freight operators (26% of its income).⁷⁹ In addition, funds are received from debt issuance, with Network Rail having previously raised bonds in the capital markets supported by a UK government guarantee for the purposes of funding capital expenditure and refinancing existing debt. However, following reclassification, Network Rail will no longer issue bonds but will instead borrow £30.3 billion directly from the government through a loan facility designed to cover funding requirements for the period 2014–2019.⁸⁰
- 2.56 In its most recent Periodic Review (PR13) of Network Rail's funding and outputs, ORR assumed that for the five-year period from 2014 to 2019 approximately 30% of Network Rail's revenue would be derived from access charges, 60% from the network grant and the remaining 10% from other sources.⁸¹ Over this period, the government has committed £18 billion, including for investments to modernise the network where this is most needed.⁸²
- 2.57 Network Rail's funding arrangements may change in the coming years following the recommendations of the Shaw report on the longer-term future shape and financing of Network Rail (described further in paragraph 2.72).

Track access charges

- 2.58 Network Rail levies a number of charges on operators using the rail network. The main categories of charges are set out below:

⁷⁸ ORR (November 2012), *Costs and Revenues of Franchised Passenger Train Operators in the UK*, p21.

⁷⁹ ORR data. As noted above, the government is planning to change the way in which Network Rail is funded, channelling funds through the TOCs instead of through the network grant.

⁸⁰ See [Network Rail: Debt Issuance Programme overview](#).

The DfT will decide whether to extend the Loan Facility Agreement by April 2017.

⁸¹ ORR (October 2013), *Final determination of Network Rail's outputs and funding for 2014-19*.

⁸² Ibid.

- (a) **Variable track access charge (VTAC)** – this charge is related to the short-term cost of running an additional train over the track, reflecting the wear and tear incurred.
- (b) **Capacity charge** – this was introduced in 2002 as a way of reimbursing Network Rail for the additional delay costs associated with additional traffic as incurred under Schedule 8 of the track access agreements.⁸³ The charge aims to provide appropriate incentives and price signals to encourage train operators and funders to make efficient use of network capacity.
- (c) **Other charges** – other charges levied by Network Rail include electrification asset usage charge, traction electricity charge and certain freight-only charges (including a freight-specific charge and a coal spillage charge).
- (d) **Fixed track access charge (FTAC)** – this charge recovers Network Rail's residual funding requirements after taking into account the charges set out above and the network grant.

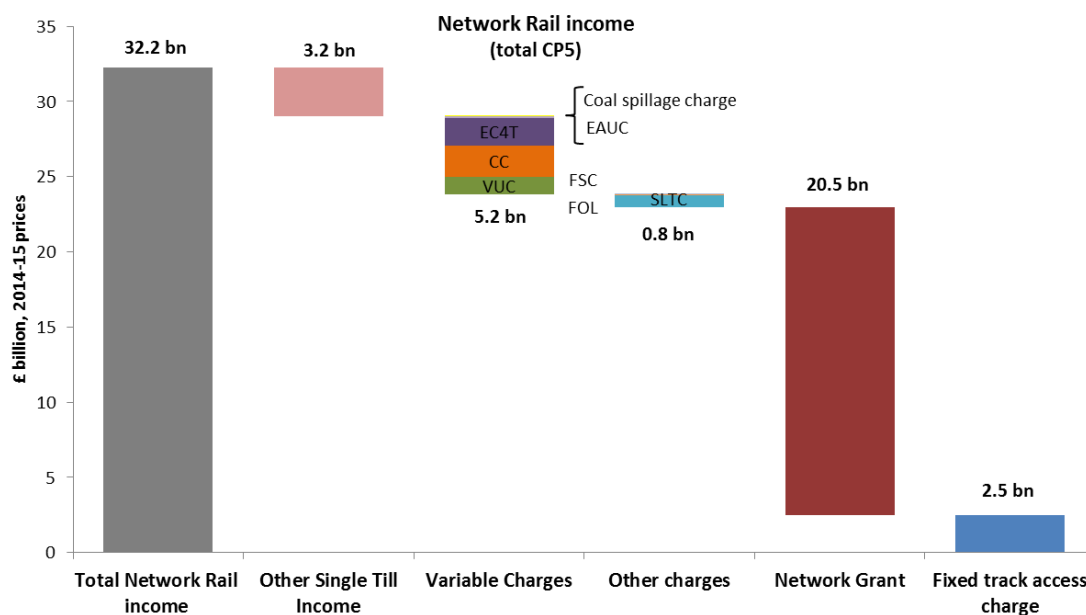
2.59 Different types of operator currently pay different charges. The charges payable are set out in the track access agreements that passenger and freight operators enter into with Network Rail. These agreements, which also specify the rights that train operators have to be allocated capacity on those parts of the network for which Network Rail is infrastructure manager, are approved by ORR.⁸⁴ Most track access agreements are entered into for a term of between five and ten years.

⁸³ Schedule 8 compensates train operators for the impact of unplanned service disruption due to poor performance. Disruptions can be attributable either to Network Rail or other train operators. Compensation payable covers fare revenue losses and costs (eg cost of running replacement bus services). The purpose of Schedule 8 is to ensure that train operators' exposure to risk is reduced. Losses incurred by train operators are covered by the organisation to which the disruption is attributable rather than the train operator facing the disruption. By better understanding the impact of service disruptions on costs and revenues of train operators, Network Rail's decision-making can be positively influenced (eg noting where further investments are needed). Payments are calculated on the basis of predetermined formulae and are made when the performance of Network Rail or train operators diverges from a benchmark number of minutes of lateness. If performance is below the benchmark, compensation is paid to the train operator affected and if Network Rail or the train operator perform better than the benchmark, a bonus is paid by the train operator that benefits from this improved performance. See ORR (November 2012), [Consultation of Schedules 4 and 8 possessions and performance regimes](#).

⁸⁴ ORR ensures that the framework of access charges set are consistent with EU law, including Directive 2001/14/EU. Specifically, it has to take into account the provisions of the Railways Infrastructure (Access and Management) Regulations 2005, which require, among others, that track access charges are non-discriminatory and transparent, ensuring on the one hand that train operators are not charged excessively high prices by Network Rail and on the other that the charges paid are sufficient to cover Network Rail's costs of running the network.

2.60 Figure 2 provides a breakdown of the different sources of Network Rail's income during CP5 (ie for the period 2014–2019), including from track access charges described above.

Figure 2: Network Rail's current overall charging income*



Source: ORR.

* The 'Other Single Till Income' referred to in Figure 2 primarily relates to income generated from the commercial exploitation of property owned by Network Rail. The variable and other charges listed are the following: the electricity asset usage charge (EAUC), the traction electricity charge (EC4T), the capacity charge (CC), the variable track access charge (VUC) and the station long-term charge (SLTC), which recovers station building and information and security systems maintenance and repair costs.

Charges paid by OAOs and franchised TOCs

2.61 Franchised TOCs, OAOs and freight operators pay variable charges, whereas only franchised TOCs also pay FTAC. The fact that OAOs do not pay FTAC is often cited as a reason to restrict the entry of OAOs in order to protect the funding of the network.

2.62 In 2006, the then franchisee on the East Coast main line, GNER, brought a judicial review against the open access applications of Grand Central and First Hull Trains in the English High Court on the basis of an alleged illegality in ORR's policy of charging franchised TOCs and OAOs inconsistently.

2.63 The court noted that there was a critical distinction to be made between the circumstances in which franchised TOCs and OAOs access the network upstream.⁸⁵ Franchised TOCs have very considerable advantages, including

⁸⁵ [Great North Eastern Railway Limited v The Office of Rail Regulation, Hull Trains Company Limited and Grand Central Railway Company Limited \[2006\] EWHC 1942 \(Admin\)](#).

taking over established businesses, protections against variations in access charges and revenue protections such as ‘cap and collar’ (now replaced by a GDP risk-sharing mechanism).⁸⁶ The court decided that the different market conditions faced by the OAOs and the franchised TOCs justified different charging regimes and also described FTAC as an ‘artificial construct’.

ORR review of structure of track access charges

- 2.64 The way in which Network Rail charges train operators for their use of the network affects decisions made by franchised TOCs, OAOs and freight operators, Network Rail and funders of the network. In its final determination for PR13, ORR therefore committed to working with the industry to conduct a review of Network Rail’s structure of access charges in advance of the next Periodic Review (PR18) which will cover Control Period 6 (CP6), which runs from 2019–2024. In undertaking its review, ORR aims to improve the understanding of what drives Network Rail’s costs and the link between these costs and charges.
- 2.65 In order to help inform ORR’s review, the Rail Delivery Group⁸⁷ conducted a review with the industry of the current structure of access charges and considered how Network Rail and operators’ incentives could be better aligned to improve industry outcomes. The Rail Delivery Group published a report setting out options for a new and/or updated charges and incentives regime in November 2015.⁸⁸
- 2.66 On 10 December 2015, ORR published for consultation a list of options for changing the structure of Network Rail’s charges.⁸⁹ In considering the options for changes to the structure of charges, ORR identified four gaps in the current charging regime: (a) a limited ability to drive down costs; (b) a lack of specific and strong incentives to provide and allocate capacity most efficiently; (c) a potential inability to support effective competition between different types of passenger train operator; and (d) complexity.
- 2.67 ORR proposes to focus its future work on understanding what drives Network Rail’s costs, considering if this information should be reflected in charges, and improving the existing set of charges.
- 2.68 The consultation closed on 4 March 2016 following two workshops (one in Glasgow and one in London) where ORR’s proposed approach to the review

⁸⁶ The ‘cap and collar’ risk-sharing mechanism is discussed further in paragraph 2.105.

⁸⁷ The Rail Delivery Group was set up in 2011 to provide leadership to Britain’s rail industry, bringing together the owners of Britain’s passenger train operators, freight operators and Network Rail.

⁸⁸ Rail Delivery Group, [Review of Charges](#).

⁸⁹ ORR (10 December 2015), [Network Charges: A consultation on how charges can improve efficiency](#).

of the structure of track access charges was discussed with stakeholders. ORR will start the process for PR18 with the publication of its initial consultation document in April 2016, setting out how it proposes to prioritise and focus the review to address the current and prospective challenges and opportunities.

- 2.69 As set out in our consideration of the options for greater on-rail competition in Chapter 6, reforming the structure of access charges is an integral part of the CMA's proposals for greater on-rail competition and the CMA will therefore continue to work with ORR as it undertakes its review.

Other recent reviews

- 2.70 In June 2015, Sir Peter Hendy was appointed Chairman of Network Rail and was asked by the Secretary of State for Transport to develop proposals by autumn 2015 on how the rail upgrade programme (set out in the Appendix should be carried out.⁹⁰ The report concluded that the vast majority of programmes and projects should go ahead for delivery by 2019. No projects were cancelled and the remaining projects will be delivered after 2019.⁹¹
- 2.71 At the same time, for the purposes of improving future investment programmes, the Secretary of State requested that Dame Colette Bowe, an experienced economist and regulator, examine lessons learned in order to make recommendations for better investment planning. The report was published in November 2015 and concluded that there was no one overarching cause which explains the cost escalation and delays to projects and programmes in the current control period, which if corrected would prevent it from recurring. Instead, a number of issues have combined to require this programme to be reviewed and elements to be replanned.⁹²
- 2.72 In July 2015, the government appointed Nicola Shaw, Chief Executive of High Speed 1, to advise it on how the longer-term future shape and financing of Network Rail should be approached.⁹³ The work is to be presented jointly to the Secretary of State for Transport and the Chancellor of the Exchequer. A scoping study was published in November 2015⁹⁴ and a detailed report with

⁹⁰ DfT (June 2015), [Oral Statement to Parliament, Network Rail's performance](#).

⁹¹ [Replanning Network Rail's investment programme: a report from Sir Peter Hendy to the Transport Secretary](#), November 2015.

⁹² [Report of the Bowe Review into the planning of Network Rail's Enhancements Programme 2014-19](#), November 2015.

⁹³ [Shaw Report on the longer-term future shape and financing of Network Rail: terms of reference](#), July 2015.

⁹⁴ [The future shape and financing of Network Rail: the scope](#), November 2015.

implementation proposals is to be prepared by the time of the Budget in spring 2016

Fare regulation

- 2.73 The Secretary of State has the power to regulate fares through franchise agreements where this is in the interests of passengers.⁹⁵ Historically, regulated fares fall into two 'baskets' of fares: commuter fares and other protected fares.
- 2.74 Fare baskets are regulated by a cap on annual fare increases. For 2015, the amount at which an individual regulated fare can rise has been capped at the retail price index (which in July 2014 was 2.5%). We note that the new government has stated that it will not permit operators to raise regulated fares (the majority of which cover commuter routes) above the rate of retail price inflation over the next five years.⁹⁶
- 2.75 Fare baskets may include off-peak or super off-peak returns, 'anytime' day singles and returns and some season tickets outside urban areas, long-distance saver fares and shorter distance standard return fares.⁹⁷ Approximately 45% of fares are subject to regulation.
- 2.76 Advance and first class tickets are not regulated. For long-distance journeys, 'anytime' single/return fares are usually unregulated as are off-peak day single/return tickets for shorter journeys. TOCs determine unregulated fares on a commercial basis and changes can be made during the franchise agreement provided that the financial effect on the franchisee is neutral within the framework provided by the Ticketing and Settlement Agreement (see paragraph 2.78).
- 2.77 In Scotland, all ScotRail season tickets, all ScotRail off-peak returns as well as all fares in the Strathclyde area and standard singles, standard day returns and season tickets in the Edinburgh commuter area are currently regulated. These fares are set by Transport Scotland and are defined in the franchise agreement. Other fares for flows in Scotland are unregulated and can be set by the franchisee on a commercial basis. Transport Scotland does not set fares for cross-border services; rather these follow the DfT's policy.⁹⁸ In 2015,

⁹⁵ See section 28 of the Railways Act 1993; also, the Transport Act 2000 and the Railways Act 2005.

⁹⁶ In previous years, the cap was higher and franchised TOCs were able to increase individual fares above the cap provided that the average fares across the basket stayed below the cap.

⁹⁷ See House of Commons note by Louise Butcher (8 January 2015), [Railways: fares](#), Business and Transport (SN1904).

⁹⁸ See Transport Scotland (November 2011), [Rail 2014 - Public Consultation](#).

ScotRail's off-peak tickets remained frozen at 2013 levels and increases in peak fares will be capped to increase in line with inflation.⁹⁹

Other ticket regulations

- 2.78 Train operators are required to comply with arrangements relating to the creation of fares, including obligations around the creation of interavailable fares and through tickets. In order to support an integrated ticket retailing system, there are interoperator agreements that enable, for example, agreement on unified systems and the allocation of revenue. The key enabling document is the Ticketing and Settlement Agreement (TSA), which is entered into by all train operators.
- 2.79 The fares and retail regime is overseen by train operators who come together through various governance arrangements. For example, the Association of Train Operating Companies leads on changes to the TSA on behalf of the train operators and the Rail Settlement Plan facilitates integrated retailing and manages the allocation of revenue between train operators. National Rail Enquiries manages the National Rail Enquiries website and telephone service and manages some central industry data, such as real-time train information.
- 2.80 Under the TSA, train operators are obliged to offer at least one interavailable fare between each origin and destination point on the network. This fare is valid on any permitted route across multiple operator services. Interavailable fares are set by the lead operator (ie the operator with the greatest commercial interest on a certain route) and must be observed by all train operators selling tickets for that journey or operating a service on some or all of the route. Other operators, other than the lead operator, can set dedicated (ie unregulated) fares for travel only on their own trains at prices which are generally lower than the interavailable fare.
- 2.81 ORR is currently conducting a retail market review focused on who sells tickets, what tickets are sold, where and how tickets are sold, and the ticket format. ORR is considering the issues from the point of view of the industry regime – in particular, the rules and practices in which retailers (ie both TOCs and third party retailers) operate under when selling tickets in order to ensure that they are working to the benefit of passengers, the industry and taxpayers. ORR's consultation on its June 2015 emerging findings¹⁰⁰ closed in September 2015. ORR is planning to publish its final recommendations with respect to third party retailer arrangements in spring 2016.

⁹⁹ See Transport Scotland (5 December 2014): [Rail fares increases capped for Scottish passengers](#).

¹⁰⁰ ORR (June 2015), [Retail market review, emerging findings](#).

The development of competition since privatisation

- 2.82 In this section, we consider the development of competition since privatisation including the extent to which the original government vision of competition has been achieved, the development of open access operations and the government's reforms to franchising.

The government's vision at the time of privatisation

- 2.83 At the time of privatisation, the government's 1992 White Paper envisaged that competition would be instrumental in driving greater efficiency and a wider choice of services that were more closely tailored to customer preferences.¹⁰¹ The government noted that the rail industry was more insulated from the demands of the market than other forms of transport – such as the airline, coach and road haulage sectors – and that radical changes were needed.
- 2.84 The 1992 White Paper also envisaged that franchises would be designed, wherever possible, to provide scope for competition. There would be no universal template for a franchise contract and flexibility would be preserved in all aspects of franchising to take full account of the private sector's views on how it could best bring its skills to bear. Subject to contractual obligations, operators would have the freedom to provide the extent, type and quality of service which they believed best met passenger demands.
- 2.85 The DfT published a paper in 1993, in which it explained that 'it is the Government's intention that on-track competition in the first generation of franchises will be moderated, but only to the extent necessary to ensure the successful transfer of British Rail's passenger services to the private sector'.¹⁰² The government envisaged that, after the initial franchises were awarded, as the system for gaining access evolved, more services would be provided on the basis of open access and fewer under franchise agreements.¹⁰³ Also, train operators would obtain subsidies for individual loss-making services rather than packages of services.¹⁰⁴
- 2.86 Freedom of access was also central to the aims of privatisation, with the government seeking the greatest possible development of commercial railway services. Liberalising access was seen as complementary to structural changes by providing the opportunity for new operators to run services,

¹⁰¹ New Opportunities for the Railways, The privatisation of British Rail, Cm 2012, July 1992.

¹⁰² The publication is entitled Gaining Access to the Railway Network and is mentioned in [the ORR's Competition for Railway Passenger Services: policy statement](#), 1994, p43.

¹⁰³ Chris Bolt, ORR, [The Restructured Railway in Great Britain: Performance and Prospects](#), p16.

¹⁰⁴ Ibid.

encouraging initiative, giving customers a wider choice and rail operators the stimulus of competition to provide better service quality and value for money.

- 2.87 Greater on-rail competition has remained a policy objective of the authorities. ORR, in its long-term regulatory statement of July 2013, said:

There is an opportunity for there to be much greater on-rail competition in the future, if governments desire it. The addition of new [network] capacity, including HS2, and the introduction of new signalling technology that allows much more dense use of network capacity, will open up new route paths that allow greater on-rail competition between operators.¹⁰⁵

Achievement of competitive benefits

- 2.88 Since privatisation, the system has produced notable successes. Competition 'for' the market has been intense, with franchise competitions attracting a number of credible bidders. There have been real benefits, evidenced by the reverse over the past two decades of the previous long-term decline in usage of Britain's railways and, over the past decade, a material increase in passenger satisfaction.
- 2.89 The system has adapted following a number of major shocks, including the Hatfield rail accident and the subsequent overhaul of the network infrastructure and insolvency of the then network operator Railtrack; the exit of the East Coast franchisee; and the failure of the 2012 West Coast franchise auction. The government, balancing the need for stability with the need to make the system more responsive to passenger needs, introduced a number of reforms to facilitate more competitive behaviour including, in the past few years, a commitment to greater flexibility in franchise specification and changes to the mechanism in franchise agreements for sharing risk between the government and franchised TOCs.
- 2.90 Nevertheless, for all these very real gains which have enabled franchised TOCs to become more responsive to passenger needs, the system has not yielded all of the benefits that were hoped for at the time of privatisation:
- the scale of on-rail competition envisaged at privatisation has not materialised;

¹⁰⁵ ORR (July 2013), [Opportunities and challenges for the railway – the ORR's long-term regulatory statement](#), p12.

- the post-privatisation period has seen a significant increase in passenger rail expenditure, only part of which can be directly attributed to the increase in outputs; and
- franchisee specification and risk sharing may limit the ability and incentives of franchised TOCs to respond to customer preferences.¹⁰⁶

2.91 The following paragraphs consider these issues in greater depth.

OAOs are limited in scale

2.92 As described in paragraph 2.18, there are currently just two OAOs operating in Great Britain – First Hull Trains and Grand Central. Both OAOs compete against the incumbent franchisee on certain East Coast main line routes. Together, they represent less than 1% of passenger rail miles in Great Britain.

2.93 In considering applications for track access, ORR must have regard to its statutory duties. Although having a duty to promote competition for the benefit of rail users, ORR must balance this with its other statutory duties, as set out in section 4 of the Railways Act 1993, including the requirement to have regard to the funds available to the Secretary of State for Transport for the purposes of his functions in relation to railways or railway services.

2.94 In the post-privatisation period, on-rail competition was limited by a policy referred to as Moderation of Competition. Under this policy, each track access agreement specified those routes on which Network Rail (and previously Railtrack) was prohibited from granting access rights to potential competitors of the franchised TOCs.¹⁰⁷ The rationale behind this approach was to ensure that OAOs could not undermine the viability of the franchise system by ‘cherry picking’ profitable services. However, in 2004, ORR indicated that it would only approve Moderation of Competition clauses in exceptional circumstances (ie where investments would not otherwise occur). In November 2010, ORR stated that such protection would no longer be approved.

2.95 Under the current open access regime, new entrants are able to compete directly against the franchised TOCs provided that such new entry meets ORR’s ‘not primarily abstractive’ test,¹⁰⁸ ie the new services would have to demonstrate that they can increase the overall market size by generating a

¹⁰⁶ For example, ORR notes in the emerging findings of its retail market review that although in the tendering process potential franchisees are incentivised to compete to offer new products and fares, during the franchise period franchisees’ ability and incentives to offer new fares and products are limited – [ORR retail market review, emerging findings](#), paragraphs 3.7–3.9.

¹⁰⁷ See ORR (October 2011), [The potential for increased on-rail competition - a consultation document](#).

¹⁰⁸ Other factors may also be relevant, eg performance effects, benefits to passengers and the impacts on taxpayers.

certain level of new-to-rail business rather than merely abstracting business from existing operators (which, in turn, would have a negative effect on the Secretary of State's funds). The test, commonly known as the 'NPA rule', is currently interpreted to require that the proposal must generate three units of new revenue for every ten units that it abstracts from the franchisee(s) operating on the same routes.

- 2.96 For the purpose of the NPA rule, ORR has established a five-stage test which applies when a new open access service would compete with franchised services, impacting upon the public sector funder's budget or when a new OAO would compete with an existing open access service.¹⁰⁹ As part of this test, standard industry models¹¹⁰ are used to estimate the likely level of abstraction (as part of stage 1) and estimates are refined using benchmarking and survey information from other comparable situations (at stage 3).¹¹¹
- 2.97 In 2013, ORR launched a consultation on whether to relax the NPA rule in return for OAOs paying a mark-up as a contribution to Network Rail's fixed costs. Following consultation, however, ORR decided to retain the NPA rule, but said that it would review the operation of the requirement.
- 2.98 Although existing OAOs have extended their operations, over the last five years no new OAOs have entered the market. ORR received three proposals from Alliance Rail in 2014 to authorise more substantial open access operations that would compete head-on against the franchised TOCs on the East Coast and West Coast main lines. Although the application to provide passenger rail services on the West Coast (between London and Blackpool) was rejected in December 2014, ORR approved a revised proposal in August 2015. Alliance Rail expects to operate six daily services between London and Blackpool from 2018.¹¹² The separate application by Alliance Rail lodged with ORR in early 2014 to operate fast services between London King's Cross and Edinburgh and to Cleethorpes and Bradford on the East Coast main line is still under consideration.
- 2.99 In March 2015, ORR received an application from FirstGroup to run services on the East Coast main line from 2018. This would add five daily services in

¹⁰⁹ The test also applies in the case where a new franchised service would compete with an existing franchise and the competing services are supported by different public sector funders or where the proposed franchise competes with an existing OAO.

¹¹⁰ Rail industry models used include MOIRA and PDFH (the passenger demand forecasting handbook). MOIRA models the supply side of the rail industry and is composed of a base year and future year timetables, including data on train capacity. On the rail demand side, PDFH identifies all the known demand drivers and quantifies the value of these drivers on demand.

¹¹¹ See ORR (December 2011), [Criteria and procedures for the approval of track access contracts](#).

¹¹² ORR (August 2015), [Decision on application for access to West Coast main line](#).

each direction between London King's Cross and Edinburgh. The application is currently being considered by ORR.

2.100 A full list of open access proposals submitted from 2000 to 2015 is set out in the Appendix.

Franchise overlaps have reduced

2.101 The number of franchise overlaps was reduced by the SRA following its franchising policy announcement in 2001.¹¹³ The SRA argued that having a single operator at each major London terminus would have a number of practical advantages including optimising capacity and offering economies of scale. In the subsequent franchising rounds, the number of franchise overlaps was significantly reduced.¹¹⁴ This trend has continued although, as set out in Chapter 3, a number of franchise overlaps remain.

Efficiencies

2.102 The post-privatisation period has seen a significant increase in passenger rail expenditure, only part of which can be directly attributed to the increase in the number of passenger rail journeys. Since 1996–1997 passenger rail industry expenditure has increased from more than £8 billion to £12.7 billion in 2013–2014.¹¹⁵ However, we note that operator margins as a share of revenue have fallen since 1997–1998, suggesting that franchising has captured value for the taxpayer.¹¹⁶ The efficiency of the sector is considered further in Chapter 4.

The government's approach to franchise specification and risk-sharing since privatisation

2.103 The form of franchises has changed several times since privatisation, reflecting changing government policies, and attempts to deal with shortcomings of the framework as they emerged.

2.104 In March 2013, the government announced its intended approach to franchising over the medium term.¹¹⁷ The timetable for future franchise awards, subsequently revised in April 2014, was published at the same

¹¹³ [SRA franchising policy announcement](#), 19 December 2001.

¹¹⁴ [SRA Strategic Plan 2002](#), p38.

¹¹⁵ Prices adjusted for inflation at 2013/14. DfT (May 2011), *Realising the Potential of GB Rail Report of the Rail Value for Money Study*, p20. Also, ORR (February 2015), [GB rail industry financial information 2013-14](#).

¹¹⁶ [GB rail: better services, better journeys and better value](#), KPMG report for the Rail Delivery Group, September 2015

¹¹⁷ DfT press notice (26 March 2013): [Fresh start for franchising](#).

time.¹¹⁸ The government also published a revised statement on franchising policy, setting out how the Secretary of State proposed to exercise franchising powers in the future.¹¹⁹

2.105 In order to mitigate the risk of distorting the commercial incentives of franchised TOCs, in more recent franchising models, the ‘cap and collar’ risk-sharing mechanism was abandoned and, in some cases, replaced by a mechanism reflecting exogenous risks, such as GDP changes, throughout the whole life of the franchise.¹²⁰

2.106 Moreover, a number of changes were made to the franchise award programme following the Brown Review in order to maximise the benefits of competition ‘for’ the market. In particular, the DfT emphasised the following:

- The new franchise award programme introduced a weighted scoring system against which bids are assessed that reflects the ‘quality’ of bids. Points in the competition are awarded to bids which include initiatives to enhance the quality of service passengers receive over and above the franchise specification’s requirements or which enhance the value of the franchise for the taxpayer that would not generally be expected to provide a return within the life of the contract.¹²¹
- Innovation in bids has been encouraged by making specific funds available to certain franchised TOCs for innovations that can be bid for by operators during the life of a franchise.¹²²
- The approach to the treatment of the residual value of investments made by franchised TOCs was developed in order to address the risk of investment tailing off towards the end of a franchise. This makes it more likely that new competitive challenges to franchised TOCs will elicit a competitive response. There are also fewer restrictions being placed on franchised TOCs, enabling them to develop additional services and quality enhancements during the lifetime of a franchise.

¹¹⁸ DfT (8 April 2014), *Rail Franchising Schedule and Prior information notice for rail franchising from 2014*.

¹¹⁹ DfT (26 March 2013), *Consultation Response Document: Railways Act Section 26*.

¹²⁰ Under the ‘cap and collar’ mechanism, a franchised TOC’s actual revenue for a given year is compared with the target revenue forecast in its original franchise bid, with any surplus or shortfall potentially shared between the DfT and the TOC.

¹²¹ The DfT notes that this policy has resulted in bidders offering more trains, more capacity, more destinations, innovative compensation mechanisms and a variety of other passenger-facing opportunities, with passengers on recent franchises such as Intercity East Coast, Thameslink, Southern & Great Northern and Essex Thameside benefiting today.

¹²² This scheme is currently a pilot that applies to the Northern, TransPennine Express and East Coast franchises, the success of which will be assessed towards the end of 2017, before a decision is taken on whether or not to roll it out to other franchises.

- 2.107 The DfT highlighted the East Anglia Invitation to Tender, issued on 17 September 2015, as an example of its new approach providing bidders with significant scope for bringing forward innovative approaches to serve passengers.¹²³ For example, rather than being specified by the DfT, bidders have been invited to make their own proposals for cutting journey times and introducing new rolling stock.
- 2.108 We welcome the trend towards reducing the degree of franchise specification and consider the level of franchise specification that may be appropriate in an environment of greater on-rail competition in Chapter 6.

Potential limitations to benefits arising from competition ‘for’ the market

- 2.109 In many sectors, competition directly between operators ‘in’ the market tends to be more effective at delivering benefits than competition ‘for’ the market.
- 2.110 We note that a number of conditions need to be met in order for a bidding process to fully realise the benefits of competition ‘for’ the market. These were outlined in a paper by Professor Paul Klemperer on bidding markets as:
(a) the winner takes all (ie the winner wins all of the order); (b) competition is ‘lumpy’ (ie the contract is a large proportion of the supplier’s total sales); (c) competition begins afresh for each contract and customer (ie there are no incumbency advantages); and (d) entry is easy.¹²⁴
- 2.111 We note that some of the conditions for an ideal bidding market might not be met by the current competitive tendering system for franchises. In particular, entry is not ‘easy’ given that the franchise application process is expensive and time-consuming. There might also be an information asymmetry between incumbents and bidders in the franchising process which creates an advantage for incumbents in the bidding process.
- 2.112 More generally, ORR’s consultation response highlighted a number of reasons why competition ‘for’ the market alone may not fully realise the potential benefits of competition in the sector. ORR noted that franchised TOCs are largely insulated from changes in the charging structure and so have weakened incentives to lower costs on the network. It also noted that most operators face limited competition between franchise bids, which weakens ongoing incentives on pricing and service quality, while the fixed duration of franchises acts to weaken incentives on operators to innovate or invest in areas where there are longer-term payoffs. ORR also suggested that

¹²³ DfT (2015), [East Anglia Invitation to Tender](#).

¹²⁴ Klemperer, P (2005), [Bidding Markets](#).

the prescriptive nature of some franchise specifications can limit the ability of operators to adapt to passengers' changing demands.

- 2.113 We also note that in order to fully realise the benefits of competition 'for' the market, there must be sufficient market interest in bids. The National Audit Office (NAO) noted in its review of franchising that the number of bids the DfT has received under the current franchising programme is lower than the historic trend.¹²⁵ For each of the first three competitions in the current programme (taking the InterCity East Coast competition to be the first) the DfT has received three bids, which is the minimum that it considers is necessary to ensure good quality bids. The previous ten competitions received four bids on average.
- 2.114 The risk of insufficient market interest in bids was also noted by Public Accounts Committee in 2016.¹²⁶ In this regard, the Public Accounts Committee stated that there are signs that the level of interest from the market in rail franchises is dwindling. It recommended that the DfT should develop alternatives to its current commercial approach so it is well placed to deliver value for money if market interest falls to a level where intense competition cannot be guaranteed.¹²⁷
- 2.115 In this regard, as noted above, we recognise that the DfT is trying to encourage new entrants to the market and maintain interest from existing operating companies by simplifying the pre-qualification process and reviewing the size and number of franchises.¹²⁸

Conclusion

- 2.116 The system of competition 'for' the market has produced some notable successes and recent reforms to the franchising system are welcome. However, the scale of on-rail competition remains limited. In Chapters 3 and 4 we consider the extent to which greater on-rail competition can deliver benefits over and above the current system of competition 'for' the market.

¹²⁵ NAO (24 November 2015), [Reform of the rail franchising programme](#).

¹²⁶ The Public Accounts Committee report [Reform of the rail franchising programme](#) noted that successful rail franchising depends on strong interest from the market and effective competition but there are barriers to entry to the UK market and the possibility that current participants in the market may drop out. Any reduction to the current level of competition was cited as a major risk to securing value for money for the taxpayer.

¹²⁷ Ibid.

¹²⁸ As discussed in Chapter 6, reducing the size of franchises may create more overlaps between franchises and therefore new opportunities for on-rail competition.

3. Evidence of potential passenger benefits from greater on-rail competition

Introduction

- 3.1 Franchised TOCs face strong competition ‘for’ the market in bidding to run franchises, with franchise competitions attracting a number of credible bidders.¹²⁹
- 3.2 Train operators often face a further degree of competitive constraint from other modes of transport, depending on the particular routes they serve. For example, on routes from London to Scotland, train operators face competition from airlines. On many long-distance flows there is competition from coach transport. On local flows, operators may face competition from local bus services. The private car also exerts a competitive constraint on many flows.
- 3.3 The competitive constraint on passenger train operators from other modes of transport was highlighted by a number of respondents to the consultation.¹³⁰ While we recognise that this constraint is strong on certain flows, it is weaker on others.¹³¹ In response to our consultation, it was also put to us by some franchised TOCs that competition from other modes of transport increases the need for franchised TOCs to be granted commercial freedom to compete effectively with other modes of transport.
- 3.4 However, as described further below, the scale of on-rail competition currently faced by franchised TOCs in Great Britain is limited.
- 3.5 This chapter considers the potential benefits that greater on-rail competition can bring in addition to competition from other modes of transport, examining examples of direct competition ‘in’ the market in:
- on-rail competition in Great Britain from open access;
 - on-rail competition in Great Britain from overlapping and parallel franchises;

¹²⁹ For example, in 2015, three companies were shortlisted to run the Greater Anglia franchise (Abellio, Go-Ahead and Stagecoach) and four for the West Coast franchise (Abellio, FirstGroup, Keolis/SNCF and Virgin). As noted in Chapter 2, the NAO highlighted in its review of franchising that, by the DfT’s own measure, if it receives fewer than three bids this may reduce value for money. Risks to the value for money of future competitions were considered by the NAO to include interest declining, although the NAO noted that the DfT is aware of such challenges and is taking steps to address them.

¹³⁰ The point was noted by FirstGroup, a number of regional transport partnerships and independent consultants.

¹³¹ One transport operator told us that intercity rail’s strongest market is on flows of around 200 miles (eg London to Manchester and York on the West Coast and East Coast main lines, respectively) as rail has an advantage over the car in journey time and airlines do not compete on flows of this distance to any significant degree.

- on-rail competition in other European countries, including Austria, the Czech Republic, Germany, Italy and Sweden;
- transport markets where there is ‘in’-market competition, such as:
 - the Great Britain rail freight sector (which, following privatisation, is fully open access);
 - the experience of EU airline deregulation;
 - the introduction of new competition between London’s airports; and
 - the deregulation of local bus services in Great Britain.

3.6 The DfT, while recognising that any comparator is likely to have deficiencies, told us in its consultation response that the comparators in other transport markets used by the CMA focused on the benefits of introducing competition to markets where competition was previously significantly restricted. In its view, the comparators were therefore unsuitable for assessing potential customer benefits from further, incremental, competition over and above the benefits of competition already achieved by way of the competitive award of franchises. In relation to the DfT’s concern, we note the following:

- We consider the incremental benefits that the current degree of on-rail competition from OAOs has delivered relative to the offering of incumbent franchised TOCs.
- Rail freight in Great Britain, European airlines and London airports all faced a degree of competition before further competition was introduced.
- We have undertaken further research into the examples of on-rail competition elsewhere in the EU, drawing on the experience of transport regulators and train operators in those countries. We have also considered the degree of competition that operators faced prior to liberalisation.

3.7 We recognise that it is not possible to comprehensively test the effects of introducing a significantly increased degree of on-rail competition in passenger train services *ex ante*. There are, inevitably, material differences between different transport sectors, and between different operators. However, we think that the evidence in this chapter taken together illustrates the significant benefits that could be obtained from greater on-rail competition

in addition to the benefits delivered by competition ‘for’ the market.¹³² We also cross-refer in this, and later chapters, to the independent impact assessment of our options for greater on-rail competition commissioned by ORR.

On-rail competition in Great Britain

3.8 The following paragraphs consider evidence regarding the benefits that the existing degree of on-rail competition in Great Britain has delivered by examining:

- fares, satisfaction, service quality and innovation on routes where there is competition between OAOs and franchised TOCs;
- fare competition where overlapping and parallel franchises operate (the degree of franchise specification restricts the range of factors on which franchised TOCs can compete); and
- the impact of changes in the degree of on-rail competition, for example, where changes to the geography of franchises have introduced or eliminated on-rail competition.

3.9 In 2014–2015, OAOs accounted for 0.7% of all rail miles in Great Britain and 0.8% of passenger rail miles. Freight operators accounted for 7.3% of rail miles. Table 2 sets out the data on rail miles by category of operator in 2014–2015.

Table 2: Rail miles in Great Britain in 2014–2015

<i>Operator type</i>	<i>Rail miles (in millions)</i>	<i>% of network</i>
Franchised TOCs	319.0	91.96
OAOs	2.5	0.72
Freight operators	<u>25.4</u>	<u>7.32</u>
Total	346.9	100.00

Source: Network Rail data from ORR data portal.

3.10 In addition to competition between OAOs and franchised TOCs, on-rail competition also takes place where franchises overlap or run parallel to each other. Overlapping franchises are defined as those where more than one

¹³² The DfT suggested that the Office of Fair Trading’s (OFT’s) newspaper and magazine distribution market work found that competition for the market can sometimes deliver better outcomes than competition in the market. We note that, while the OFT found that competition for the market provides a competitive constraint on the conduct of wholesalers, its effectiveness may vary between territories and wholesalers, depending on how each tender is structured and the number of bidders. The OFT also noted that while competition for the market provides a competitive constraint on wholesalers’ behaviour, it did not necessarily show that it is the most effective form of competitive constraint. [OFT1121, Newspaper and magazine distribution in the United Kingdom - Decision not to make a market investigation reference to the Competition Commission](#), September 2009.

operator serves passengers on a flow using the same track. Parallel franchises are defined as those where more than one operator serves a flow between an origin and destination, but using a different line (eg London–Birmingham with Chiltern Railways or via the West Coast line).

- 3.11 Table 3 below sets out the overlapping and parallel rail franchises in Great Britain in March 2016. A map of franchised and open access services is included in the Appendix.¹³³

¹³³ www.projectmapping.co.uk.

Table 3: Overlapping and parallel franchises in Great Britain in 2016

<i>Overlapping and parallel franchises</i>	<i>Flows</i>
Great Northern and Virgin East Coast	London to Stevenage and Peterborough
Great Northern and Abellio Greater Anglia	London to Cambridge
First Great Western and Chiltern Railways	London to Oxford
London Midland, Chiltern Railways and Virgin Trains	London to Birmingham
London Midland and Virgin Trains	London to Milton Keynes, Coventry, Rugby, Nuneaton, Tamworth, Lichfield, Stafford, Crewe and Stoke-on-Trent Rugby to Coventry, Birmingham International
Thameslink and East Midlands Trains	London to Luton and Bedford
c2c and Abellio Greater Anglia	London to Southend
South West Trains and Southern	London to Portsmouth London to Southampton London to Epsom, Dorking and Guildford
South West Trains and First Great Western	London to Reading, Exeter and Bristol London to Basingstoke
Cross Country, First TransPennine and Virgin East Coast	York to Newcastle (and between Cross Country and Virgin on services north to Edinburgh)
London Midland, Virgin Trains, Arriva Trains Wales and Cross Country	Birmingham International to Wolverhampton and Shrewsbury
First Great Western and London Midland	Worcester to Hereford
Govia, Abellio Greater Anglia and Cross Country	Cambridge to Ely
East Midlands Trains, Cross Country and Abellio Greater Anglia	Peterborough to Ely
Cross Country and Abellio Greater Anglia	Ely to Norwich
Cross Country and First Great Western	Bristol Parkway to Tiverton, Exeter and stations to Plymouth and Penzance and between Reading, Oxford and Banbury Reading to Basingstoke
First TransPennine, East Midlands Trains and Northern Rail	Liverpool to Manchester
First TransPennine, Virgin East Coast and Northern Rail	Manchester to Leeds and York Blackpool and Barrow-in-Furness to Manchester
East Midlands Trains, Cross Country and Northern Rail	Derby to Sheffield and Leeds
First TransPennine and Northern Rail	Leeds to Scarborough
First TransPennine and Northern Rail	Leeds to Hull
Northern Rail and Virgin East Coast	Doncaster to Hull
First TransPennine and Virgin Trains	Wigan to Preston, Carlisle and Glasgow/Edinburgh
Arriva Trains Wales and Virgin Trains	Chester to Holyhead
Arriva Trains Wales and First Great Western	Newport to Cardiff, Swansea and Carmarthen
Virgin East Coast, Cross Country and ScotRail	Edinburgh to Glasgow
Virgin East Coast, Cross Country and ScotRail	Edinburgh to Aberdeen
Virgin East Coast and ScotRail	Edinburgh to Aberdeen and Inverness
South West Trains and Cross Country	Basingstoke to Winchester, Southampton and Bournemouth
Abellio Greater Anglia and Cross Country	Cambridge to Stansted Airport
First Great Western and Southern	Brighton to Southampton
London Midland, Cross Country and Virgin Trains	Wolverhampton to Stafford
London Midland and Chiltern	(Leamington and) Birmingham to Kidderminster

Source: CMA analysis.

- 3.12 The extent of competition on overlapping and parallel franchises varies significantly according to the frequency of the overlapping services and the extent of journey time differentials between operators.
- 3.13 The following paragraphs consider the passenger benefits that the relatively limited extent of on-rail competition in Great Britain from OAOs and competing franchises has delivered.

Competition between open access operators and franchisees

- 3.14 As described in Chapter 2, First Hull Trains and Grand Central currently compete with Virgin East Coast on the East Coast main line.
- 3.15 The current limited scale of on-rail competition in Great Britain constrains the extent to which one can draw conclusions about what would happen if the scale of on-rail competition were to increase materially. Nevertheless, there are a number of concrete examples of the benefits of current open access rail competition in Great Britain, including in relation to fares, service quality and innovation.¹³⁴
- 3.16 In its consultation response, ORR cited potential benefits that OAOs bring in terms of:
- different business models, with the potential for greater cost reduction than could be achieved through franchising;
 - stronger incentives to compete on price and service quality, reflecting their greater exposure to costs and revenue risk in the absence of a time-limited franchise; and
 - combining these factors to support greater innovation in service offering and pricing and the ability to find new, underserved markets.
- 3.17 The following paragraphs consider the benefits arising from competition between OAOs and franchised TOCs in the current model of (limited) open access operations. Further evidence of the impact of the current level of on-rail competition in Great Britain is presented in section 5 of the impact assessment commissioned by ORR.

¹³⁴ Transport Focus emphasised in its consultation response that while fares are the most significant passenger priority for improvement, performance, service frequency and capacity are also key elements.

First Hull Trains and Virgin East Coast (London to Stevenage, Grantham, Retford and Doncaster with one daily overlap to Hull)

- 3.18 First Hull Trains is now a joint venture between FirstGroup (as 80% shareholder), which operates franchises in Great Britain including the Greater Western franchise and (through a joint venture) the TransPennine Express (see Chapter 2, Table 1) and Renaissance Trains. It was the first OAO in Great Britain, entering the sector with direct services between London and Hull in 2000. FirstGroup acquired its interest in Hull Trains in 2003 and the company was rebranded in 2008 as First Hull Trains.
- 3.19 First Hull Trains competes with Virgin East Coast on a number of flows on the East Coast main line. First Hull Trains also competes with Grand Central on the flows from London to Doncaster.

Impact on fares

- 3.20 First Hull Trains offers dedicated fares in competition with Virgin East Coast. In addition to offering a range of advance tickets, First Hull Trains offers super off-peak, off-peak and anytime 'walk-up' tickets which are generally priced below the fare set by the lead operator (with respect to interavailable fares).¹³⁵ For example, from London to Doncaster, the off-peak single offered by First Hull Trains is priced at £64.00 against an interavailable off-peak single priced at £82.10. From London to Hull, the same ticket types cost £79.00 and £96.80, respectively. On the London–Grantham flow, the operators also compete on price. For example, First Hull Trains offers the dedicated anytime single ticket at a price of £51.50 against the corresponding interavailable ticket, which is priced at £60.00.¹³⁶
- 3.21 Although the dedicated fares sold by First Hull Trains are only valid on their own services (which are less frequent), passengers benefit from the availability of cheaper fares which, in turn, may also constrain the fare set by the lead operator in the case of interavailable tickets.
- 3.22 First Hull Trains also competes with Virgin East Coast on the price of dedicated advance purchase tickets. Passengers booking advance tickets

¹³⁵ Interavailable fares are set by the lead operator for a journey, which is normally the operator with the greatest commercial interest in that particular journey. Other operators are required to honour these interavailable fares once they have been set by the lead operator, but other operators or groups of operators can set 'dedicated' fares for travel only on their own trains, generally at a lower price than the interavailable fare. The lead operator can also set dedicated fares in certain circumstances. For example, it can set discounted advance fares for travel only on its own services.

¹³⁶ Fares based on travel in November 2015.

with either operator are restricted to travelling on a specific train but benefit from lower prices as a result of on-rail competition.

- 3.23 First Hull Trains introduced a 'carnet' ticket for business passengers in 2013 that it claims offers savings of up to 50%. ORR noted in the emerging findings of its retail market review that OAOs offering such products may also encourage competing franchised TOCs to offer similar products, citing the 2014 example of Virgin East Coast offering carnet tickets to business passengers through its website.¹³⁷
- 3.24 We note that price competition between First Hull Trains and the incumbent franchised TOC would be expected both because First Hull Trains needs to win passengers by undercutting the incumbent in order to ensure that its services remain commercially viable (as an OAO service it would not be subsidised if it entered financial difficulty) and because, as an OAO, First Hull Trains has lower costs (including through paying lower access charges than the franchised TOC). Further examples of fare competition between First Hull Trains and the incumbent franchised TOC are set out in Table 3 of the impact assessment commissioned by ORR.

Impact on service levels and innovation

- 3.25 First Hull Trains also competes on service and innovation. First Hull Trains identified a number of examples, including:
- a passenger information system (incorporating information from the official industry real-time train running information system and GPS tracking) which provides real-time information on board the train, including the progress of the service, expected arrival times at stations and information on connecting trains. First Hull Trains cited its freedom from the need to amend a franchise agreement as facilitating this innovation in response to on-rail competition;
 - privately funding new rolling stock with 125mph capability (the current maximum permitted line speed), more seats and higher specification;
 - free 4G Single Sign Up wi-fi on all trains; and
 - access to a selection of ITV programmes on board.

¹³⁷ ORR (June 2015), [Retail market review, emerging findings](#), paragraph 3.8.

- 3.26 First Hull Trains is also pursuing a project to electrify the line from Selby to Hull using predominantly private sector finance (discussed further in paragraphs 4.36 and 4.37).
- 3.27 Passenger surveys consistently rank First Hull Trains as one of the leading rail operators in terms of overall passenger satisfaction. The National Rail Passenger Survey published in autumn 2015 indicated that 97% of passengers were satisfied with First Hull Trains, the highest score across all operators (followed by Grand Central and Heathrow Express – which both operate on an open access basis).¹³⁸ The Which? 2016 Trains Satisfaction Survey ranked First Hull Trains as the operator with the second highest customer score in Great Britain, taking into account factors including the availability of seating, cleanliness, frequency, punctuality, reliability and value for money.¹³⁹

Impact on passenger usage

- 3.28 Analysis of on-rail competition by Ove Arup for ORR in 2009¹⁴⁰ found that the number of journeys from stations served by both the incumbent and First Hull Trains increased at a faster rate than most of the control stations.¹⁴¹ The increase in revenue yield (ie the increase in average fare per passenger) was also smaller at stations with competition (Grantham, Doncaster and Hull) than on the control flows. Arup also cited a number of softer benefits of competition in its study, including additional car parks.

Wider economic impact

- 3.29 In terms of the wider economic benefits of the service, Arup (2009) notes that prior to the introduction of First Hull Trains, the Hull and Humber Ports City Region was one of the few major urban areas in Great Britain that was not served by direct connections to London. The new services created major opportunities for business in London, with people able to arrive in the capital before 0930 and to travel back in the evening.

¹³⁸ Transport Focus, [National Passenger Rail Survey, autumn 2015](#).

¹³⁹ Which? [Trains Satisfaction Survey](#), February 2016.

¹⁴⁰ ORR (December 2009), *On Rail Competition Analysis Key Findings* (commissioned from Ove Arup & Partners Ltd).

¹⁴¹ The report selects control flows (and stations) with similar geography to the competitive flows in order to ensure similarity between the socio-economic characteristics of the study area in terms of various indicators, including population, journey times and service provision.

Grand Central and Virgin East Coast (London to York, Northallerton and Sunderland; London to Doncaster, Wakefield and Bradford)

3.30 Grand Central is a subsidiary of Arriva UK Trains (which is itself a subsidiary of the main German national rail operator Deutsche Bahn); Arriva also operates franchised services in Great Britain (see Chapter 2, Table 1). Grand Central competes with Virgin East Coast on a number of flows on the East Coast main line and serves stations, such as Sunderland, which previously had no direct services to London.¹⁴²

Impact on fares

3.31 Grand Central offers dedicated fares as part of its strategy of competing with Virgin East Coast.

- For example, Grand Central offers a dedicated anytime single fare from London to York for £83.10, whereas the interavailable fare set by the lead operator is £112.00.¹⁴³ Although the dedicated fares limit the number of services on which a passenger may travel (to five per day in the York example), Grand Central told us that the majority of its passengers travel using dedicated tickets. The availability of cheaper dedicated tickets may also constrain the interavailable fare set by the lead operator, although Virgin observed that as the lead operator on the route, fare regulations prevent it from offering dedicated walk-up fares.
- For travel from London to York, both Grand Central and Virgin East Coast compete on the prices of their dedicated advance single tickets.
- We observed that the cheapest advance single tickets for travel between London to York available for departures between 0700 and 0859 cost from £20.90, whereas for travel from London to Manchester on the West Coast main line, a similar distance as from London to York but without on-rail competition, the cheapest advance single available for departures between 0700 and 0859 cost £110.00.¹⁴⁴ While differences in demand and operating cost are likely to exist between the East and West Coast main lines, the magnitude of the fare differential appears significant.

¹⁴² Virgin East Coast introduced direct services to Sunderland in December 2015, eight years after Grand Central. However, Grand Central remains the only train operator to offer direct services to London from other stations in the region such as Eaglescliffe and Hartlepool.

¹⁴³ Fares based on travel in November 2015.

¹⁴⁴ Fares based on travel in November 2015.

- Which? also considered the fare differentials on the London–York flow, finding that that Grand Central’s ‘walk-up’ tickets are cheaper than those of Virgin East Coast.¹⁴⁵ For example, Grand Central also sells a dedicated off-peak single valid in the peak period. The cheapest walk-up ticket for the 0802 Grand Central London to York service is therefore only £55.40, whereas the cheapest walk-up single valid on the 0800 Virgin East Coast service costs £124.50.
- As set out above in relation to First Hull Trains operating on the East Coast main line, price competition between the OAO and the incumbent franchised TOC may be expected as the OAO needs to win business by undercutting the incumbent in order to remain commercially viable and due to the fact that the OAO has lower costs (including through paying lower access charges than the franchised TOC). Further examples of fare competition between First Hull Trains and the incumbent franchised TOC are set out in Table 4 of the impact assessment commissioned by ORR.

Impact on service levels and innovation

3.32 Grand Central also competes with Virgin East Coast on service quality and innovation. The following examples were cited by Grand Central:

- Grand Central told us that it was the first train operator in Great Britain to offer free wi-fi to all passengers. The incumbent lead operator at the time, GNER, responded by offering wi-fi (although, in contrast to Grand Central, it charged passengers in standard class to use wi-fi).
- Grand Central introduced a ‘carnet’ ticket offer where a book of 20 fully flexible tickets is sold at a 25% discount. GNER responded by offering its own carnet.
- GNER increased the number of advance tickets that it sold on the East Coast main line. Grand Central responded by increasing the number of advance tickets that it offered for sale.
- When Grand Central launched its services from London to York, the incumbent responded by adding additional services to York. We were told that the capacity required to run the additional services was identified partly as a result of the increased competitive pressure on the route.¹⁴⁶ The additional capacity has generated benefits for all passengers on the route both in terms of increased frequency and crowding relief.

¹⁴⁵ Which? (March 2015), Trains Satisfaction Survey, Save money on your route.

¹⁴⁶ This example is discussed further in paragraph 4.35.

- Grand Central makes its full range of walk-up tickets available for sale on the train. In contrast, Grand Central told us that it is common for franchised TOCs to sell only the most expensive tickets available for a given journey if passengers do not purchase a ticket before boarding.
 - Grand Central's service to Bradford is, itself, an example of innovation. The introduction of the service acted as a catalyst for the refurbishment of Wakefield Kirkgate station, from which Grand Central offered the first direct trains to London for 32 years.¹⁴⁷ The service also utilises a former freight-only line to Bradford.
- 3.33 Passenger surveys consistently rank Grand Central as one of the leading rail operators in terms of overall passenger satisfaction. The National Rail Passenger Survey published in autumn 2015 indicated that 93% of passengers were satisfied with Grand Central, the third highest score across all operators (following First Hull Trains and Heathrow Express – which both operate on an open access basis).¹⁴⁸ The Which? 2016 Trains Satisfaction Survey ranked Grand Central as the operator with the highest customer score in Great Britain, taking into account factors including the availability of seating, cleanliness, frequency, punctuality, reliability and value for money.¹⁴⁹

Impact on passenger usage

- 3.34 Grand Central commissioned AECOM to examine the impact of on-rail competition on market growth between 2007–2008 and 2011–2012. Passenger journeys, revenue and yield at stations with competition (namely Peterborough, Grantham, Retford, Doncaster, Wakefield, York and Northallerton) were compared with the corresponding data at stations without competition (namely Newark, Leeds, Darlington, Durham, Newcastle, Berwick-upon-Tweed and Edinburgh).¹⁵⁰ We recognise that analysis of this kind can be sensitive to the methodology used, and that ORR and AECOM have had some analytical differences regarding this to date.¹⁵¹ We comment on the implications of this when outlining AECOM's key findings below. We

¹⁴⁷ The Rail Delivery Group highlighted that the station improvement plans were spearheaded by Groundwork Wakefield and partner funded by Network Rail. Additional funding was secured from the Station Commercial Project Facility and National Stations Improvement Programme, both of which are administered by Network Rail.

¹⁴⁸ Transport Focus, [National Passenger Rail Survey, autumn 2015](#).

¹⁴⁹ Which? [Trains Satisfaction Survey](#), February 2016.

¹⁵⁰ The AECOM report considers the principal stations on the East Coast main line and whether those stations were affected by competition.

¹⁵¹ The principal discussion corresponds to capturing accurately how passengers may be switching stations to take advantage of new services, and whether these are properly accounted for rather than classed as genuinely new passengers. Discussion of this can be found in this [letter](#) describing the ORR's 2014 decision on an Open Access application on the West Coast Main Line. Moreover, we note that ORR only approves open access applications which are not primarily abstractive and thus generate a certain level of revenue from previously unmet demand.

also note that ORR has commissioned new work to establish the volume of new passenger growth generated by OAOs on the East Coast main line.

3.35 AECOM's analysis found that, on average:

- passenger journeys grew by 42% at stations with competition compared with 27% at stations without competition;
- over the same period, revenue increased by 57% at stations with competition compared with 48% at stations without competition; and
- revenue yield (ie average fare per passenger) therefore rose more slowly at stations with competition, increasing by 11% over the period, as compared with stations without competition where revenue yields rose by 17%.

We note that these figures may slightly overstate the benefits competition has brought in this area if, for example, some of this growth in passenger numbers was abstracted from other stations which are not included in the sample.

3.36 It should also be noted that AECOM compiles data which could be used as a control to account for the impact of changes in demand, namely employment and population growth, but does not use this in its analysis. Virgin also observed that its own analysis of East Coast revenue trends indicated that flows with competition outperformed in passenger numbers compared to other flows, but significantly underperformed in revenue, suggesting that passenger volumes increased and fares fell.

3.37 In conclusion, however, we consider that the general direction of these effects found by AECOM are likely to be correct for three reasons. First, the results are in line with those found by Arup (2009) using a somewhat different methodology, as discussed below. Second, these figures are based on averages from a number of stations, and so passenger growth caused by abstraction from one station to another station would be more likely to be cancelled out and so not have an overly positive effect on the average values. Finally, they are in line with economic theory, which would normally suggest that introducing competition lowers prices and raises passenger numbers.

3.38 AECOM also compared revenue yield trends at Northallerton and York for the financial years ending April 2008 and April 2012. The results indicated that Grand Central entered the market at a higher average fare than East Coast on journeys from London to York and Northallerton as it did not offer heavily discounted advance purchase tickets (although its walk-up dedicated fares were cheaper than those of East Coast). However, competition led to yields on both operators' services falling over the period. In constant prices, overall

average yield fell by 10% at York and by 13% at Northallerton. This contrasts with increasing average fares at East Coast main line stations where there was no competition.

- 3.39 In order to examine the extent to which OAOs could grow the market through introducing new direct services, AECOM examined revenue growth at Thirsk, Eaglescliffe, Hartlepool and Sunderland. Over the period from 2007 to 2014, revenue grew by 552% from £1.4 million to £9.1 million. While this success is remarkable, we are aware that there may have been particular circumstances which led to success in this area (namely a large underserved population, with no previous direct service to London, and, at Eaglescliffe in particular, good car parking facilities allowing passengers from a large new catchment area to be attracted). Therefore, while it seems that introducing competition can have positive effects in terms of growing the market, this may not be of the same magnitude as the results at these four stations.
- 3.40 In 2009, Arup examined the impact of the launch of Grand Central's services between London and Sunderland in December 2007 (the work predated the increase in Grand Central's frequency and the launch of its services to Bradford). Arup's analysis, commissioned by ORR, was consistent with the results of the AECOM work, finding that passenger growth from Northallerton and York to London (where Grand Central competed with the incumbent operator) significantly outperformed control flows despite similar levels of regional economic growth. The improvements could not be fully explained by a reduction in generalised journey time.¹⁵² Lower fares enabled Grand Central to grow its market share, while extra capacity offered by Grand Central offered benefits to customers.

Wider economic impact

- 3.41 In terms of the wider economic benefits of the introduction of the Grand Central service, Arup (2009) notes that new journey opportunities were created from Sunderland, Hartlepool, Eaglescliffe and Thirsk to London. Since the Arup report was published in 2009, Grand Central launched services to other stations that were not previously served directly from London, including Pontefract, Mirfield, Brighouse, Halifax and Bradford.¹⁵³

¹⁵² Generalised journey time is a measure of the overall temporal cost of a journey and is made up of a number of component costs, including the fare and journey time and other factors, which may include waiting time and parking costs.

¹⁵³ As set out in paragraph 3.32, Grand Central also invested in Wakefield Kirkgate station, creating additional direct journey opportunities to London from Wakefield (prior to the Grand Central service, customers could only travel directly to London from Wakefield Westgate station).

Alliance Rail (London to Blackpool from 2018)

- 3.42 The new operation, running under the GNR brand, will increase the number of direct services between London and Blackpool from one to six or seven each way per day.
- 3.43 The new services are expected to call at Milton Keynes, Nuneaton, Tamworth, Lichfield Trent Valley, Crewe, Preston, Kirkham & Wesham and Poulton-le-Fylde. At a number of these stations, the new operator will compete for passengers against Virgin and London Midland. It will also create new direct services between London and Poulton-le-Fylde and Kirkham & Wesham. There will be an increase in direct travel options from some other stations and some journey times will be improved including from London to Tamworth and Lichfield Trent Valley (which will also benefit from the higher service quality offered by intercity services).
- 3.44 The services will be operated by four new six-car tilting 125mph Pendolino trains built and paid for by the operator. ORR stated in its approval decision that these will have similar or better traction characteristics to the Pendolinos using the route today.¹⁵⁴ GNR will also invest £1.5 million in station improvements.

Overlapping and parallel franchises

- 3.45 This section considers the degree of on-rail competition on overlapping and parallel franchises, the extent of which varies significantly according to the frequency of the overlapping services and the extent of journey time differentials between operators.
- 3.46 In contrast to OAOs, which are free from franchise specification, the factors on which franchised TOCs are able to compete is restricted due to the detail of the franchise specification which, for example, defines service frequency and other service characteristics. Franchised TOCs are, however, free to compete on fares, although the lead operator providing interavailable tickets may only offer permanent dedicated advance fares in addition to those that are interavailable (ie it cannot offer dedicated anytime or off-peak 'walk-up' fares).
- 3.47 In Appendix C of our discussion document published in July, we examined the extent of competitive interaction between overlapping and parallel franchises

¹⁵⁴ ORR (August 2015), [Decision on application for access to West Coast main line](#).

across each of the overlaps.¹⁵⁵ A number of themes emerged from this analysis:

- The degree of price competition between franchised TOCs on overlapping and parallel franchises appears to depend on journey distance, relative journey times, frequency of services, the nature of the franchised TOCs (eg whether they are long-distance or regional operators) and the extent of franchise specification.
- Where franchised TOCs compete on shorter distance flows, such as between London and Cambridge and London and Peterborough, the franchised TOC competing with the lead operator typically offers a lower dedicated walk-up fare in competition with the lead operator's inter-available fare. This offers passengers a greater range of fare and service options, including a number of cheaper fares, and may also constrain the lead operator's unregulated fares. In the London to Cambridge and Peterborough examples, commuters benefit from cheaper season ticket options.
- In a number of cases, franchised TOCs competing with the lead operators operate a slower service than the lead operator (with the lead operator sometimes running an intercity service and the competitor a metro or regional service). In some of these examples, the franchised TOC with the slower service appears to offer deep discounts, particularly on advance tickets. Where there is competition on parallel franchises, for some passengers, the franchised TOC with the longer journey time may still offer a shorter overall journey time given the location of the stations relative to the passenger's ultimate origin and destination.
- Long-distance intercity franchised TOCs competing on overlapping flows appear to primarily compete on the price of their dedicated advance tickets, particularly where journey times are similar on both operators. This appears to generate passenger benefits by way of lower fares.
- Competition between franchised TOCs on overlapping and parallel franchises appears to be most intense where the franchises are loosely specified or where significant changes in franchises and/or access rights were permitted. For example:
 - (a) Chiltern Railways has a relatively loose franchise specification compared with other franchises and was incentivised to invest in new

¹⁵⁵ *Competition in passenger rail services in Great Britain: A discussion document for consultation*, [Appendix C](#), July 2015.

rolling stock, launch free wi-fi, introduce new timetables and improve line speeds in order to compete with Virgin Trains on the London–Birmingham route in response to the introduction of Virgin’s new ‘very high frequency’ high-speed timetable following the West Coast main line upgrade.¹⁵⁶ Chiltern Railways’ customers benefited from lower fares, refurbished rolling stock, improved services (branded as ‘Mainline’) and faster journey times (cut by 20%). The total market for rail traffic between London and Birmingham grew, as did the premium paid to government.

(b) London Midland increased its service frequency on services from London to Birmingham and North West England through changes to its access rights and enhancements to its rolling stock to allow 110mph running. The new rolling stock also offered tables and power sockets throughout. Competition from Virgin Trains and Chiltern Railways was one driver for the enhancements.¹⁵⁷

- The frequency of overlapping services is likely to have an impact on the intensity of price competition. Competition between franchised TOCs appears to be less intense where one of them runs only an infrequent service.

Changes to the level of franchise overlap

3.48 There have been a number of changes to the degree of on-rail competition in recent years as the geographic reach of franchises has changed and as OAOs have introduced new services. Although the previous section highlights that there remain a number of franchise overlaps on which operators compete, the number is less than in previous years following a policy introduced by the SRA to simplify the franchise map and to seek to have a single franchise operator at each London terminus station (see paragraph 2.101). This allows us to examine the impact of removing on-rail competition.

Arup 2009 analysis of changes to franchise overlaps

3.49 The effect of some of these changes in overlap is considered by Arup (2009) in the study referred to above. The three case studies are considered below.

¹⁵⁶ Chiltern Railways’ franchise specifies first and last trains, the quantum (not timing) of trains per hour and action to deal with overcrowding.

¹⁵⁷ ORR/CT/1463, *Incentivising better capacity management in GB rail: Case study evidence from other industries and railways*, Credo, March 2015.

Ipswich to London: Anglia Railways and National Express East Anglia

- 3.50 Prior to the formation of the London and Eastern Railways ('One') franchise, Anglia Railways and First Great Eastern competed on flows between London, Colchester and Ipswich. Evidence from Arup's analysis found that the timetable changes resulting from the introduction of a single operator meant that service characteristics deteriorated for passengers. In particular, service frequencies reduced and journey times were extended and the number of seats per hour reduced. Passenger growth at Ipswich and Colchester was lower compared with control flows and revenue yields (ie average fare per passenger) increased at a faster rate compared with Norwich and Stowmarket. Passenger satisfaction scores¹⁵⁸ slightly deteriorated and some softer measures delivered by one operator before competition was removed were affected. However, service performance levels¹⁵⁹ improved, which – as set out in paragraph 2.101 – was the rationale for the reducing the number of operators.

Reading to London: First Great Western and South West Trains

- 3.51 The extent of on-rail competition on this flow was reduced following the merger of Thames Trains into the Great Western franchise in 2004, first as First Great Western Link and then as part of the enlarged Greater Western franchise. Prior to the changes, First Great Western was the dominant operator, with Thames Trains attracting about a third of the total revenue on the flow. The revenue allocated to South West Trains, which ran a much slower service, was negligible. Arup's analysis is inconclusive as to the impact of the changes following the removal of competition. Service frequencies did not change and the overall change in revenue yield affecting Reading was similar to that at Maidenhead (a control flow). There was an improvement in service performance levels, although there was a deterioration in passenger satisfaction.

Gatwick Airport to London: Thameslink and Southern

- 3.52 Arup (2009) examined the lessening of on-rail competition brought about by the amalgamation of Gatwick Express services within the Southern Railway franchise in June 2008. While there were no significant changes to the timetable or passenger growth trends, subsuming Gatwick Express into

¹⁵⁸ The survey measures passenger satisfaction of the on-train and station environments, eg train or station cleanliness and the helpfulness and attitude of train or station staff.

¹⁵⁹ This is reflected in Public Performance Measure (PPM) data, which is calculated from the percentage of planned trains that are neither cancelled nor late. See ORR Passenger & Freight Rail Performance: Quality and Methodology Report (November 2015).

Southern led to a large increase in yield (ie average passenger fares) between 2008 and 2009 affecting Gatwick Airport, significantly larger than on the control flows. Service performance increased although passenger satisfaction reduced.

Summary

- 3.53 Arup (2009) examined only three of the many changes in franchise overlaps that resulted from the SRA's policy decision to reduce the number of franchises. Two case studies suggested that average fares (measured as overall revenue yield) increased after the franchise overlaps were removed, while the other did not find an overall change compared with the control flow. Service performance increased in the three examples, although passenger satisfaction decreased.

Recent changes to overlapping franchises

- 3.54 There have been a number of further changes to the degree of on-rail competition in recent years. One example is the award of the new Thameslink, Southern & Great Northern franchise to Govia in September 2014.
- 3.55 The new franchise removed on-rail competition between First Capital Connect and Southern including between London and Gatwick Airport, Three Bridges, Haywards Heath and Brighton. However, we were told by the DfT that a deliberate decision was taken to have only one operator running through the Thameslink cross-London section during the Thameslink upgrade programme in order to reduce the risk to the delivery of the project. We were also told that the new franchise is designed in such a way that it could be split again in the future following the completion of the upgrade work.
- 3.56 In terms of the impact on fares, we note that, following the award of the new combined franchise, cheaper fares offered by Thameslink (the operator replacing First Capital Connect) will rise over time to harmonise with Southern's fares.
- 3.57 Which? noted that Thameslink offered a London–Brighton off-peak ticket at £17.10 against £26.70 on Southern and that the cheaper fare may be lost after harmonisation.¹⁶⁰ An annual season ticket between Brighton and London cost £4,304 after the cheaper dedicated £3,640 season ticket was withdrawn, while from Three Bridges to London, the cheapest season ticket was £3,392 per year, an increase of £436 on the dedicated fare.

¹⁶⁰ Which? (March 2015), Trains Satisfaction Survey, Save money on your route.

3.58 The DfT told us that, notwithstanding the impact on fares, the legacy of multiple competing operators on the Brighton main line resulted in an inefficient timetable and poor performance. However, ORR told us that performance had declined since the franchises were combined – although it is not clear the extent to which this is due to the upgrade works at London Bridge station.¹⁶¹ The DfT also suggested that the historical fare structure was complex and, in some respects, confusing. We consider the relationship between on-rail competition and operational performance and ticketing complexity in detail in Chapter 5.

On-rail competition in other European countries

Introduction

- 3.59 On-rail competition has developed in a number of other European countries, in particular in Austria, the Czech Republic, Germany, Italy and Sweden. This trend is continuing in a number of other European countries, with proposals for greater competition being developed in countries including Finland, France and Spain.
- 3.60 The EU is also focusing on developing a strong and competitive rail transport industry through a number of packages aimed at restructuring the European rail transport market. The ‘market pillar’ of the Fourth Railway package, which focuses on liberalising domestic passenger railway services, is currently being enacted. An overview of the EU railway packages is set out in the Appendix.
- 3.61 While we note a number of differences between on-rail competition in Great Britain and other European countries, examining the European experience offers valuable insights as to the benefits and costs of on-rail competition on a greater scale than currently exists in Great Britain.
- 3.62 The intensity of on-rail competition is different in each country and depends on a number of variables defined by policymakers, such as the degree of liberalisation, the scope of public service contracts (PSCs) and PSOs,¹⁶² the manner in which PSCs are awarded (ie competitive tendering versus direct

¹⁶¹ In period 9 of 2015–2016, the Public Performance Measure for Southern Mainline and Coast was 81.8%, down from 89.6% in 2011–2012. In the same period, the Thameslink Public Performance Measure was 80.6%, down from 90.5% in 2011–2012.

¹⁶² Article 2 of Regulation (EC) No 1370/2007 defines a PSO as ‘a requirement defined or determined by a competent authority in order to ensure public passenger transport services in the general interest that an operator, if it were considering its own commercial interests would not assume or would not assume to the same extent or under the same conditions without reward’. A PSC is defined as ‘one or more legally binding acts confirming the agreement between a competent authority and a public service operator to entrust to that public service operator the management and operation of public passenger transport services subject to public service obligations’.

awards), the structure of the market (ie vertical integration or separation) and the presence of an independent economic regulator.

- 3.63 In summary, as set out in Table 4 below and described in further detail in the Appendix, the level of open access on-rail competition is relatively low in Germany, but is higher in Austria, the Czech Republic, Italy and Sweden (although subject to different legal and market constraints).
- 3.64 As discussed further below, efficient open access entry, signalled by the sustainability of the OAO's business and its share of the relevant market segment, has had a positive impact on those markets in terms of price, quality of service, demand growth and, sometimes, efficiency. There have also been some pitfalls (described further in Chapter 5), including uncertainty regarding financial stability and impact on public funds.
- 3.65 Table 4 and Figure 3 show the OAOs active in the EU in 2015 and provide a direct comparison of the main policy factors affecting the rail market design in European countries with on-rail competition.

Table 4: OAOs active in Europe in 2015

Country	Main OAOs	Service	Entry date	Market share (%)	
				OAO in relevant segments/routes	Incumbent country overall
Austria	Westbahn	LD	2011	[20–25]*	88
Czech Republic	RegioJet Leo Express	LD	2011	[35–40]†	95
		LD	2012	[25–30]†	
Germany	HKX	LD	2012	[5–10]‡	88
Great Britain	Grand Central First Hull Trains	LD	2007	[0–5]§	-
		LD	2002	[0–5]§	
Italy	NTV	HS	2012	[20–25]#	83
Sweden	Veolia/SkandJern/TAG MTR	LD	2011	N/A	68
		LD	2015	[25–30]~	

Source: Based on 2013 data (passenger miles) available in the Staff Working Document accompanying the European Commission's Fourth report on monitoring development of the rail market (SWD (2014) 186 final) and from interviews conducted with national authorities and OAOs in Austria, the Czech Republic, Germany, Italy and Sweden.

* Market share estimate relating to the Vienna–Salzburg route.

† Market share estimate relating to the Prague–Ostrava route.

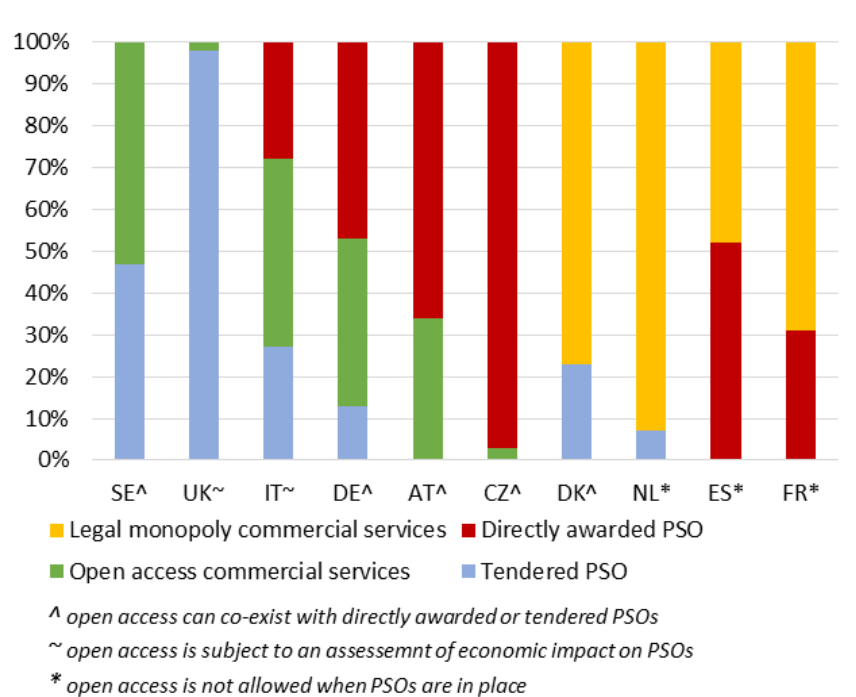
‡ Market share estimate relating to the Hamburg–Cologne route.

§ Market share estimate relating to long-distance services on the East Coast main line.

Market share estimate on the overall national high-speed services market.

~ Market share estimate relating to the Stockholm–Gothenburg route.

Figure 3: Rail market design in EU countries (2012)*

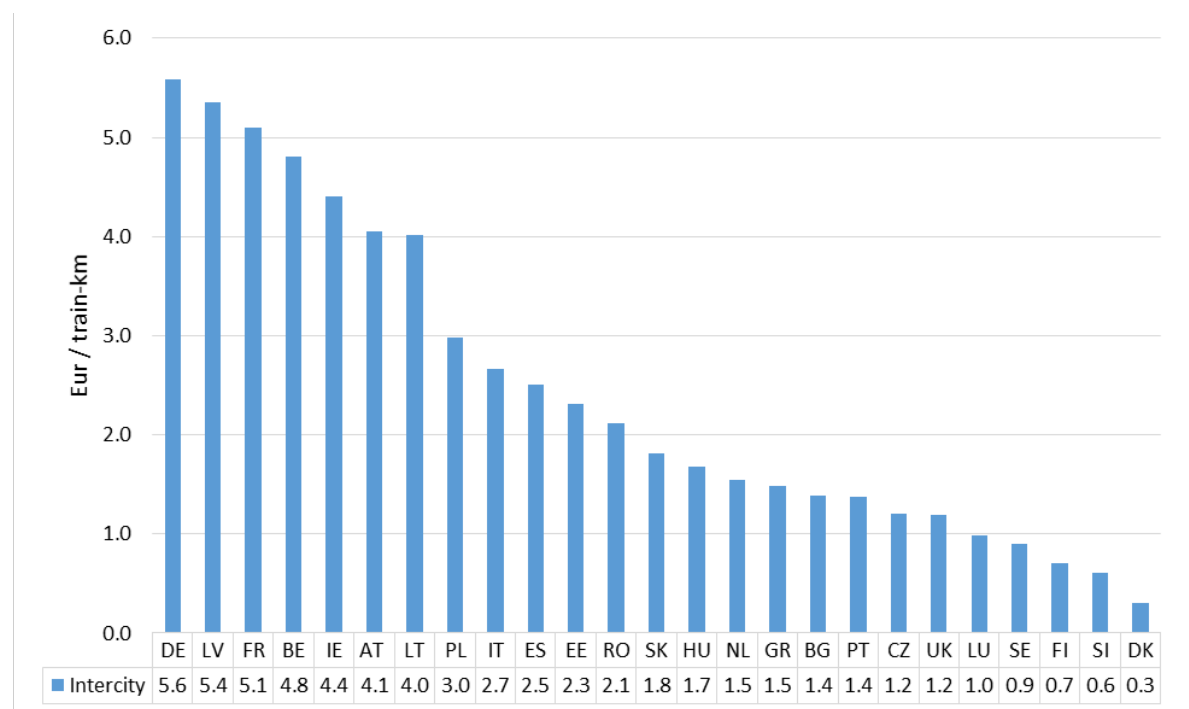


Source: Elaboration on data from EU Commission RMMS questionnaires – Annex 15 of SWD (2014) 186.

* In Great Britain, franchise contracts include bundles of both profitable and unprofitable services.

3.66 It is also relevant to note that there is considerable variation in the track access charges paid by train operators across Europe. Figure 4 presents the track access charges for intercity/long-distance services.

Figure 4: Track access charges for intercity/long-distance services (2014)*



Source: EU Commission – SWD (2014) 186 final.

* Track access charges in 2014 for a 500-tonne intercity train.

- 3.67 A more detailed description of the evolution of on-rail competition in Austria, the Czech Republic, Germany, Italy and Sweden is set out in the Appendix.

Benefits of on-rail competition in Europe

- 3.68 This section considers the benefits that on-rail competition has generated in continental Europe, including in relation to fares, service quality and innovation, passenger usage and efficiencies.

Fares

- 3.69 The European case studies offer evidence of how open access competition has affected fares.
- 3.70 In Austria, the OAO's entry generated intense price competition with the incumbent¹⁶³ and in the Czech Republic the three operators have engaged in intense price competition.¹⁶⁴
- 3.71 In Italy, the incumbent reacted to competition from the OAO, NTV, by offering frequent discounts, exerting downward pressure on fares for high-speed services. As a result, the fares for high-speed services are now similar to the fares for those non-high-speed long-distance services that are operated on a commercial basis but which are not subject to competitive pressure.¹⁶⁵
- 3.72 In Sweden, the early new entrants (eg Veolia) often focused on the low price segment of the market and did not therefore compete strongly with the incumbent. However, the entry of a new OAO, MTR, which competes head-to-head with the incumbent has generated an extensive discounted tickets campaign from the incumbent on the Stockholm–Gothenburg route.¹⁶⁶
- 3.73 In Germany, the OAO, HKX, focused on offering low fares with the aim of attracting custom from lower income groups, including students and the retired. In contrast to its routes with no competition, Deutsche Bahn (DB)

¹⁶³ The Austrian OAO, Westbahn, offered discounted fares for regular travellers and the incumbent consistently reduced its fares by introducing special offers, starting this practice three months before the OAO's entry.

¹⁶⁴ For example, when RegioJet entered the market in September 2011, it offered fares which were, on average, 25% lower than the incumbent's fares for a slightly slower service (87 mph versus 99 mph). After a month, the incumbent reacted by lowering its fares by 30% as well as waiving reservation fees and offering special discounts. Since competition in the market has been introduced, according to OAOs, average fares have decreased by 50%.

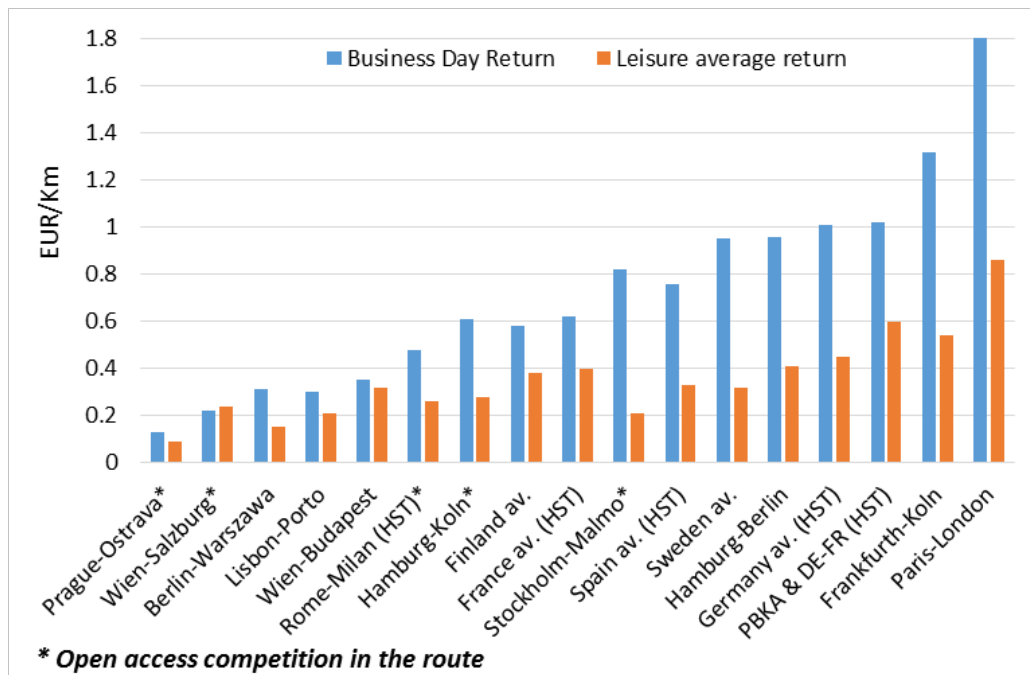
¹⁶⁵ The data compares price/km on the incumbent Trenitalia high-speed services ('Frecciarossa'), eg the Florence to Rome route with that on the incumbent non-high-speed long-distance services ('Frecciabianca'), eg on the Adriatic route from Pescara to Bologna.

¹⁶⁶ The incumbent reduced its fares by 10 to 15% following MTR's entry. Currently, according to MTR, its cheapest fares are 10-15% lower than the incumbent.

responded by freezing its fares on the Hamburg–Cologne route and by introducing refurbished rolling stock.

- 3.74 Figure 5 presents the estimated average return fares (in terms of €/km) on the main long-distance European commercial routes. Fares on routes with on-rail competition (eg Prague–Ostrava) are some of the lowest in Europe, and often lower than other routes in the same country.

Figure 5: Estimated average return fare (€/km) in the main EU commercial routes (2013)



Source: Elaboration on data from European Commission – SWD (2014) 186 final.

Notes:

1. Data, as of February 2013, refers to (a) simple average day return business class fare (purchased eight days in advance) and (b) simple average leisure return (weekend trip with advance purchase and weekend trip with immediate departure).
2. PBKA = Paris–Brussels–Cologne–Amsterdam. HST = high-speed trains.

Service quality and innovation

- 3.75 In Austria, the OAO introduced free wi-fi and the incumbent followed this innovative offer. Moreover, the Austrian OAO introduced ticketing innovations such as online retailing, on-board ticketing services offered by stewards¹⁶⁷ and the sale of discounted tickets at tobacco kiosks. The OAO's five-stop service also achieves the same journey time as the incumbent three-stop service due to its more technologically advanced rolling stock. The Austrian OAO has reported very high overall customer satisfaction and punctuality rates,¹⁶⁸ which are higher than those of the incumbent. The OAO told us that

¹⁶⁷ In peak-time hours, there is one steward per coach.

¹⁶⁸ The Austrian OAO reported a 95.5% punctuality rate (based on a 5-minute time range), against the incumbent's rate of 86%.

the incumbent has now responded to this competitive pressure by enhancing the quality of its service, leading to higher customer satisfaction.

- 3.76 In the Czech Republic, service quality improvements have also been generated. For example, the OAOs introduced higher quality standards in their services than that of the incumbent (such as wi-fi and lower-floor trains to facilitate access) and also offered complimentary parking and taxi services upon departure and arrival.
- 3.77 In Italy, the OAO explicitly started competing with the incumbent on service quality and innovation, including by introducing new rolling stock which offers more comfortable seating, a greater range of dining options and a cinema car. The incumbent reacted with a service differentiation strategy and increased frequency (especially in the off-peak hours) and also by investing in new high-speed rolling stock, which will enter service in 2017.
- 3.78 In Sweden, one OAO introduced sophisticated restaurant services and the new OAO, MTR, has started competing with the incumbent on the Stockholm–Gothenburg route in terms of price and quality of service in order to win passengers from rail, car and air. MTR has introduced new trains, complying with more advanced environmental requirements (which are perceived to be a relevant component of service quality in Sweden) and high-quality service on-board. MTR has scored very highly in customer satisfaction surveys.
- 3.79 In summary, these case studies indicate that, in addition to generating lower fares, on-rail competition in Europe has resulted in improvements in service quality, innovation and service frequency, leading to higher customer satisfaction.

Passenger usage

- 3.80 In the Czech Republic, we were told that the customers of the new entrants (which currently have a combined market share of 55 to 60%) were largely new to the rail market and, therefore, demand was not significantly abstracted from the incumbent. The new entrants told us that overall demand for rail travel on the Prague–Ostrava increased by 40% since on-rail competition was introduced. In Italy, when the OAO commenced its high-speed operations, rail demand grew by 10 to 15% and the overall frequency of services was increased, mainly due to the transfer of passengers from air transport services on the Milan–Rome route.¹⁶⁹ In Austria, overall demand for rail travel on the

¹⁶⁹ Steer Davies Gleave Consultancy, Research for European Commission, DG Move, 2012.

Vienna–Salzburg route has been growing by 10% per year since on-rail competition started, with passengers attracted from road transport. As a result, the initial reduction in the incumbent's share of the passenger rail market was only about 1.5%, despite the growth of the OAO.¹⁷⁰ In Sweden, the explicit aim of the new OAO, MTR, is to target competing modes of transport rather than the incumbent rail operator.¹⁷¹ Overall demand for passenger rail services has grown since MTR entered the sector and MTR estimates that about 20% of this demand has been abstracted from air transport services.

- 3.81 In summary, on-rail competition generated market growth on almost all the routes involved. The new services often served previously unmet demand and also resulted in the transfer of passengers from other modes of transport, particularly from road and, in some cases, from air.

Efficiencies

- 3.82 There is limited information available on the costs of OAOs in other European countries and it is therefore difficult to assess the extent to which OAOs are able to achieve lower costs than incumbents.¹⁷²
- 3.83 We were told by the Austrian regulator that the OAO in Austria is understood to have lower overheads and lower staff costs than the incumbent, which allows it to compete effectively despite it having lower economies of scale and density. Moreover, the new Swedish OAO, MTR, told us that it is able to keep costs down by exploiting synergies with MTR Stockholm (the Stockholm metro network operations, which MTR took over in 2009). We were also told that a number of the OAO entrants in other European countries¹⁷³ have sophisticated yield management systems which allow them to generate additional revenue.¹⁷⁴

Conclusion on the benefits of on-rail competition across Europe

- 3.84 The evidence indicates that, in these examples, on-rail competition across Europe has delivered significant benefits to passengers in terms of exerting a downward pressure on fares, improving service quality and encouraging innovation, while also generating new rail demand and market growth.

¹⁷⁰ Steer Davies Gleave Consultancy, Research for European Commission, DG Move, 2012.

¹⁷¹ 'MTR Swedish open-access venture targets air and road', *International Railway Journal* (7 April 2015).

¹⁷² Table 10 of the impact assessment commissioned by the ORR presents some information on efficiencies from European on-rail competition.

¹⁷³ HKX in Germany, NTV in Italy and, potentially, MTR in Sweden.

¹⁷⁴ Yield management is a pricing strategy based on dynamic fare setting, which aims to maximise revenues by fully exploiting different consumers' willingness to pay.

- 3.85 However, there have also been some pitfalls, including concerns regarding financial sustainability and the impact of competition on public funds, which we consider and address in Chapter 5.

Differences between open access competition in Great Britain and other European countries

- 3.86 There are a number of differences between open access competition in Great Britain and other European countries including vertical integration, capacity constraints and PSOs (see the Appendix for an overview of the market structure in each country). These differences are considered below in order to put both the benefits and costs of greater on-rail competition in other European countries in context when considering the potential benefits that greater on-rail competition would be likely to deliver in Great Britain.

Vertical integration

- 3.87 As described in the Appendix, a major difference between most European systems and Great Britain is the level of integration in the market, both at the vertical and horizontal level. Continental European incumbents are typically vertically integrated companies¹⁷⁵ yet subject to obligations of functional and accounting separation imposed by the EU legislation (which does not impose a full vertical separation as there is in Great Britain).¹⁷⁶
- 3.88 Therefore in Austria, the Czech Republic, Germany and Italy, the OAOs compete against a vertically integrated incumbent operator, which can act as an entry barrier. In particular, there have been concerns that OAOs may not be able to compete on a level playing field, and that incumbents may raise competitors' operating costs, through price and non-price discrimination or by engaging in other exclusionary practices, such as predatory pricing.
- 3.89 The problems arising from vertical integration and the lack of a level playing field arose in Italy prior to the establishment of the independent regulator in

¹⁷⁵The incumbents operate both at upstream level, as monopolist network operator, and at downstream level, as TOC.

¹⁷⁶Moreover, the transposition and implementation of EU rail directives at national level has not always been a smooth and effective process in continental Europe. For example, the European Commission referred to Austria the EU Court of Justice (in 2014) for not ensuring financial transparency (and therefore failing to ensure that public funds paid for PSOs were not used to cross subsidise other transport services); Germany (in 2013) for failure to separate financial flows between train operator and rail track manager; Italy (in 2011) because of concerns regarding lack of independence of the regulatory body (previously a ministerial department) from the government; Czech Republic (in 2009) for insufficient separation between the infrastructure manager and the incumbent train operator company.

2013. Issues arising included margin squeeze¹⁷⁷ and non-price discrimination.¹⁷⁸ In Germany, there have been problems in terms of access to ticket distribution, stations and the DB Energie electricity network. Action was taken by the sector regulator.¹⁷⁹ Complaints by the OAO in Austria have concerned both discriminatory path allocations and the exclusion of the OAOs' train services from the timetable published by the incumbent.¹⁸⁰ However, the OAO in Austria told us that OAOs are now able to compete on a more level playing field. The Czech OAOs filed complaints before the national and EU competition authorities about exclusionary practices (namely predatory pricing sustained by cross-subsidisation), undertaken by the Czech incumbent.¹⁸¹

- 3.90 In contrast, in Sweden, long-term vertical separation has allowed a more level playing field.

Capacity constraints

- 3.91 Capacity constraints in other European countries are often less severe than in Great Britain. Figure 6 illustrates the intensity of the use of network in various European countries.

¹⁷⁷ Where a vertically integrated operator, dominant in the upstream market, reduces profit margins of its competitors in the downstream market making competition unsustainable. The vertically integrated operator puts in place this exclusionary practice by increasing prices of upstream inputs sold to its competitors and/or reducing its downstream prices.

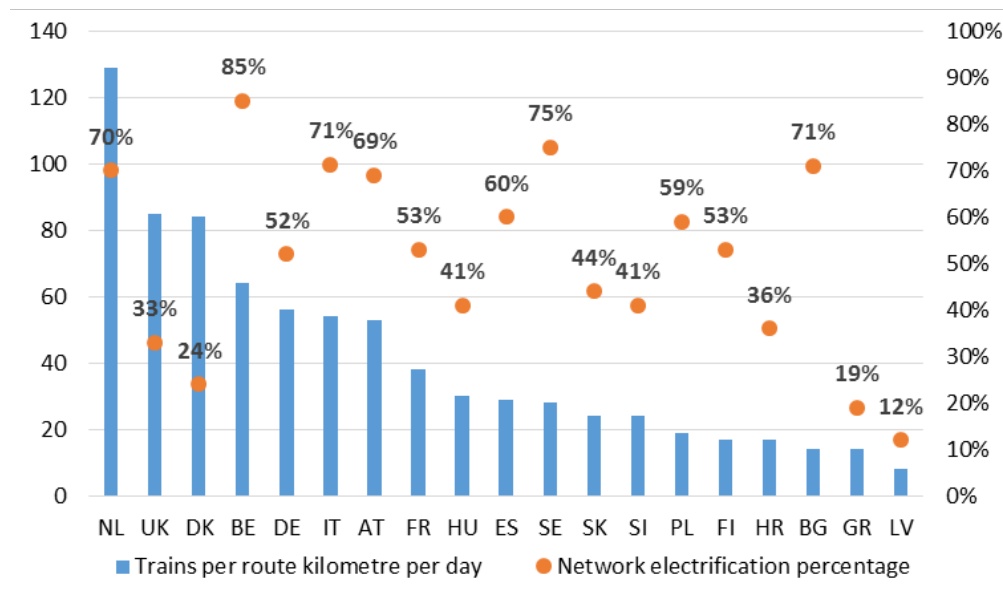
¹⁷⁸ In 2014 the Italian Transport Regulator (ART) imposed transparency and non-discrimination obligations (eg obligations concerning access to commercial space in the stations and train depots). See ART Regulation 70/2014. In 2014 the Italian National Competition Authority (AGCM) accepted the incumbent's commitments on alleged abuse of dominance infringements (namely margin squeeze, access only to secondary stations, and allocation of paths forcing empty runs to depots). See AGCM decision A443.

¹⁷⁹ In 2009, the regulator BNetzA rejected clauses in DB Netz AG's network statement and the Federal Administrative Court upheld BNetzA's decision finding that most of these were discriminatory. In October 2010, BNetzA asked DB Energie to open its energy network to third parties, against which DB Energie brought an appeal. The Higher Regional Court of Düsseldorf agreed with the opinion of the regulator and the energy network will need to be opened to other energy suppliers from 2012; this has now occurred. In February 2012, BNetzA required that DB Energie reduce the fee by 23% compared with its proposed amount. Complaints regarding ticket selling were made to the Swedish competition authority signalling that the main selling platform is the incumbent's website which sets price and access conditions. However, the Swedish competition authority stated that the ticket platform was not an essential facility and thus refusal to supply access did not represent abusive conduct.

¹⁸⁰ Complaints from the OAO about discriminatory treatment by the incumbent were addressed by the sector regulator, Schienen-control, either by facilitating a negotiated agreement between the parties or via a formal decision. Some complaints were also brought before the Austrian Competition Court.

¹⁸¹ The Czech Republic's competition authority is currently investigating this allegation.

Figure 6: Network usage intensity and electrification percentage (2013)*



Source: Elaboration on data from IRG-Rail Annual Market Monitoring Report 2015 and Eurostat 2014.

* This intensity measure is calculated by dividing the total train kilometres by the route length and number of days to give the average number of trains per route kilometre per day.

3.92 We also note that in a number of the case studies considered, competition takes place on dedicated high-speed networks with spare capacity. In contrast, open access competition in Great Britain is on conventional (albeit intercity) lines with limited capacity available to new entrants, which limits the scale of on-rail competition.¹⁸²

Passenger Service Contract scope, award and PSO definition

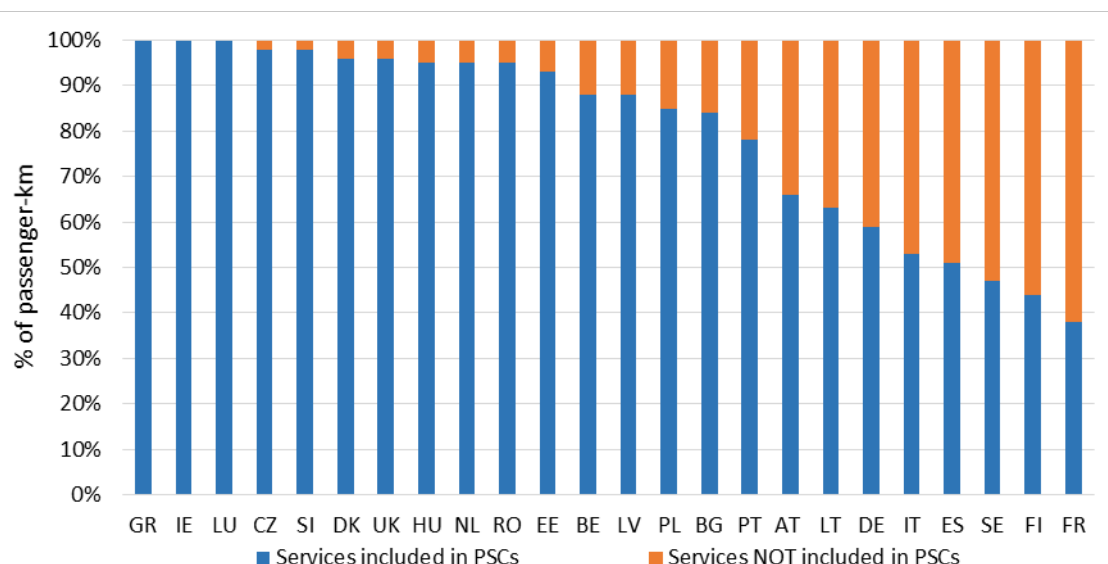
3.93 Another relevant difference between Great Britain and the other European countries examined is the ratio between services included in PSCs and services not included in PSCs. This is particularly true for high-speed and long-distance services, while for the regional/suburban services it is more similar (see Figures 7 and 8 below). Moreover, in most of the European countries where open access competition has developed, there is a clear definition of PSO services and a clear separation between PSO and commercial services,¹⁸³ while franchise contracts in Great Britain generally include bundles of profitable and unprofitable services.¹⁸⁴

¹⁸² We note in Chapter 6 that there may be an opportunity for greater on-rail competition on high-speed services in Great Britain once HS2 is introduced.

¹⁸³ Article 4 of Regulation (EC) No 1370/2007 states that PSCs should clearly define the PSOs with which the public service operator is to comply and the geographical areas concerned.

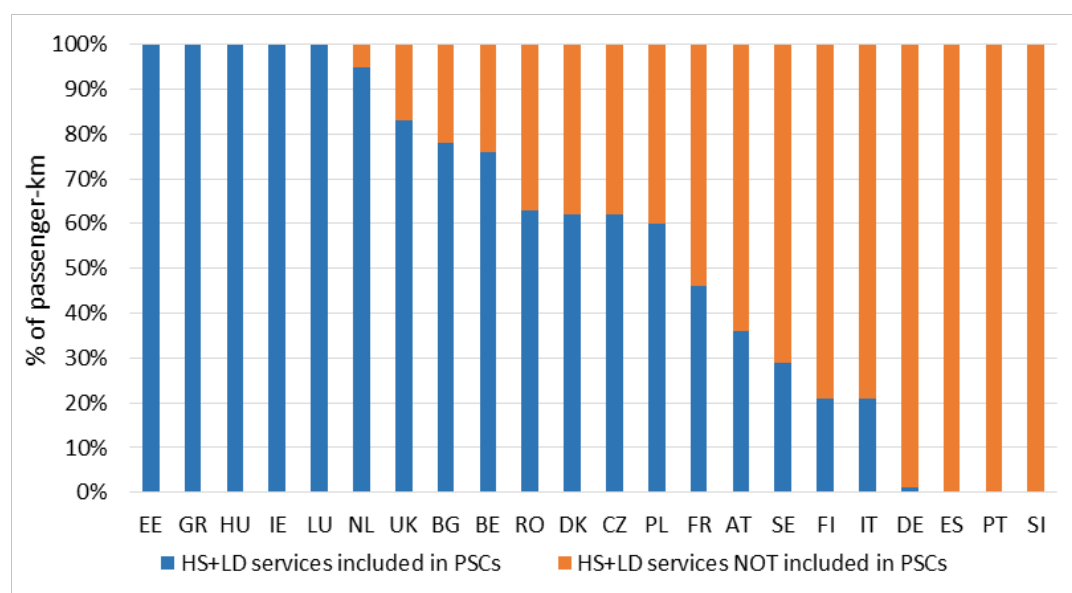
¹⁸⁴ Arriva told us that an increased clarity of the distinction between commercial and PSO market segments in Great Britain, with appropriate competition environments for each, would make the franchising process even more effective in delivering its aims. The process of clearly identifying the rail market segments or service elements which do require financial support would allow these to be identified and treated as PSOs, with greater on-rail competition focusing on commercial services.

Figure 7: Service included in PSCs in 2012 (% passenger-km)



Source: EU Commission RMMS questionnaires – Annex 15 of SWD (2014) 186.

Figure 8: High-speed and long-distance services included in PSCs in 2012 (% passenger-km)



Source: Elaboration on data from EU Commission RMMS questionnaires – Annex 15 of SWD (2014) 186.

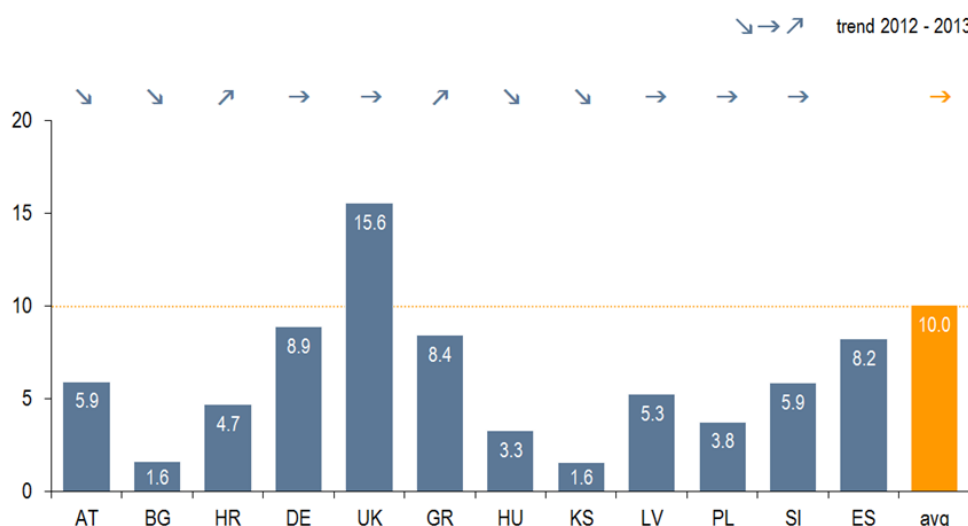
3.94 Furthermore, the system in Great Britain differs from many other European countries (with the exception of Sweden) in terms of the scope of the competition for the market. In Britain, PSO services are generally awarded by way of a competitive bidding process rather than direct awards, while the percentage of tendered PSOs is very low in Austria and the Czech

Republic,¹⁸⁵ low and slowly increasing in Italy¹⁸⁶ and increasing to a greater degree during last few years in Germany (currently at about 60%).¹⁸⁷

Network investments and unprofitable service funding

3.95 There are also different approaches to financing the network in Great Britain than in other European countries. As noted above, in Great Britain, PSOs and commercial services are bundled together in franchises, with profitable services, in effect, cross-subsidising unprofitable services. In other European countries, the non-PSO routes are often separately defined. In addition, as set out in Chapter 2, in Great Britain, a greater proportion of revenue is derived from passengers than from general taxation. This is reflected in higher average passenger fares (Figure 9) and lower average public subsidies (Figure 10) in the UK relative to many other European countries.

Figure 9: Average passenger fare (euro cents per passenger km) on all routes (2013)



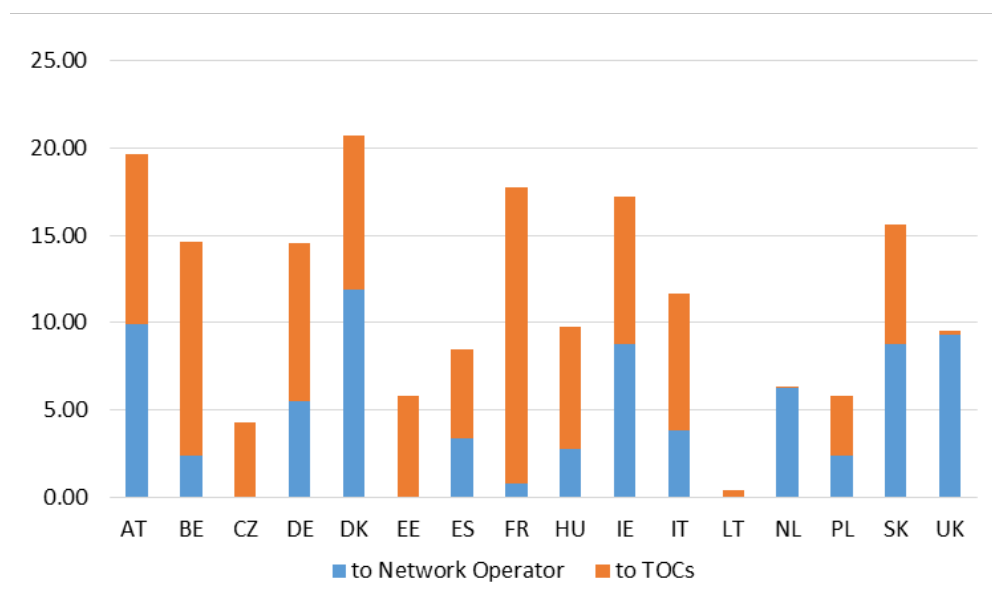
Source: IRG-Rail Annual Market Monitoring Report 2015.

¹⁸⁵ The Czech Republic has planned a number of PSO tenders to commence by late 2015/early 2016.

¹⁸⁶ In Italy, long-distance PSO services are allocated to the publicly owned incumbent by direct award, while at regional level, according to Regulation 1370/2007, it is possible (but not compulsory) to tender out regional PSOs. A number of legislative amendments and judicial decisions in the last few years created a high level of uncertainty in this regard.

¹⁸⁷ In Germany, PSOs are defined only on regional/suburban services, while long-distance services are operated on a purely commercial basis.

Figure 10: Public subsidies (euros per train km) on all routes (2012)



Source: EU Commission RMMS questionnaires – Annex 15 of SWD (2014) 186.

The incremental benefits of on-rail competition

- 3.96 The DfT noted in its consultation response that where competition in the market has been introduced in other EU countries, this has tended to be the first introduction of any form of competition to the relevant network (or part thereof), whereas in Great Britain, there is already strong competition ‘for’ the market.
- 3.97 In this regard, we note that in Sweden, which was the first country in Europe to introduce vertical separation, most services included in PSCs are awarded through a competitive tender, as in Great Britain.¹⁸⁸ We also note that in a number of European countries in which on-rail competition has taken place for some years, the entry of additional operators (such as in Sweden and the Czech Republic) has still led to incremental benefits for passengers.
- 3.98 It is also relevant to note that in countries in which on-rail competition represented the first significant intra-mode competition faced by train operators, the resulting passenger benefits were often achieved in the absence of a level playing field given the presence of vertically integrated incumbents. In contrast, Great Britain’s vertically separated rail sector offers a level playing field for in-market competition between train operators. Therefore, although the introduction of competition to the rail sector for the first time in countries such as Austria and Italy might have delivered greater incremental benefits

¹⁸⁸ The main difference in the competitive tender of PSCs in Sweden as compared with Great Britain is that, in Great Britain, such contracts include a larger element of commercial services.

than the expansion of on-rail competition in an environment of strong competition 'for' the market, the benefits achieved in these countries to date may be lower than the benefits that could be achievable through greater on-rail competition in Great Britain.

A trend towards greater rail competition in European countries

- 3.99 The trend towards greater competition in the rail sector is continuing, with a number of other European countries planning to open their services to competition. This trend is expected to continue as the market pillar of the EU's Fourth Railway Package is enacted.

France and Belgium

- 3.100 In France, Thello (a joint venture of Veolia Transdev and Trenitalia) began operating overnight services between Paris and Venice in 2011. The service was the first open access operation in France. In December 2014, Thello launched open access services between Marseille and Milan, following approval by the French rail regulator, competing with SNCF on certain flows.
- 3.101 In October 2015, Trenitalia announced that it was holding preliminary discussions with its suppliers and relevant regulatory bodies regarding the possible launch of an open access high-speed service between Paris and Brussels in direct competition with the Thalys service.¹⁸⁹ If taken forward, this would result in significant head-to-head competition on one of Europe's most important routes.

Finland

- 3.102 In Finland, the Transport Minister announced in October 2015 that work to open up the rail sector to competition would commence, with a report aiming to identify the possible options for competition planned for publication in spring 2016. The incumbent state operator, VR, currently has an exclusive agreement which runs until 2024. However, the Transport Ministry has raised concerns about the cost-effectiveness and quality of this arrangement, which it is now considering terminating early. The Finnish domestic rail freight market was opened to competition in 2007.

¹⁸⁹ Thalys is a high-speed service provided jointly by the Belgian, French, Dutch and German railways.

Germany

3.103 In Germany, a new OAO, Locomore, is planning to operate open access services between Stuttgart and Berlin from September 2016.¹⁹⁰ The current OAO, HKX, expanded its network in December 2015, when it extended its Hamburg to Cologne services to Bonn, Frankfurt and Koblenz. In July 2015, the German Monopolies Commission published a special report on competition in the rail sector¹⁹¹ concluding that the majority of travellers would benefit from functioning competition and urged policymakers to be more active in advancing competition in the sector.

Spain

3.104 In Spain, on-rail competition is being introduced on long-distance high-speed services. Legislation has now been passed that will lead to the gradual introduction of duopolies on high-speed routes, on which the incumbent RENFE is currently the only operator. The first route to be opened to competition will be that from Madrid to Valencia and Alicante. A tender process has been designed to select an operator to compete with RENFE for a seven-year period, after which full on-rail competition may be introduced. The tender is expected to take place in 2016.

3.105 We were told that the rationale for introducing duopoly competition is to increase efficiency, to facilitate a more dynamic industry and to increase the volume of passengers on the new high-speed network on which there is currently spare capacity.¹⁹² Duopoly competition was chosen as the mechanism by which to introduce competition in order to offer some protection to the incumbent for a transitory period while it adapts to competition. The asymmetry between the positions of the incumbent and new entrant is considered sufficient to reduce the risk of collusion.

3.106 We note that this has some analogies with our proposed 'Option 2' for introducing greater on-rail competition, which is discussed in Chapter 6.

International

3.107 Eurostar services are expected to face competition from Deutsche Bahn from 2017.¹⁹³

¹⁹⁰ Locomore's [website](#).

¹⁹¹ Monopolkommission (22 July 2015), [Special Report on competition on German railway markets](#).

¹⁹² Response by REGUTRAIN at UNED University (Madrid) to CMA consultation.

¹⁹³ Deutsche Bahn was granted an operating licence to run services in competition with Eurostar in 2013, but the operation of the new services was delayed.

Competition in other transport markets

The Great Britain rail freight sector

3.108 As set out in Chapter 2, freight train services in Great Britain operate on an entirely open access basis, ie there is full competition ‘in’ the market, rather than ‘for’ the market. There are currently seven separate rail freight operators in Great Britain. Services are not specified by government and freight operators are not subsidised, other than indirectly through lower track access charges and taxpayer funded enhancements.¹⁹⁴

3.109 In common with OAOs, freight operators pay variable charges, but not FTAC. The McNulty Report observed that ‘by paying its wear and tear costs, rail freight ensures that the network provider is no worse off from the existence of freight than from its absence’.¹⁹⁵ However, the fixed costs of the network are still essentially paid for by taxpayers (through the network grant) and passengers (through franchised TOCs’ FTAC payments) rather than by freight operators.¹⁹⁶ In addition, for the purpose of recovering freight avoidable costs¹⁹⁷ (not recovered by other charges) and fixed costs of freight-only lines, certain segments of the rail freight industry pay the freight-specific charge (FSC) and freight-only line (FOL) charge.¹⁹⁸

Competition between freight operators

3.110 The rail freight sector is characterised by high levels of competition between freight operating companies (but also between rail freight and road haulage). Since on-rail competition was introduced at privatisation, the industry has achieved growth of over 70% with the revenue of rail freight operators increasing by 44%.¹⁹⁹

3.111 The increase in rail’s share of land freight, from about 8% in 1995 to 11% in 2013 was achieved against the backdrop of decline in heavy industry²⁰⁰ and ongoing competition from road freight. In contrast, the nationalised French

¹⁹⁴ ORR (January 2013), [Conclusions on variable usage charge and freight specific charge](#), p16.

¹⁹⁵ DfT (May 2011), *Realising the Potential of GB Rail Report of the Rail Value for Money Study*, p226 (detailed report).

¹⁹⁶ The current freight access charges regime also aims to internalise the positive environmental effects that rail freight generates by reducing road congestion.

¹⁹⁷ The network costs that would be avoided by no longer allowing freight operators to use the network.

¹⁹⁸ In CP5, these charges were levied only on Electrical Supply Industry coal, spent nuclear fuel and iron ore freight market segments. Freight operators transporting coal also pay the coal spillage charge.

¹⁹⁹ Rail Delivery Group (14 May 2014), [Keeping the lights on and the traffic moving: Sustaining the benefits of rail freight for the UK economy](#). We note that, prior to privatisation, rail freight was already facing strong competition from road freight. This suggests that on-rail competition was a key driving factor in the growth in rail freight achieved since privatisation.

²⁰⁰ Network Rail (October 2013), *Long Term Planning Process: Freight Market Study*, p20.

and Spanish rail freight sectors have seen relative modal share decline since the late 1990s.²⁰¹

- 3.112 Forecasts indicate that rail freight is expected to grow by a further 30% in the five years from 2014.²⁰² In the longer term, Network Rail forecasts that rail freight volumes could more than double over the next 30 years.²⁰³
- 3.113 The market shares of rail freight operators have changed significantly as a result of competition and new entry since privatisation. New entrants, such as GB Railfreight, have won market share from DB Schenker (formerly known as EWS), which has been active in Great Britain since privatisation. For example, in 2005–2006, DB Schenker had a market share of 67.8%, which fell to 46.7% by 2014–2015 primarily as a result of competition from other freight operators.²⁰⁴
- 3.114 The success of new entrants is often attributed to their focus on providing customer care at competitive prices. It was suggested to us that flexible working practices among drivers, including flexibility in rostering and drivers taking on additional duties (including dealing with customers), was a key part of the strategy to deliver an efficient service that is competitive on price.

The efficiency of the rail freight sector

- 3.115 The competitive environment has forced rail freight to find significant efficiencies over recent years and it has encouraged Network Rail to do the same. The DfT's 2012 report entitled *Reforming our Railways: Putting the Customer First* highlights the fact that, unlike franchised TOCs, freight operators are subject to access charge variations at regulatory reviews. As a result, freight operators engaged considerably with ORR and Network Rail during periodic reviews in 2003 and 2008, pushing hard to challenge Network Rail's costs.²⁰⁵ The DfT's report goes on to state that, in an industry that has had difficulty in reducing costs, freight has made good progress and that the government seeks to repeat this approach with similar success for passenger services.
- 3.116 The McNulty Report also considered the efficiency of the rail freight sector and highlighted the fact that, since 1997, rail freight traffic increased and unit costs fell as freight operating companies invested in new rolling stock and

²⁰¹ Rail Delivery Group, p12.

²⁰² MDS Transmodal.

²⁰³ Rail Delivery Group, p8.

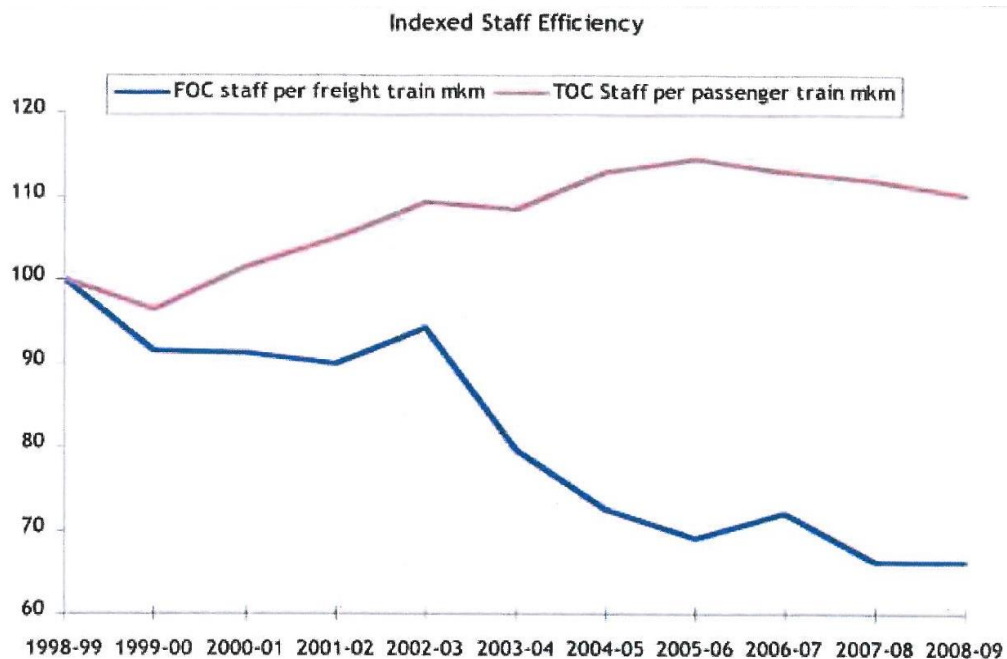
²⁰⁴ Market share calculated on the basis of gross tonne miles. See [ORR and NRT Data Portal](#).

²⁰⁵ DfT (March 2012), *Reforming our Railways: Putting the Customer First*, Cm 8313, p50.

entered different market segments.²⁰⁶ Freight operators increased their load usage. For example, GB Railfreight increased its load usage from 667 million gross tonne miles during 2005–2006 to 3,142 million gross tonne miles by 2013–2014.²⁰⁷

3.117 According to the McNulty Report, staff productivity increased in rail freight while, as illustrated in Figure 11 below, in the rail passenger sector staff productivity has slightly decreased.²⁰⁸ The McNulty Report notes that this may be due to the greater effect of competition on freight operating companies.

Figure 11: Staff productivity – freight and passenger operating companies 1998–2009



Source: McNulty Report.

3.118 Lodge (2013) also highlights the efficiencies achieved by the rail freight sector, pointing to data indicating that freight operating companies reduced their unit costs by 35% between 1998–1999 and 2008–2009 as a result of competition, whereas in the rail passenger sector costs increased by 10% over the same period.²⁰⁹ Rail freight traffic increased by 50% since privatisation with half the number of locomotives and two-thirds of the wagons used at the time moving a greater volume of goods.²¹⁰

²⁰⁶ DfT (May 2011), *Realising the Potential of GB Rail Report of the Rail Value for Money Study*, p22.

²⁰⁷ Ibid. Gross Tonne Miles (GTMs) is the mileage for each locomotive, wagon or coaching stock multiplied by the weight for each relevant vehicle.

²⁰⁸ Ibid.

²⁰⁹ Lodge, T (March 2013), *Rail's second chance: Putting competition back on track*, Centre for Policy Studies, p36.

²¹⁰ Ibid, pp37 & 38.

- 3.119 Freight operators have striven to minimise costs in order to ensure the competitive pricing of rail freight distribution compared with road, given that rail freight customers are price-sensitive and there are low switching costs between certain modes.²¹¹
- 3.120 Competition also appears to have spurred investment. Rail freight operators have continued to invest in the sector, investing £2 billion in new locomotives, wagons and other capital equipment since privatisation.²¹² During CP4 (2009–2014), Network Rail and government made investments of over £500 million to improve freight capacity and performance.

Conclusion

- 3.121 The rail freight sector is an example of a fully open access rail environment. Competition ‘in’ the market developed strongly after privatisation, with new entrants successfully winning market share from incumbents. This competition appears to have generated benefits over and above those resulting from intense intermodal competition, including improved staff productivity and investment which enables prices to be kept down and service standards to improve.²¹³ In common with OAOs, freight operators determine their time-tables, subject to securing access to the network, and are free from franchise specification.
- 3.122 Although we were told that freight is less subject to the constraints of timetabling than passenger services, it was also put to us that rail freight is subject to strict commercial and contractual requirements requiring the goods be delivered ‘just in time’. For example, supermarkets transport fresh and frozen goods by rail and, in the intermodal market segment (eg shipping containers), services run to a regular timetable.
- 3.123 While there are clearly differences between the structure of the freight and passenger rail sectors, the case study of the rail freight sector provides a valuable illustration of how competition ‘in’ the market can realise benefits in the rail sector.

²¹¹ Ibid, p17. Road transports 89% of the goods moved; the remaining 11% are moved by rail.

²¹² Ibid, p21.

²¹³ In addition Network Rail is subject to freight performance regulatory targets. Freight performance is measured by the Freight Delivery Metrics (FDM) which was introduced for CP5, replacing the Freight Performance Measure. FDM records the percentage of trains arriving at their destination within 15 minutes of their scheduled arrival time and only covers delays caused by Network Rail. See ORR (November 2015), [Passenger & Freight Rail Performance: Quality and Methodology Report](#).

The experience of EU airline deregulation

- 3.124 The airline industry in Europe was deregulated in the 1990s. Before deregulation, airline competition in the EU primarily took place between legacy national carriers, such as British Airways, British Midland, Air France, Lufthansa and KLM. Coles (2004) found that deregulation led to a major reduction in fares as well as an increase in the number of routes and choice of carrier.²¹⁴ Low-cost airlines emerged and, by 2003, they accounted for 24% of the UK international market and 32% of the domestic market, leading to an average reduction in fares of 75% and contributing to an increase of 78% in the number of flights.²¹⁵ The emergence of low-cost airlines has led to many passengers travelling from their local airports, increasing the range of flights available from regional airports.^{216,217}
- 3.125 Low-cost airlines can sustain cheaper fares as their costs are lower than those of traditional airlines.²¹⁸ Costs are minimised by paying staff lower wages, performing ticket sales and issuing boarding passes online, requiring passengers to pay separately for food and beverages and using secondary airports. In order to compete with low-cost airlines, traditional airlines have also cut costs by adopting some of these practices and this has led to a fall in average one-way fares paid by UK-based passengers for both business and leisure travel, as shown in Figure 12 below.²¹⁹

²¹⁴ Coles, H (2004), *Passenger Flights in Europe* in Stephen Davies et al, *The Benefits from Competition: some illustrative UK cases*, DTI ECONOMICS PAPER NO. 9, London.

²¹⁵ Ibid.

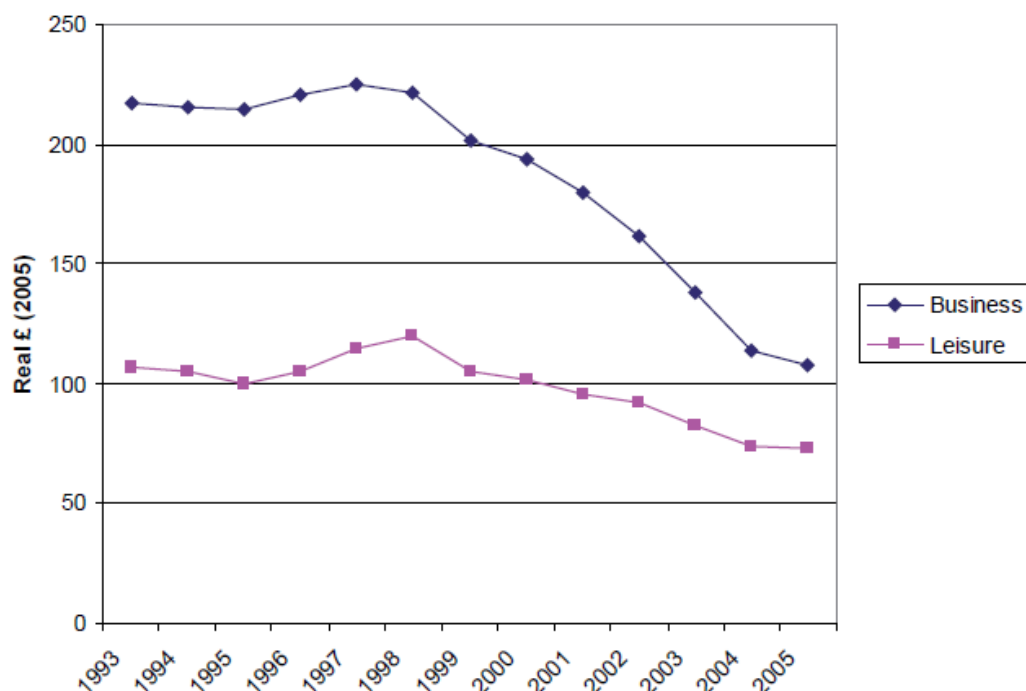
²¹⁶ CAA (2006), *No-frills carriers: Revolution or Evolution? A study by the Civil Aviation Authority*, Chapter 1, p2.

²¹⁷ Section 5.2.7 of the impact assessment commissioned by ORR sets out additional evidence of reductions in air fares in Europe following the emergence of low-cost airlines.

²¹⁸ Ibid, Chapters 1 and 3.

²¹⁹ Ibid, Chapter 4, p12.

Figure 12: Average one-way fares paid by UK passengers (UK-EU) by purpose of travel, 2005 prices



Source: International Passenger Survey, ONS.

Conclusion

3.126 The experience of the airline industry in Europe illustrates that a greater degree of competition 'in' the market can lead to a reduction in costs and lower fares, while also leading to improved services, the development of innovative business models and growth in the market overall.^{220,221}

Dynamic competition: the Gatwick Airport example

3.127 Across numerous industries exposed to a significant increase in competitive pressures, the benefits of competition in terms of innovation, service quality improvements and lower prices have materialised over a number of years as incumbents and new entrants compete to win customers.²²² The benefits of

²²⁰ The DfT noted that the most significant differences between the rail and aviation sectors in this context is the absence of any substantial public subsidy to the aviation sector and the lower fixed cost base in the aviation sector. We note, however, that the focus of our report is on the potential for greater on-rail competition in the commercial part of the rail sector. Moreover, we note that the airline industry as a whole has significant fixed costs, not only in relation to airline fleets, but also in relation to investment in runways and terminals.

²²¹ Arriva noted in its consultation response that the success of the deregulation of the air industry led to lower fares and a greater choice of carriers and routes and that the opportunity should be taken to explore whether similar benefits could be achieved in the rail industry.

²²² The impact assessment commissioned by ORR also cites the entry of Virgin Media to the UK telecoms sector as an example of competition driving innovation. Virgin Media offered faster broadband and BT responded by increasing its own broadband speed.

this dynamic competition are difficult to forecast in advance of market opening and are generated by firms adopting new strategies in order to win market share, with competitors responding by improving their offering.

3.128 A further example of dynamic competition being introduced in a transport market is the introduction of competition between London's Gatwick and Heathrow airports following the break-up of BAA.²²³ The key developments are summarised below.

3.129 Gatwick Airport was owned by BAA until its divestiture was ordered by the Competition Commission in March 2009 following a market investigation into the supply of airport services by BAA in the UK.²²⁴ At the time, BAA also owned Heathrow, Stansted and some other UK airports. Gatwick Airport was acquired in 2009 by Global Infrastructure Partners. The sale of Gatwick Airport was part of a package of remedies devised to address the adverse effects on competition found by the Competition Commission to arise from BAA's common ownership of airports in the South East of England and lowland Scotland. The CMA is currently evaluating the impact of the Competition Commission's remedies arising from the 2009 BAA airports market investigation and the evidence presented here was gathered prior to the evaluation.²²⁵

3.130 Following its sale to Global Infrastructure Partners, Gatwick Airport developed its offering²²⁶ and there is also evidence that Heathrow Airport was incentivised to improve its own offering:

- **New routes and customers** – in targeting Heathrow Airport's full-service long-haul airlines, Global Infrastructure Partners focused on developing its performance, capacity utilisation and facilities to accommodate new aircraft types such as the A380. Gatwick Airport developed new international routes and attracted new carriers.
- **New transfer service** – in order to assist airlines to establish new long-haul services from Gatwick Airport, a new commercial strategy was devised which included developing a transfer service called 'Gatwick

²²³ The British Airports Authority (BAA) was established by the Airports Authority Act 1965 but, as part of the government's privatisation plans, it was dissolved and its property, rights and liabilities transferred to BAA under the Airports Act 1986. Following incorporation in 1985 and flotation in 1987, BAA was acquired by the Spanish company, Ferrovial, in 2006.

²²⁴ The OFT made a market investigation reference in this case to the Competition Commission in March 2007 under section 131 of the Enterprise Act 2002.

²²⁵ CMA (November 2015), [BAA airports - evaluation of the Competition Commission's 2009 market investigation remedies. Terms of reference.](#)

²²⁶ We note that prior to the break-up of BAA, Heathrow and Gatwick airports faced some degree of competitive constraint from other airports in Great Britain and, for transfer passengers, from airports elsewhere in Europe (such as Paris Charles de Gaulle, Amsterdam Schiphol and Frankfurt). These competitive pressures are still in place.

Connect' in order to allow passengers to transfer between flights more easily.

- **Improved resilience** – Global Infrastructure Partners also invested in facilities to minimise closure time following natural events.
- **Improved services and new innovations** – other benefits to service quality deriving from greater competition include Gatwick Airport's introduction of new services for passengers with reduced mobility, improved security and search procedures, a premium area security lane, an airport welcome service and a new commercial retail strategy to attract high-value customers from Heathrow Airport.
- **New infrastructure** – Gatwick Airport invested in infrastructure including the station, new terminal floors and toilets.

3.131 Heathrow's service offering also developed following the break-up of BAA. Heathrow Airport invested a total of £5.9 billion to improve quality of passenger services, enhance resilience and provide additional capacity and improve overall airport efficiency.

3.132 Heathrow Airport's passenger satisfaction continued to increase following the new investment (having started to rise following the opening of Terminal 5).

3.133 In addition to making new investments, Heathrow Airport adopted a new commercial strategy, which included improvements to:

- the cleanliness and security of the airport's terminals;
- the departure lounge at Terminal 3 and improvements to the security screening process; and
- departure punctuality and baggage handling, in coordination with the airlines (see annex for chart of rates).

3.134 Finally, a new Terminal 2 opened at Heathrow Airport in 2014, replacing the old terminal. In addition to improving the quality of service, the new terminal enhanced connectivity by co-locating Star Alliance members that fly from Heathrow Airport. Although the new terminal was in the pipeline prior to the break-up of BAA, we note that competitive pressure may have enhanced its final product and service offering.

Conclusion

- 3.135 The example of competition between London's Gatwick and Heathrow airports demonstrates that innovation, service quality improvements and lower prices may materialise over a number of years when dynamic competition is significantly increased and incumbents and new entrants compete to win customers.

Deregulation of local bus services in Great Britain

- 3.136 In the 1980s, long-distance coach services in Great Britain and local bus services outside London were deregulated and offered largely on a commercial basis.²²⁷ As a result, there was a degree of competition 'in' the market where local bus services overlapped. Passengers benefited from improved services and lower fares on main routes but, in some cases, reduced frequencies, higher fares and a loss of services on the lower density routes. In London, bus services were also privatised through introducing competition 'for' the market with all routes being contracted out by means of competitive tendering.
- 3.137 In 2009, the OFT examined the local bus sector (excluding Northern Ireland and London) – ie the deregulated sector where there is competition 'in' the market. The study found some evidence that market liberalisation and competition led to lower average fares in the sector. However, the OFT identified a number of competition concerns and made a market investigation reference to the Competition Commission in January 2010.
- 3.138 The Competition Commission found that head-to-head competition in the supply of local bus services was uncommon and most local markets were highly concentrated.²²⁸ It found that sustained head-to-head competition where it exists could deliver significant benefits to customers, as a result of bus operators competing on the basis of service frequencies, in addition to fares and service quality.²²⁹

²²⁷ However, outside of London, certain socially valuable services were tendered by the relevant local authorities and were, therefore, subsidised until the late 1990s when the majority of these services also became commercially operational. See MVA Consultancy (in association with Leeds University's ITS), *Assisting Decisions: Modelling the Impacts of Increased On-rail Competition through Open Access Operation*, Report for ORR (22 July 2011), p2.4.

²²⁸ Competition Commission (December 2011), [*Local bus services market investigation, final report*](#), paragraph 9.31.

²²⁹ Virgin/Stagecoach told us in its consultation response that under competition 'in' the market, the quality and reliability of bus services has improved, investment has continued, fares offer good value for money and customer satisfaction is high. The response also suggested that customers pay more for franchised services in London compared with non-franchised systems in the rest of England and that customers in London are less satisfied with services.

- 3.139 However, it also found that the process of competition could result in periods of intense short-lived rivalry, leading to the exit of one operator. The anticipation of costly rivalry was found to create a barrier to entry and expansion.²³⁰ Along with other barriers to entry and expansion, this was found to reduce the competitive constraint from potential competition and new entry.
- 3.140 We also note that, in recent years, concerns have been identified regarding strategic behaviour by incumbent operators, including aggressive scheduling in response to new entry.²³¹
- 3.141 However, ORR has previously observed that competition concerns identified in the local bus sector have limited application to the case of passenger rail where similar concerns relating to the impact of head-to-head competition on service frequency are unlikely to arise.²³² Track paths are allocated in advance and frequencies cannot be quickly adjusted. Moreover, service timings cannot be altered easily, making it difficult to run trains just ahead of competitors in order to win customers.²³³ 'Hit and run' entry (ie where an undertaking enters a market temporarily and then exits when extra profits are exhausted) is also not possible in the rail sector given that the barriers to entry and exit are higher than those in the bus sector.

Conclusion

- 3.142 The local bus sector provides an example of the adoption of models of both competition 'for' and 'in' the market. The evidence regarding passenger benefits and efficiencies resulting from the two modes of competition is mixed. While in-market competition has led to some concerns regarding the behaviour of incumbent operators in certain areas of Great Britain, we do not consider that the issues that have arisen in the local bus sector are directly relevant to the long-distance intercity rail sector.²³⁴

²³⁰ Ibid, paragraph 9.38(a).

²³¹ CMA decision of 6 May 2014, [Completed acquisition by Arriva Passenger Services Limited of the remainder of the entire share capital of Centrebus Holdings Limited \(ME/6226-13\)](#).

²³² ORR (October 2011), [The potential for increased on-rail competition – a consultation document](#), p23.

²³³ A small number of consultees suggested to us that the ORCATS revenue allocation system may incentivise operators to schedule their services slightly ahead of those of competitors in order to obtain the most revenue. However, we note that on long-distance intercity routes, a significant proportion of passengers book their tickets in advance, with operators often differentiating their services on price and quality. Moreover, neither OAOs nor franchised TOCs raised this as a concern. We also note that timetabling must be agreed through Part D of the Network Code, reducing the likelihood of suboptimal timetabling.

²³⁴ We consider issues including timetabling, financial viability and a level playing field in Chapter 5.

Conclusion on the evidence of potential passenger benefits

3.143 This chapter demonstrates the benefits that greater on-rail competition can bring through on-rail competition examples as well as in other transport markets. The following key points emerge:

- On-rail competition in Great Britain from open access shows that OAOs, notwithstanding their current limited role:
 - compete with franchised TOCs on price, frequently offering lower dedicated fares both for 'walk-up' and advance fares;
 - have developed improvements to service levels and introduced innovations, including selling a wider range of tickets on-board, free wi-fi and new information systems (this is reflected in high passenger satisfaction); and
 - have generated growth in the market for rail travel and delivered wider economic benefits.
- On-rail competition in Great Britain from overlapping and parallel franchises shows that:
 - there are examples of on-rail competition between franchised TOCs leading to price competition, with other franchisees offering lower fares than the lead operator across a range of season tickets, 'walk up' fares and advance fares; and
 - franchised TOCs are generally able to compete mainly on price given that service quality, timetables and innovation are determined through franchise specification. However, where franchise agreements are less specified (such as the Chiltern Railways franchise), there is evidence that on-rail competition between franchised TOCs has also led to improved service quality and innovation.
- On-rail competition in other European countries, including Austria, the Czech Republic, Germany, Italy and Sweden shows that:
 - on-rail competition has delivered significant benefits for passengers, including lower fares, increased service frequency and customer service innovations;
 - the introduction of on-rail competition has taken place on some of the most geographically important routes in each country, indicating the

trust placed in the ability of on-rail competition to deliver benefits that outweigh any risks;

- due to differences between the structure of the rail sector in Great Britain and many other European countries, we consider the evidence of on-rail competition in other European countries to be relevant and informative but not determinative; and
- we note that the trend towards introducing greater on-rail competition is continuing in Europe.

3.144 The following conclusions may be drawn from our assessment of the introduction of competition in other transport markets:

- In rail freight in Great Britain,
 - Competition ‘in’ the market developed strongly after privatisation, with new entrants successfully winning market share from incumbents. Benefits included improved staff productivity and investment which enables prices to be kept down and service standards to improve.
 - While there are clearly differences between the structure of the freight and passenger rail sectors, the case study of the rail freight sector provides a valuable illustration of how competition ‘in’ the market can realise benefits in the rail sector.
- The experience of the airline industry in Europe illustrates that a greater degree of competition ‘in’ the market can lead to a reduction in costs and lower fares, while also leading to improved services, the development of innovative business models and growth in the market overall.
- The example of competition between London’s Gatwick and Heathrow airports demonstrates that innovation, service quality improvements and lower prices may materialise over a number of years when dynamic competition is increased and incumbents and new entrants compete to win customers.
- In local bus services:
 - Sustained head-to-head competition where it exists has delivered significant benefits to customers, as a result of bus operators competing on the basis of service frequencies, in addition to fares and service quality.

- However, it also found that the process of competition could result in periods of intense short-lived rivalry, leading to the exit of one operator.
- We do not consider that the issues in the local bus sector are directly relevant to the long-distance intercity rail sector.

3.145 Making due allowances for differences between transport sectors, we think that the evidence in this chapter taken together illustrates the significant benefits that could be obtained from greater on-rail competition in addition to the benefits delivered by competition ‘for’ the market.

4. Efficiency gains from greater on-rail competition

- 4.1 In addition to generating benefits for passengers, on-rail competition may also result in greater efficiency at both the train operator level and the ‘upstream’ network management/operation level. This chapter considers the evidence available regarding the potential for greater on-rail competition to lead to efficiency savings.

Efficiencies in train operations

Introduction

- 4.2 Competition is an important way to drive improvements in efficiency. If firms are competing to win or retain customers in a competitive environment, they typically have greater incentives to adapt their operations in order to minimise their costs, use resources where they are valued most and to innovate to find better ways of delivering services.²³⁵
- 4.3 We examine the extent to which these incentives would be likely to result from greater on-rail competition in Great Britain and the impact that this might have on the cost of train operations.
- 4.4 Open access operations in Great Britain provide an indication of the potential for on-rail competition to lead to efficiencies as OAOs are exposed to on-rail competition from incumbent franchised TOCs and are free from franchise specification.
- 4.5 There are number of specific aspects of OAOs in Great Britain that make them better able than franchised TOCs to operate efficiently:²³⁶
- OAOs operating in Great Britain are free from franchise specification and have greater flexibility to change their price and service offering as part of their strategy, whereas franchised TOCs are less able to control their costs as a result of their franchise agreements.
 - OAOs can make their own staffing and procurement decisions.

²³⁵ These sources of efficiency are also described in the ORR’s 2011 report, [The potential for increased on-rail competition – a consultation document](#). A distinction is made between productive, allocative and dynamic efficiencies.

²³⁶ ORR noted in its consultation response that OAOs bring potential benefits in terms of different business models, with the potential for greater cost reduction than can be achieved through franchising (where each franchise largely inherits the operational and cost structures of its predecessor).

- Franchised TOCs may have less of an incentive to challenge certain costs (particularly staff costs) given the cost of potential disruption through industrial disputes, etc as compared with the benefit that would be accrued over the limited term of their franchise, and the effect that such disruption could have on a bid to renew the franchise.
- Franchise agreements that include revenue-sharing features such as cap and collar mechanisms (described in Chapter 2) or franchise operations that are run on the basis of management agreements typically result in even lower incentives to achieve efficiencies once the franchise is under way.

4.6 In addition to efficiency savings at the train operating level, we consider that train operators who are not indemnified against increases in track access charges (such as OAOs) are more likely to take a strong interest in Network Rail's efficiency and to drive demands for:

- more efficient use of network capacity to accommodate new paths; and
- more efficient spending on the network.

Estimating efficiency

4.7 Efficiency is conventionally measured as units of input per unit of output, or through costs per unit of output. For example, a franchised TOC's efficiency could be assessed by its cost to provide a passenger mile, or how many staff and how much rolling stock it requires to do so. Efficiency may also be measured in terms of train-hours (ie the hourly cost of operating services) to reflect time-driven costs such as staff costs and rolling stock leasing costs.

4.8 As set out in Chapter 2, there is some evidence to suggest that the passenger rail sector in Great Britain could still achieve greater efficiency. The McNulty Report commissioned by the DfT and ORR found an efficiency gap when comparing the system in Great Britain with four European comparator railways.²³⁷ It concluded that Great Britain's passenger rail sector should aim to achieve a 30% reduction from the 2008–2009 level of industry costs by 2018–2019. Other studies, such as Smith, Nash and Wheat (2009)²³⁸ and

²³⁷ ORR, [Rail Value for Money study](#).

²³⁸ Smith, A, Nash, C and Wheat, P (2009), 'Passenger rail franchising in Britain: has it been a success?', *International Journal of Transport Economics* 36(1), pp33–62.

Smith and Wheat (2011)²³⁹ find that, respectively, franchised TOC costs were the same in 2006 as in 1997, or had actually increased.²⁴⁰

- 4.9 In order to determine whether on-rail competition has the potential to generate efficiencies, the unit costs or productivity of sections of the rail network where there is on-rail competition could be compared to sections of the network where there is no competition (controlling for any differences in characteristics of the network which affect costs and which differ between these areas). As passenger railway operations involve multiple outputs and multiple inputs, these outputs and inputs would ideally be assessed together, and there are a number of sophisticated means to do this.²⁴¹ However, such methodologies require a large amount of data, including comprehensive data on franchised TOC and OAO outputs, inputs and costs at a greater degree of granularity than is currently readily available.
- 4.10 As an alternative, it is possible to examine the costs of OAOs, which face on-rail competition for the majority of their flows, relative to franchised TOCs, which face more limited on-rail competition (and which are unable to adjust much of their competitive offering due to franchise specification). It is important to consider whether comparisons of this nature are drawn on the basis of providing 'like-for-like' services. We consider that this is broadly the case in the examples we consider below, as the comparisons are drawn for the provision of intercity services.
- 4.11 A second approach would be to draw comparisons between passenger rail services and other sectors in Great Britain with in-market competition that have similar characteristics. A third approach would be to compare results in comparable markets which experienced changes in the degree of competition they faced. In respect of these latter two approaches, we focus on the rail freight and the airport sectors, which are discussed in Chapter 3 above.

Efficiency of open access operators

- 4.12 OAOs, which currently compete on the East Coast main line, face strong competition from franchised TOCs on the routes on which they operate. Previous work has found that OAOs may achieve significant efficiencies. In its 2011 consultation, MVA consultancy, on behalf of the ORR found it

²³⁹ Smith, ASJ and Wheat, PE (February 2011), 'Evaluating Alternative Policy Responses to Franchise Failure: Evidence From the Passenger Rail Sector in Britain,' *Journal of Transport Economics and Policy*, published online (Fast Track Articles).

²⁴⁰ DfT (May 2011), *Realising the Potential of GB Rail Report of the Rail Value for Money Study*, p20.

²⁴¹ A summary of the issues associated with assessing efficiency in the rail sector is presented in Nash, C and Smith, SJ (2014), [Rail Efficiency: Cost Research and Its Implications for Policy, Paper for the International Energy Agency roundtable: Efficiency in Railway Operations and Infrastructure Management](#).

appropriate to use an assumption that OAOs have costs which are 10 to 30% lower than franchised TOCs' costs for a given density of operation.²⁴²

- 4.13 This figure was based on a study prepared by Leeds University's Institute of Transport Studies and included in work conducted by the MVA consultancy for the 2011 ORR consultation. The Institute of Transport Studies generated its estimate based on a number of approaches including: econometric papers by Smith, Nash and Wheat (2009)²⁴³ and Smith and Wheat (2011);²⁴⁴ estimates of the efficiency gains experienced in Sweden and Germany since privatisation through successful competition for the market; and sense-checking against the savings achieved through bus and airline deregulation in the UK (which were considerably higher at 40 to 50%).
- 4.14 In this regard, we were informed by a transport company which operates both franchised and open access services that its unit costs in 2014 (per vehicle mile) were in the region of 10% lower for its open access operations than for its franchised operation with similar characteristics.
- 4.15 In assessing the efficiencies achieved by OAOs, it is important to note that the evidence relates only to the efficiencies delivered by OAOs in the current model of marginal open access operations. In some of the proposed options for reform set out in Chapter 6, OAOs would compete on key commercial routes (closer to the model adopted in other European countries with on-rail competition).
- 4.16 This may generate additional costs, but potentially much larger efficiencies as OAOs benefit from economies of scale and density and as greater dynamic competition between operators increases incentives on all operators to achieve efficiencies. Moreover, as noted in the impact assessment commissioned by ORR, the effect of cost reductions due to greater on-rail competition on particular routes may lead to impacts beyond the routes that are affected as the efficiency gains may be implemented across the entire operator's business.
- 4.17 As well as these efficiencies and benefits, there are a number of potential risks, which we consider further in our assessment of options in Chapter 6.

²⁴² See ORR (October 2011), [The potential for increased on-rail competition – a consultation document](#).

Economies of density are defined as the response of cost per train mile to an increase in train miles over track miles, ie how the cost of running additional services over an area of network where an operator already runs services changes. In the MVA report, Leeds University's ITS consider this elasticity of density to be around 0.8.

²⁴³ Smith, A, Nash, CA and Wheat, P, 'Passenger rail franchising in Britain: has it been a success?', *International Journal of Transport Economics*, Volume 36(1), 2009, pp33–62.

²⁴⁴ Smith, ASJ and Wheat, PE (2011), 'Evaluating Alternative Policy Responses to Franchise Failure: Evidence From the Passenger Rail Sector in Britain,' *Journal of Transport Economics and Policy*, published online (Fast Track Articles).

We also note that OAOs may face additional track access charges under a regime where they have a significantly expanded role on the network, although we consider charges to be a separate issue from operator efficiency as the level of charges paid are not under the operator's control.²⁴⁵

Econometric analysis by Rasmussen, Wheat and Smith

- 4.18 The CMA commissioned Wheat and Smith (with Rasmussen) from Leeds University's Institute of Transport Studies to undertake research comparing the costs of OAOs with franchised TOCs after controlling for a number of factors. The analysis is based on the model of Wheat and Smith (2015)²⁴⁶ which is currently thought to be the most sophisticated modelling of the cost structure of train operators in Great Britain.
- 4.19 The study found that OAOs' input prices are 29% lower than those of franchised TOCs operating intercity routes.²⁴⁷
- 4.20 In the next step, the study utilised an econometric model that makes allowances for differences between OAOs and franchised TOCs (including differential access charges, density, scale, heterogeneity and input prices). This analysis suggests that the efficiency advantages offered by OAOs, which are able to adopt a more efficient business model than franchised TOCs, more than offset any cost disadvantages from the limited scale and density of their current operations – although, as the study notes, there is a degree of uncertainty regarding the precise magnitude of the efficiencies.
- 4.21 The analysis in the paper also suggests that expanding the role of OAOs has the potential to deliver greater efficiencies as operators would benefit from greater economies of scale and density, although the overall cost impact depends on the extent to which the incumbent loses economies of scale and density as OAOs gain market share, and is route-specific. The paper also acknowledges that the incentives that dynamic competition would create for operators to reduce costs may be expected to generate further efficiencies over and above those reflected in the model.

²⁴⁵ We discuss this further in Chapter 6, below.

²⁴⁶ Wheat, P and Smith, A (2015), 'Do the Usual Results of Railway Returns to Scale and Density Hold in the Case of Heterogeneity in Outputs?', *Journal of Transport Economics and Policy*, Volume 49(1).

²⁴⁷ We note that the DfT's response to our consultation suggested that a factor in explaining OAOs' lower costs observed by the study may be the specific characteristics of individual operators or routes. For example, the DfT notes that current OAOs only run on the East Coast main line, which does not require the more costly tilting rolling stock needed on the West Coast main line. While we consider that this may be a useful caveat, we do not consider that it is likely to explain the full degree of difference found by Wheat and Smith. In particular, we note that the West Coast tilting rolling stock has been in service since 2003 and that conventional trains are used on each of the other routes considered in the study, some of which is older than the stock used by OAOs.

- 4.22 In this regard, the DfT told us in its consultation response that it would expect efficiencies associated with OAOs' business models to decline as they grew larger and that, in its view, it was unlikely OAOs' input prices would remain much lower than franchised TOCs' costs if the former expanded their operations considerably.²⁴⁸ While this cannot be ruled out, we note that OAOs could still remain smaller businesses than the larger TOCs in an environment of greater on-rail competition and might be dedicated to serving a particular route. OAOs would also remain free from franchise specification, allowing them to retain some of the fundamental principles of their alternative business models. As noted above, OAOs would also benefit from economies of scale and density as their operations grew. As such, we consider that there may still be scope for OAOs to generate efficiency benefits as they grow in scale. We also note that the impact assessment commissioned by ORR did not choose to model OAO efficiencies which declined with OAO size.²⁴⁹

Sources of efficiency at open access operators

- 4.23 We have further explored, through industry engagement and round tables, the efficiencies that OAOs have been able to achieve and how these have been attained.

Staff costs

- 4.24 Staff costs represent one of the industry's most significant costs, accounting for 29% of TOC costs in 2013/14.²⁵⁰ The franchising system has had limited success in controlling staff costs as is noted, for example, in the McNulty Report.²⁵¹ In the same publication, Leeds University's Institute of Transport Studies is reported as having found that historical OAO staff costs were 6 to 18% lower than franchised TOC staff costs, while there is evidence that staff satisfaction levels may be higher in OAOs than in franchised TOCs.
- 4.25 This is widely considered to be because OAOs recruit their own staff upon entry to the market. By contrast, franchised TOCs inherit staff from their predecessor under TUPE arrangements on the same terms and conditions: the duration of the new franchise is then typically insufficient to risk harming industrial relations through introducing changes to pay and conditions.²⁵²

²⁴⁸ Ibid

²⁴⁹ See impact assessment commissioned by ORR, section 5.3.1 for further details of assumptions used.

²⁵⁰ ORR (February 2015), [GB rail industry financial information 2013-14](#).

²⁵¹ DfT (May 2011), *Realising the Potential of GB Rail Report of the Rail Value for Money Study*.

²⁵² We note that it is possible that if OAOs took a significantly greater role on the network, they could become subject to TUPE arrangements. This possibility is also considered in the impact assessment commissioned by ORR (see p36).

- 4.26 We were told by OAOs that they were able to achieve cost savings by allocating staff more efficiently, for example through flexible and efficient rostering of staff. A number of employees at OAOs also undertake multiple roles. For example, OAOs use on-board staff to despatch trains rather than paying station staff to undertake the task. We were also told that working practices at OAOs were more flexible than those under many historical agreements in the rail industry.
- 4.27 We have also seen evidence that the different terms and conditions under which staff at OAOs are employed has not led to lower staff satisfaction. On the contrary, we were told that staff at OAOs demonstrate higher levels of engagement with their employer than staff at franchised TOCs. A company operating both franchised and OAO services told us that the staff on its open access services had the highest employee engagement and staff satisfaction within its operating group, because of greater staff involvement in decision-making and strategy and a stronger relationship between company performance and pay.

Other sources of train operator efficiencies

- 4.28 OAOs told us that they are able to achieve a number of additional efficiencies over franchised TOCs:
- **Outsourcing** – one operator told us it had achieved efficiencies by outsourcing maintenance, retail and cleaning activities. Local procurement was identified as a source of cost savings in certain areas. OAOs told us that they benefited from sharing some of the services of larger owning groups, for example in terms of legal, property and safety advice.
 - **In-house provision** – vertical separation in the rail industry in Great Britain means that OAOs can access stations and train depots on an equal basis with larger franchised TOCs. This is not to say OAOs are wholly reliant on buying in upstream services; they have told us they are free to undertake services themselves when they see inefficiencies. One operator told us that it prefers to uncouple and despatch its own trains at stations as it can do it faster than if it uses the services provided by the franchisee at the station. We have also been told that they have achieved efficiencies in terms of faster passenger embarkation and disembarkation at stations.²⁵³

²⁵³ If OAOs expanded significantly in scale, they may need to take on more fixed costs, such as depots. The magnitude of any such costs will depend on factors including the scale of the OAO, the route concerned and the potential for overheads to be shared with a parent company.

- **Freedom from franchise specification** – we were told by OAOs that they have achieved a number of operational efficiencies. These include faster turnarounds of train units at stations, running services that are more closely tailored to demand and adjusting the rolling stock formation accordingly. OAOs are also free to adjust services to changing demand. A number of TOC owner groups also noted that prescriptive franchise arrangements and costs prevent them from achieving further efficiencies. The impact assessment commissioned by ORR also stated that there is no evidence to suggest that franchised TOCs would have the ability to reduce unit costs of staff given the constraints of a franchise agreement.
- **The franchise process** – OAOs avoid the cost of the franchise bidding process and the ongoing costs of running franchises such as contract management services required to demonstrate that franchised TOCs are appropriately fulfilling their franchise duties. This point is also made in the 2011 ORR consultation and associated MVA report.²⁵⁴
- **Ticket retailing** – OAOs may have a greater incentive to chase every pound of revenue compared with franchised TOCs whose franchise contracts contain revenue-sharing mechanisms. This has led to efficiencies in terms of ticketing and pricing innovations. Key factors include early introduction of yield management systems (where advance ticket prices change over time towards the point of departure, maximising revenue for the operator). We were told that one OAO implemented this system well before its franchised rival. We have also been told that OAOs more frequently sell tickets on board trains and have a greater incentive to prevent revenue leakage than some franchised TOCs (eg through fare evasion). These customer-facing innovations are aimed at attracting the maximum number of passengers to their services. Other pricing innovations have included loyalty schemes and carnet tickets, where passengers can buy journeys in bulk ‘books’, for example of 20 tickets, at a discounted price.

4.29 Moreover, as discussed above, OAOs may have the potential to achieve further efficiencies if they were permitted to expand their service offering – eg along the lines of some of the options considered in Chapter 6.

²⁵⁴ See ORR (October 2011), [The potential for increased on-rail competition – a consultation document](#). Also, MVA Consultancy (in association with Leeds University’s ITS), Report for ORR (22 July 2011), *Assisting Decisions: Modelling the Impacts of Increased On-rail Competition through Open Access Operation*.

Upstream efficiencies

- 4.30 The network is currently owned, operated and managed by Network Rail. The operation of the network makes up 52% of total industry expenditure.²⁵⁵ Efficiency gains at this upstream level therefore have significant potential to reduce the cost of the network to both passengers and taxpayers.
- 4.31 We consider that on-rail competition has significant potential to enhance capacity allocation and to reduce upstream costs. First, there is potential for greater on-rail competition to increase the incentives for train operators to put pressure on Network Rail to use capacity more efficiently. Second, greater on-rail competition may incentivise train operators to encourage Network Rail to reduce costs where possible (in discussions we have had in the course of preparing this document, network costs were often cited as a major source of inefficiency within the current system).
- 4.32 The potential for greater on-rail competition to generate upstream efficiencies would be strengthened if the structure of charges within the industry were reformed so that access charges paid by train operators were truly cost-reflective, rather than covered partly through the current mixture of infrastructure funding (ie FTAC, variable charges and the network grant). The current structure does not incentivise franchised TOCs to encourage efficiency from Network Rail as they factor in the cost of access charges to their franchise premiums or subsidy requirements, and are indemnified in their franchise agreements from increases in access charges at ORR periodic reviews. Similarly, while OAOs are fully exposed to variable charges (that reflect their direct impact on the network), they do not face any fixed access charges and, therefore, are not exposed to charges relating to the cost of providing and expanding the network. In this regard, we note that ORR's review of the structure of track access charges has identified improving cost reflectivity and supporting efficient use and provision of network capacity as objectives.

Evidence from open access operators and competing franchisees

- 4.33 There is evidence to suggest that new entrants and competing franchised TOCs have incentives to put pressure on Network Rail to use capacity more efficiently (ie to accommodate new entry and to control costs).
- 4.34 For example, as highlighted in Chapter 3, in response to competition from Virgin Trains on the West Coast main line and from the parallel Chiltern

²⁵⁵ ORR (2012), *Costs and Revenues of UK Passenger Train Operators*.

Railways franchise, London Midland found that it was possible to operate two services in a single train path, allowing an additional service to be added into each off-peak hour in 2012 and two additional morning peak services and five evening peak services to be added in December 2014. This example is discussed further in paragraphs 5.54 to 5.56.

- 4.35 In addition, we were told that when Grand Central launched its services from London to York, the additional capacity required by the incumbent franchised TOC to run services from London to York was identified by Network Rail partly as a result of the capacity questions raised by Grand Central in its open access application.
- 4.36 There are also examples of OAOs encouraging Network Rail to undertake projects to increase network capacity. First Hull Trains persuaded the DfT to back its plans to electrify the line between Selby and Hull, securing £3.3 million in public funds to support the scheme which is predominantly privately financed.²⁵⁶ The scheme will allow for the introduction of new electric trains which would reduce journey times. Once completed it is expected that Network Rail would take over maintenance with the special purpose company that funded and delivered the upgrade being paid an access fee by First Hull Trains and the other operators on the route to recoup its investment.
- 4.37 In a report published in March 2015 by the Electrification Task Force, which was established by the Secretary of State for Transport to advise him on the next steps for electrification in the North of England, the project to electrify the line between Selby and Hull was identified as one of the government's priorities, which would lead to the provision of faster rail services, while also alleviating problems of overcrowding on routes. The Secretary of State for Transport has indicated that 'Network Rail will take the task force's findings into account as it develops its nationwide plan to improve the nation's railways'.²⁵⁷
- 4.38 The potential for on-rail competition to drive private sector investment in the network is considered further in Chapter 5.

Evidence from the rail freight sector

- 4.39 As noted by the DfT in its 2012 report entitled *Reforming our Railways: Putting the Customer First*, the competitive environment has also generated significant efficiencies in the rail freight sector over recent years, and this has

²⁵⁶ 'Privately-funded Selby to Hull electrification by the end of CP6', *Rail Technology Magazine* (19 March 2015).

²⁵⁷ DfT news story (5 March 2015): [Transport Secretary in Sheffield to receive northern electrification report](#).

encouraged Network Rail to achieve efficiencies.²⁵⁸ Specifically, freight operators which, unlike franchised TOCs, are subject to access charge variations and regulatory reviews, have engaged extensively with ORR and Network Rail during periodic reviews in 2003 and 2008 (to a greater degree than franchised TOCs), in order to challenge Network Rail's costs.

- 4.40 We also set out below examples from other industries which help illustrate the point that competition can generate efficiencies at the upstream level of a value chain.

Capacity expansion at Heathrow Airport

- 4.41 NATS is the provider of air navigation and traffic control services in the UK. In 2012, NATS was successful in London's Heathrow Airport tender process to develop a system to address the short- and long-term capacity and operational constraints at the airport.²⁵⁹
- 4.42 Heathrow Airport faces competition from other airports, including Gatwick Airport and European airports such as Frankfurt, Amsterdam Schiphol and Paris Charles de Gaulle. It is therefore incentivised to create additional capacity in order to satisfy airline demand. The airlines themselves compete to attract passengers and require additional capacity in order to satisfy demand, expand their businesses and increase the reliability of their services. At the same time, NATS is a commercial business which is paid partly upon the number of movements that it facilitates into and out of Heathrow Airport.
- 4.43 This competitive environment led to an alignment of incentives between the airlines, the airport and NATS, which encouraged collaboration between the various stakeholders in order to address the capacity and operational constraints at Heathrow Airport. The solution found involved using 'big data' to provide decision support to air traffic controllers in order to enable more dynamic management of the network to improve capacity.
- 4.44 As in the rail industry, capacity constraints mean that demand for services can exceed available capacity on parts of the network. Moreover, both the aviation and rail sectors have access to rich data which can be used to model passenger demand. The example illustrates that cooperation by a downstream transport service provider and an upstream infrastructure provider, both with

²⁵⁸ DfT (March 2012), *Reforming our Railways: Putting the Customer First*, Cm 8313, p50.

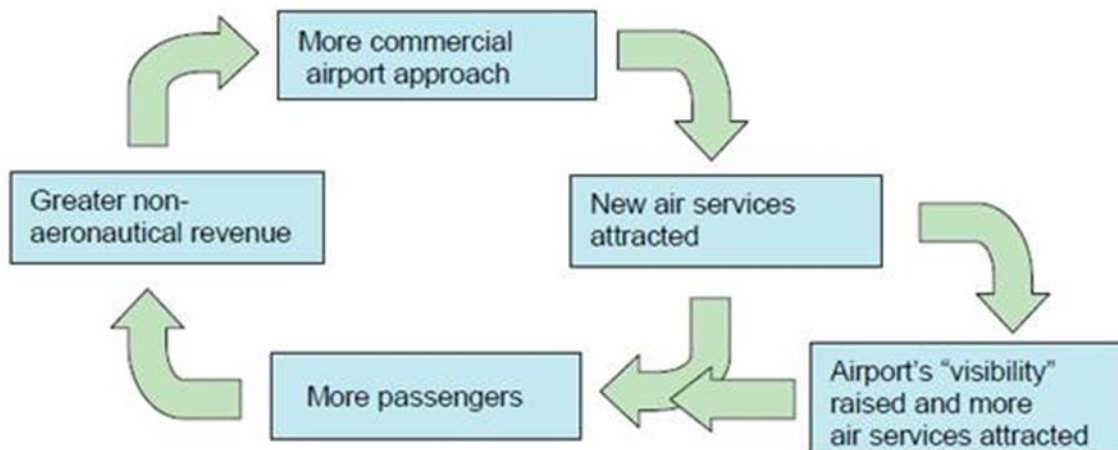
²⁵⁹ ORR/CT/14-63, *Incentivising better capacity management on GB rail: Case study evidence from other industries*, Credo, March 2015.

an incentive to increase capacity, was able to find an innovative solution to improve capacity.

Airport management

- 4.45 Another interesting example from the air transport services sector concerns the ‘upstream’ pressure and positive impact that airline deregulation has had on the management of airports.
- 4.46 The air transport regulator, the Civil Aviation Authority (CAA), has described the ‘virtuous circle’ generated by greater competition between airlines (and low-cost airlines in particular) seeking to exploit new business opportunities (see Figure 13 below). In this context, airports have moved from a ‘passive role’ to a more commercially oriented approach in the management of their operations.²⁶⁰

Figure 13: Airport-airline interaction – post-liberalisation of EU aviation market



Source: CAA study on No-Frills Carriers (CAP 770).

- 4.47 In response to airline deregulation, airports began to change the way they viewed their operations. Although this may have also been due to a move from the public to private sector, and in part due to the break-up of BAA (described in more detail in Chapter 3), even where still publicly owned, airports started to reduce costs, price more competitively and seek out new air services.

²⁶⁰ CAA (2006), *No-frills carriers: Revolution or Evolution? A study by the Civil Aviation Authority*, Chapter 3, pp4–6.

Scottish water sector

- 4.48 Another example of competitive downstream market participants encouraging efficiencies in upstream markets comes from the experience of the introduction of competition into the non-household water and wastewater market in Scotland in 2008. The reforms saw the separation of the previous incumbent's 'upstream' water supply and wastewater treatment wholesale arm from its 'downstream' arm, and the opening of the retail market to competition.
- 4.49 The Water Industry Commission for Scotland (WICS) in its 2011 analysis with the consultancy Oxera,²⁶¹ assumed that vertical separation and retail competition in the downstream market would lead to efficiencies of at least 0.05% per year, giving a total NPV of savings of £110 million per year. We understand the savings were realised and delivered a year ahead of schedule.
- 4.50 WICS considered this efficiency to have been generated as a result of the retailers taking up the role of 'customer champion', and putting pressure on the upstream operator to deliver services and investments tailored to the preferences of their own customers, namely downstream consumers. In the rail context, this would equate to train operators in an environment of on-rail competition putting pressure on Network Rail to minimise costs and to improve service quality in terms of reliability and punctuality, and to develop the network better in the interests of passengers.
- 4.51 Although it is difficult to identify the precise effect the introduction of retail competition has had, Scottish Water has achieved remarkable gains in efficiency in recent years. WICS told us it considers that the introduction of retail competition has played a significant part in this.

Efficiency gains in the impact assessment

- 4.52 The impact assessment commissioned by ORR reviewed evidence regarding the potential for on-rail competition to generate efficiencies, including from the Great Britain rail sector, examples of European on-rail competition, the UK bus and coach travel market, airlines' buyer power with respect to airports and the entry of low-cost carriers in the air travel market.
- 4.53 In its modelling, the impact assessment made a number of assumptions regarding efficiencies.
- 4.54 In relation to staff costs, the impact assessment cited the McNulty Report and Leeds Institute of Transport Studies estimates, as well as estimates from

²⁶¹ Oxera (May 2011), [Water retail market savings: the experience in Scotland](#).

Smith and Wheat (2015). The authors concluded it was appropriate to assume reductions in staff costs for OAOs of 5 to 15% relative to the 'do nothing' counterfactual.²⁶²

- 4.55 In relation to rolling stock costs, the impact assessment assumed a range of possible efficiencies of between 0 and 10% savings, again citing evidence from Smith and Wheat (2015).
- 4.56 The impact assessment also included an 'own costs efficiency' for OAOs of between 10 to 30% savings per train km, based on estimates of 'open access operator business model effects' in Smith and Wheat (2015), and a 20 to 30% range used by MVA in its 2011 report.
- 4.57 In addition, the impact assessment assumes an own cost efficiency of 0 to 10% for franchised TOCs competing against an OAO, and an own cost efficiency of 0 to 5% for franchised TOCs when competing against another franchisee, based on economic theory and evidence from other transport sectors such as the bus market.²⁶³
- 4.58 In all the scenarios modelled in the impact assessment, economies of density, which imply reduced efficiency when services are divided up between operators, are assumed in the range of 0.95 to 0.85.
- 4.59 The impact assessment applied these assumptions to scenarios in which service patterns were redesigned to model the indicative impact of the options for greater on-rail competition on operating costs.²⁶⁴ Under Option 1, where OAOs expand, total industry costs fell under most of the scenarios.²⁶⁵ The results for Options 2 and 3, in which greater on-rail competition between franchised TOCs is introduced, were more mixed.²⁶⁶ These findings are discussed in more detail in Chapter 6.

²⁶² The counterfactual used in the impact assessment is described in more detail in Chapter 6.

²⁶³ These assumptions are detailed further in Chapter 5 of the impact assessment.

²⁶⁴ The estimates of how the efficiency assumptions affect operating costs in each option modelled are set out in section 8.3 of the impact assessment.

²⁶⁵ Total industry costs fell for the 'central' and 'high' scenarios on the East Coast, West Coast and Great Western main lines, and for the 'low' scenario on the East Coast main line. However, for the low scenario on the West Coast and Great Western main lines, costs rose. The 'high', 'low' and 'central' scenarios reflect the assumptions used, in this case with respect to cost efficiency gains resulting from competition. Further detail of the modelling and assumptions used is set out in Chapter 6 of this document.

²⁶⁶ For Option 2, total industry costs were higher in the low scenarios for the East Coast and West Coast main lines, higher in the central scenario for the East Coast main line and did not change on the West Coast main line under the central case scenario. Costs fell under the high scenarios for the East Coast and West Coast main lines. For Option 3, which was modelled only on the Great Western main line, total industry costs rose in the low scenario, fell marginally in the central scenario, and fell slightly in the high scenario.

Conclusion

- 4.60 We consider that the evidence in this chapter suggests that greater on-rail competition has the potential to generate efficiency savings – particularly where operators are free from franchise specification.
- 4.61 Analysis by Rasmussen, Wheat and Smith (2015) found that OAO input costs were 29% lower than those of franchised TOCs operating intercity routes. This analysis also found further efficiency benefits for OAOs, although it noted there is a degree of uncertainty regarding the precise magnitude of the efficiencies and whether these would change if OAOs grew in scale.
- 4.62 There is also evidence to suggest that greater on-rail competition may reduce upstream costs in network and infrastructure provision and put pressure on Network Rail to use network capacity more efficiently. Evidence from other UK sectors such as the rail freight sector, capacity expansion at Heathrow Airport, airport management and the Scottish water sector also lead us to consider that increased on-rail competition may lead to increased upstream efficiencies.

5. The feasibility of greater on-rail competition: Obstacles and opportunities

Introduction

- 5.1 This chapter considers the potential technical, economic and policy obstacles to greater competition in the passenger rail market in Great Britain and describes possible ways to overcome these obstacles.
- 5.2 In particular, we consider issues that are relevant to assess in an environment of greater on-rail competition relating to:
- access to infrastructure, network capacity and rolling stock (paragraphs 5.4 to 5.68);
 - funding the network and loss-making services, and the financial sustainability of operators (5.69 to 5.155); and
 - an increase in the number of operators, which might lead to operational issues and to greater complexity of the system (5.158 to 5.2061).
- 5.3 We cross-refer to our analysis of these issues in discussing the design of options for greater on-rail competition in Chapter 6.

Access to infrastructure, network capacity and rolling stock

- 5.4 The structure of the value chain in the rail industry is complex. As described in Chapter 2, after the privatisation of British Rail, a model of vertical separation was chosen in Great Britain.²⁶⁷
- 5.5 Therefore, the market fundamentals required for greater on-rail competition in terms of a level playing field and non-discriminatory access arrangements are already in place in Great Britain.
- 5.6 Nevertheless, technical and economic constraints at the upstream network management level could result in obstacles to greater on-rail competition. In the following paragraphs we set out these potential obstacles, consider mitigating factors and discuss the regulatory and policy tools designed to overcome the obstacles.

²⁶⁷ See 'New opportunities for the railways – Privatisation of British Rail', presented to Parliament by the Secretary of State for Transport by Command of Her Majesty, July 1992.

Access to network infrastructure and capacity scarcity

Non-discriminatory access and level playing field

- 5.7 A vertically integrated market structure may be a barrier to increasing downstream competition in the rail market (whether by way of competition ‘for’ or ‘in’ the market).²⁶⁸ As described in Chapter 3, vertical integration has impeded competition in a number of European countries.
- 5.8 In Great Britain, there is full vertical separation between Network Rail and the TOCs on one side and between TOCs and ROSCOs on the other. Although on-rail competition remains limited in scale, the unbundling of the rail network has created the prerequisite for a level playing field and the conditions for open downstream competition in the market.
- 5.9 Network Rail is not permitted to discriminate unduly between train operators and has to consider all applications for access rights in an even-handed way, ie franchised TOCs will not automatically be prioritised over non-franchised TOCs. We note that franchised TOCs are committed to run the services that they bid to operate as part of the competitive process during the life of a franchise, unless there is a significant change in circumstances, although additional franchised services may be specified.²⁶⁹
- 5.10 Network Rail’s Sale of Access Rights Panel oversees Network Rail’s approach to access applications, in particular considering carefully where selling rights to access network capacity may involve a trade-off with other Network Rail objectives (ie deliverability and performance of services and optimising network efficiency).
- 5.11 However, all new agreements to access Network Rail infrastructure and all amendments to existing agreements are subject to ORR approval and direction. Similarly, where Network Rail has multiple requests to access the same network capacity that cannot all be accommodated, ORR will determine who, if anyone, should be given access.

²⁶⁸ Although vertical separation may entail certain costs (eg as a result of higher transaction and coordination costs), it also creates the prerequisite for a ‘level playing field’ between TOCs and OAOs in both models of competition ‘for’ and ‘in’ the market by removing the ability or incentive for the network owner/manager to discriminate in favour of certain incumbent operators. As discussed in Chapter 4, this is likely to lead to efficiency gains more than offsetting the vertical separation costs.

²⁶⁹ For example, we were told that the June 2015 Train Service Requirement under the new East Coast main line franchise is for 199 weekday services at London King’s Cross, compared with 186 in March 2014 under the previous franchise. Moreover, the current services to Middlesbrough, Thornaby, Sunderland and Stirling were not included in the March 2014 Train Service Requirement.

- 5.12 In assessing an application for track access, ORR does not discriminate between operators. ORR has discretion as to the weight it places on each of its statutory duties according to the circumstances of a particular application.²⁷⁰ Where the duties point in opposite directions, ORR seeks to balance the duties in order to reach a decision. As set out in Chapter 2, ORR balances its duties through the application of the NPA test, which has moderated the scale of open access operations.²⁷¹
- 5.13 Moreover, as noted in Chapter 2, ORR is reviewing the structure of charges paid to Network Rail, in preparation for the next five-year control period for access charges (CP6) which starts in 2019. One objective of the review identified by ORR is to create a more level playing field supporting effective competition between different types of passenger operators, eg in terms of the risks and charges that franchised TOCs and OAOs face.²⁷²
- 5.14 In addition, we note that the system in Great Britain benefits from the impartiality obligations that feature in the TSA and the franchise agreements, which require incumbent operators to sell OAOs' tickets on an impartial basis. We discuss the current arrangements that are in place that enable the allocation of revenue between operators in paragraph 5.204 below.

Capacity scarcity and the potential for capacity expansion on the network

- 5.15 Many parts of the rail network in Great Britain are characterised by physical and technical constraints which limit the network capacity available and which, in turn, might limit the opportunity for train operators to compete for passengers by running additional services. Indeed, as described in Chapter 3, capacity constraints in Great Britain are more severe than those in many

²⁷⁰ In its 2015 decision on Alliance Rail's application for the West Coast main line, ORR identified the following duties as particularly relevant to its assessment of track access applications: promote improvements in railway service performance; protect the interests of users of railway services; promote the use of the network for passengers and goods; promote competition for the benefit of rail users; have regard to the funds available to the Secretary of State [for Transport] for the purposes of his functions in relation to railways and railway services; have regard to any general guidance given to ORR by the Secretary of State about railway services or other matters relating to railways; have regard to the interests in securing value for money of various stakeholders; and enable operators to plan their businesses with a reasonable degree of assurance.

²⁷¹ As described in Chapter 6, in an environment of greater on-rail competition an alternative mechanism for allocating track access rights may need to be established in order to handle a potential increase in conflicting requests.

²⁷² In this regard, ORR consulted on whether OAOs should pay charges which are reflective of the fixed and variable costs of the infrastructure they use (while protecting the business viability of that market segment and long-term decisions already taken). Moreover, ORR advocated a review of the indemnity that franchisees enjoy against changes in track access charges during their franchises. (ORR acknowledged that the DfT is considering allowing some exposure of franchised operators to changes in track access charges, as set out in a letter from the DfT to ORR – [Improving financial incentives in the rail industry to deliver better outcomes for passengers, freight and taxpayers, December 2015](#).)

European countries, particularly on parts of the network where demand is high and entry might be commercially viable.²⁷³

- 5.16 A number of respondents to the consultation told us that capacity scarcity and network congestion currently (and in the near future) represent a barrier to greater on-rail competition.²⁷⁴
- 5.17 However, ORR pointed to the potential for network capacity to increase following technological enhancements. As further described in the Appendix, these technological enhancements include the introduction of on-board digital signalling as part of the move from conventional signalling to the European Rail Traffic Management System (ERTMS) electrification programmes²⁷⁵ and investment in the rail network (eg the development of HS2 and upgrading of station facilities).²⁷⁶

Shorter-term capacity enhancements

- 5.18 In relation to capacity enhancements in the shorter term, the Secretary of State for Transport issued a statement on High Level Output Specification (HLOS) in 2012 setting out to ORR what should be achieved on the rail network in Great Britain during CP5 (see the Appendix). Moreover, the ORR's CP5 periodic review (2014–2019) assessed options for Network Rail to improve the capability of the whole system by, for example, the use of new technology. As a result, Network Rail has planned short-term (ie by the end of CP5) enhancement works (budgeted at £6 billion) aimed at improving capacity and capability. The intention is to deliver 20% more morning peak seats into central London and 32% more peak seats into major regional cities.
- 5.19 ORR told us that there is potential for capacity increases in the shorter term, which may help to facilitate on-rail competition, as highlighted in ORR's most recent long-term regulatory statement.²⁷⁷ Examples cited included lengthening trains and innovation in rolling stock design to permit faster acceleration and shorter dwell times at stations.²⁷⁸ We also note that electrification projects

²⁷³ As described in paragraph 3.91, capacity constraints in other European countries are often less severe than in Great Britain, particularly on dedicated high-speed networks.

²⁷⁴ Responses by First Group, Mid Wales Transport Partnership, Sherborne Transport Action Group, Transport for London, The Railways Consultancy Ltd, MDS Transmodal, Mid Wales Transportation Partnership, Chartered Institute of Logistic and Transport, SEStran, and a number of private individuals.

²⁷⁵ These enhancements to the rail network are being funded and facilitated by Network Rail as part of its Digital Railway programme. On-board digital signalling will allow trains to run closer together and electrification will improve the acceleration of many trains.

²⁷⁶ Stations and junctions are key bottlenecks in the network.

²⁷⁷ ORR (July 2013), [Opportunities and challenges for the railway – the ORR's long-term regulatory statement](#).

²⁷⁸ We note that faster acceleration has been achieved on London Midland trains through upgrades to existing rolling stock and will be enabled by electrification on the Great Western main line. The Thameslink upgrade project is an example of train lengthening and planning for shorter dwell times at stations.

including those planned for the Great Western and Midland main lines may lead to some additional capacity in the shorter term through greater reliability and better rolling stock performance. ORR also told us that a strengthened system operator would be better incentivised to find new capacity on the existing network.

- 5.20 However, a number of respondents to the consultation, told us that sufficient capacity to sustain increased on-rail competition would be achieved only as a result of major investments in the network.²⁷⁹ The impact assessment commissioned by ORR concluded that, in the short and medium term, for the three key main line intercity routes, a significant increase in the scale of open access competition would be likely to require government to allocate some train paths that are currently being used by franchised TOCs to OAOs in the future.²⁸⁰

Longer-term capacity enhancements – digital signalling and HS2

- 5.21 In the longer term, as described in the Appendix, the move from conventional signalling to on-board digital signalling as part of the ERTMS is expected to allow for more trains to be safely run over the same length of track. Network Rail told us that digital train control will enable an increase in capacity on the existing rail network by up to 40%.²⁸¹ ORR stated in its consultation response that the move to digital signalling will increase capability of the network, albeit in ways that are difficult to predict.
- 5.22 Certain consultation respondents questioned the potential for on-board signalling to increase capacity,²⁸² while others have indicated that capacity created by such technological developments will only ease current overcrowding²⁸³ and that sufficient capacity to sustain increased on-rail competition would be achieved only as a result of major investments in the network, such as HS2.²⁸⁴

²⁷⁹ Responses by Transport for London and SEStran.

²⁸⁰ The Great Western main line electrification was considered likely to result in some increases in capacity although frequencies on the main long-distance route were expected to be similar to today. Improvements in capacity at Reading, in combination with Crossrail, may result in a significant increase in peak-time capacity into London, although capacity constraints at Paddington were considered to be such that the changes are unlikely to result in spare capacity for OAOs to compete directly with the Great Western franchise. In relation to the more attractive routes for OAOs, capacity on the East and West Coast main lines were considered to be constrained by capacity at London termini.

²⁸¹ Network Rail, Discussion Pack: [The Digital Railway Programme](#).

²⁸² Submissions by ASLEF, MDS Transmodal Ltd, Powys County Council and the Mid-Wales Transportation Partnership.

²⁸³ Submissions by Professor Chris Nash and Sherborne Transport Action Group.

²⁸⁴ MDS Transmodal Ltd, Mid Wales Transportation Partnership, Professor Chris Nash, the Chartered Institute of Logistic and Transport, SEStran and some private individuals.

- 5.23 In particular, certain consultation respondents stated that, although line capacity could increase following the introduction of on-board signalling, this new technology is unlikely to alleviate problems of capacity at stations.²⁸⁵ FirstGroup told us that such technological innovations will undoubtedly have a positive impact, but it is unlikely that they will have a significant impact on major stations which are already operating at or near maximum capacity (eg London) or ‘bottlenecks’, where physical constraints (eg the number of platforms available or capacity at junctions) will remain.²⁸⁶
- 5.24 On balance, there is evidence – including from ORR and Network Rail – to suggest that the introduction of on-board digital signalling as part of ERTMS will lead to greater capacity on parts of the network. However, we observe that the extent of capacity increases are difficult to predict at this stage and that a number of barriers, including capacity constraints at stations, may restrict the eventual capacity increase.
- 5.25 The other major longer-term change to capacity on the network is likely to arise from the construction of HS2, which is planned to create approximately 352 miles of new track and increase the number of passenger seats on trains from the North into London (and vice versa).
- 5.26 Phase 1 of HS2, which is expected to open in 2026, will see high-speed services run between London Euston and Birmingham, many of which will continue to other destinations using the ‘classic’ rail network. Phase 2 is planned to form a ‘Y’ shape from the West Midlands up towards Manchester and the North West with proposed stations at Manchester Airport and Manchester Piccadilly; and up towards Leeds and the North East with proposed stations in Leeds, the East Midlands and Sheffield Meadowhall. Further details of HS2 are set out in the Appendix.
- 5.27 A number of consultation respondents indicated that the opportunity for greater competition would only arise after completion of HS2, which is likely to significantly expand capacity on the ‘classic’ West Coast main line.²⁸⁷ In this

²⁸⁵ Submissions by The Railways Consultancy Ltd and the Passenger Transport Executive Group.

²⁸⁶ Consultation responses from the Passenger Transport Executive Group and Transport for Greater Manchester.

²⁸⁷ The Chartered Institute of Logistics and Transport and MDS Transmodal Ltd suggested that HS2 has the potential to alleviate some capacity constraints, although other solutions should also be considered (eg longer trains and train sectioning). Professor Chris Nash stated that HS2 may reverse capacity constraints for limited parts of the network. Regional respondents in Wales (Powys County Council and Mid Wales Transportation Partnership) stated that they do not want any changes implemented until after HS2, while the Scottish Association for Public Transport expressed concern that future infrastructure investments like HS2 are likely to be compromised by increased on-rail competition.

regard, ORR told us that HS2 will add a significant amount of new capacity, potentially freeing up capacity on the West Coast main line.

- 5.28 However, the DfT told us that although HS2 will release capacity on the 'classic' West Coast main line, some of this capacity will be specified to remove duplication between classic and HS2 services, to ensure that HS2 and classic rail services are fully integrated and to make use of the capacity freed up by the introduction of HS2 to improve the rail services to certain locations.²⁸⁸ These principles are considered by the DfT to be fundamental to the HS2 business case. However, we note that there are many options for future service specifications and that decisions on future services will not be taken until much nearer the time.
- 5.29 As considered in Chapter 6, the HS2 high-speed line may itself be a candidate for on-rail competition. We are, however, conscious of the need for policy-makers to ensure that HS2 delivers the maximum economic and social benefits envisaged in its business case for its construction and that a variety of objectives must be balanced in making operational decisions regarding the nature of services that will run on HS2.
- 5.30 In summary, in the longer term, on-board digital signalling and HS2 are likely to create some additional capacity on the network, helping to create the flexibility to increase on-rail competition on parts of the network, should policymakers be minded to do so. ORR also told us that a reformed open access system would, alongside franchising, support the delivery of the government's objective of making the best use of step changes in capability, such as HS2 and on-board signalling, by responding to changing circumstances and identifying opportunities for new services.
- 5.31 Moreover, as considered in the next section, we do not consider that the existence of spare capacity on the network is a strict prerequisite for greater on-rail competition.

Competition under capacity constraints

- 5.32 Although new capacity would create opportunities for greater on-rail competition in the future by allowing new entrants to run services in addition to those operated by incumbents today, we consider that on-rail competition could take place under today's capacity constraints.
- 5.33 First, while barriers to capacity expansion may represent an obstacle to the expansion of on-rail competition from its current marginal scale through the

²⁸⁸ [The economic case for HS2](#), PFM v4.3: Assumptions report, October 2013.

introduction of new services in addition to those run by incumbents, greater on-rail competition could be introduced by reallocating existing capacity between operators. For example, the size of certain franchises could be reduced in order to allow greater open access operations or there could be two successful bidders for some franchises.

- 5.34 Second, even when there is no additional track capacity (ie in terms of train paths), there is still likely to be capacity available on trains, which will incentivise operators to compete to win additional passengers. We were told by a number of stakeholders that there is considerable spare capacity on many off-peak services on the long-distance intercity routes. We were also told that there may be spare capacity on certain peak-time services on intercity routes, as more price-sensitive passengers typically avoid travelling on these services.²⁸⁹ We also understand that even when capacity on services is limited on certain flows on a long-distance intercity route, spare capacity may still exist on a number of other flows on the route.
- 5.35 Third, even where certain train services are at full capacity, eg in peak services, this does not, in itself, imply that on-rail competition cannot be effective in a long-distance intercity environment. We note that:
- (a) many long distance operators use yield management systems which (subject to restrictions from fare regulation) enable them to manage demand across services; and
 - (b) operators are still able to compete under capacity constraints by differentiating their services to attract passengers with different preferences and budget constraints (for example, we note that the open access applications by Alliance Rail and FirstGroup seek to compete with the incumbent in different ways).²⁹⁰
- 5.36 Finally, we note that there are also examples of on-rail competition leading to the identification of greater capacity on the network, suggesting that greater on-rail competition has the potential to incentivise the development of solutions to capacity scarcity.

²⁸⁹ In this regard we note that load factors increased in the European air transport sector following liberalisation and the introduction of new competition.

²⁹⁰ This is also illustrated by the example of extensive competition between airlines for services in and out of the London airports, even where capacity constraints exist.

Incentives to maximise network capacity

Misalignment of incentives and Network Rail's access rights policy

- 5.37 In addition to network enhancement works and investments, a number of ORR reports have noted that the capacity identification process undertaken by Network Rail could be improved in order to maximise and manage the network capacity more efficiently, allowing more services to operate on the existing network.²⁹¹
- 5.38 We were told by a number of train operators and other stakeholders that there is currently little incentive for Network Rail to maximise capacity utilisation, with its primary focus being on operational performance. For example, in its final determination of Network Rail's outputs and funding for 2014–2019,²⁹² ORR noted Chiltern Railways' view that Network Rail is 'programmed' to prioritise performance results over sale of capacity. Chiltern Railways also noted that there are many ways of creating additional capacity without embarking upon major schemes but that Network Rail is not currently incentivised to do this.
- 5.39 This alignment of incentives may be due to a number of reasons:
- Most variable charges are cost-oriented but cover only short-run marginal costs, so Network Rail has no financial incentive to sell more of its network capacity;²⁹³ moreover, fixed track access charges are not fully cost-reflective and are independent of the quantity of services provided.²⁹⁴
 - Performance incentives and targets have been significant in Network Rail's regulation, which have provided a disincentive for Network Rail to make additional capacity available because of the trade-off between punctuality/reliability and capacity maximisation.
 - Lack of incentives could also result from (a) Network Rail's ownership structure (ie it is a 'for profit' but not 'for dividend' company²⁹⁵); and (b) Network Rail's incentive schemes applied to its senior management.

²⁹¹ See, for example, ORR, Periodic Review 2013, 'On-rail competition: Consultation on options for change in open access', June 2013.

²⁹² ORR (October 2013), [Final determination of Network Rail's outputs and funding for 2014-19](#).

²⁹³ In a commercial setting, Network Rail would charge prices which are set above its short-run costs so that it would profit by selling more of its network capacity.

²⁹⁴ Fixed charges cover Network Rail's remaining costs after variable charges, other single till income and the network grant.

²⁹⁵ Network Rail can make a profit but has to reinvest it in the network.

- 5.40 In its system operation consultation document on making better use of the railway network,²⁹⁶ ORR identifies the current trade-offs between the level of capacity, performance and cost. ORR also highlights that while cost and performance are currently measured and regularly reported, this is not the case for the capacity of the system.
- 5.41 In order to take steps to improve the existing alignment of incentives, ORR undertook a recalibration of variable charges for CP5 resulting in:
- a substantial increase in the capacity charge²⁹⁷ paid by train companies to Network Rail, which now grows exponentially in congested areas and therefore encourages Network Rail to make further capacity available; and
 - an enhanced volume incentive mechanism,²⁹⁸ designed to encourage Network Rail to make commercially oriented trade-offs when deciding whether to meet unexpected demand.
- 5.42 In addition, ORR is considering further how to introduce more cost-reflective charging schemes in order to incentivise Network Rail to manage the network capacity, and to incentivise its customers to use that capacity, more efficiently.²⁹⁹
- 5.43 In its response to our consultation Network Rail stated that we should be seeking ways to make best use of the available network capacity and to provide the best service to end users through on-rail competition. In this regard, Network Rail stated that capacity optimisation is one of the best ways to deliver value for money for funders and end users.
- 5.44 Network Rail considers that neither a purely market-based approach nor a completely planned system is likely to achieve this. In Network Rail's view, the optimal solution would be a 'reasonably' planned system which still provides opportunities for operators to innovate. In an environment with greater on-rail

²⁹⁶ ORR (August 2015), [System Operation: A consultation on making better use of the railway network](#).

²⁹⁷ The capacity charge recovers the additional Schedule 8 compensation from Network Rail to operators due to network performance issues resulting from increased traffic on the network. Franchised operators are largely protected from this increase under the terms of their franchise agreements.

²⁹⁸ The volume incentive mechanism consists of payments made to Network Rail in the event that, for example, passenger train miles exceed a predetermined baseline. From CP5 onwards, the volume incentive also includes a downside with symmetric payments made by Network Rail to the government if passenger train miles fall below the baseline. ORR introduced a payment floor of –£300 million and a ceiling of +£300 million in order to balance the risk of the incentive becoming inactive, against affordability concerns for both government and Network Rail.

²⁹⁹ Cost-reflective charges would allow Network Rail to levy higher charges on parts of the network where capacity is scarce. In its December 2015 structure of track access charges consultation, ORR stated that improving the cost-reflectivity of charges has the potential to improve outcomes by reducing costs and improving the use of the network. At this stage, ORR proposes to continue work with Network Rail to understand the drivers of costs that are fixed in the medium to long term and then to consider separately whether and how to pass any improved understanding of costs into charges.

competition, the system operator role is seen by Network Rail as key to maximising capacity through timetabling and allocating train paths to operators in a non-discriminatory way.

- 5.45 Some stakeholders told us that inefficiencies in the optimisation of capacity have been a consequence of the lack of flexibility resulting from the detailed specification of franchise agreements and access rights. Access rights were originally prescriptive in nature in order to satisfy the concerns of train operators at the time of privatisation that protection was required against potential network degradation.
- 5.46 Network Rail observes that these original concerns have not been realised and supports a greater degree of flexibility in access rights as a way to achieve more efficient timetabling and, consequently, to free up additional capacity, recognising that different approaches may be appropriate for different parts of the network. ORR and the DfT are also supportive of the principle of more flexibility around the sale of access rights.
- 5.47 More flexible access rights may make it easier to optimise the use of network capacity by allowing Network Rail flexibility to optimise the timetable, particularly as the network becomes even more intensively used and infrastructure projects come to fruition. As highlighted below, this could also support greater flexibility in franchise specification. The counterargument is that new entrants require certainty regarding access rights and FirstGroup noted that this would be important in a framework of increased competition.
- 5.48 In September 2015, Network Rail published its sale of access rights policy,³⁰⁰ which sets out how Network Rail will deal with requests for the sale of access rights from those who seek to use the network. The new strategy follows extensive debate in the industry under the auspices of the Rail Delivery Group's Contractual and Regulatory Reform Working Group.
- 5.49 In relation to passenger rail services, the policy states that where parts of the network are predominantly used by a single operator, Network Rail will usually only agree 'quantum rights' for that operator in order to provide maximum flexibility in the construction of timetables.³⁰¹ Where parts of the network are predominantly used by more than one operator, Network Rail will consider agreeing additional specification, which may include journey time or interval protection, in order to provide greater certainty and avoid suboptimal timetable adjustments. We note that this approach balances certainty for operators with

³⁰⁰ [Network Rail Access Rights Policy](#), September 2015.

³⁰¹ Quantum rights cover passenger train slots, associated timing loads and calling patterns.

flexibility and therefore has the potential to facilitate on-rail competition. The access rights policy will remain under review and will be updated, as necessary, to reflect wider industry developments and experience.³⁰²

- 5.50 In summary, the role of the system operator in identifying and allocating capacity is a key component in introducing greater on-rail competition. We welcome ORR's system operation review and the development of an access rights policy that helps to facilitate on-rail competition in the future.

Impact of on-rail competition on capacity identification and network enhancements

- 5.51 On-rail competition can have, and has had, a positive impact on the capacity identification and maximisation process, because of the strong incentives of new entrants to identify additional capacity.
- 5.52 The open access applications proposed to Network Rail have often identified additional capacity in the network – allowing more services on the network – and led to efficient path allocation solutions. In general, one of the benefits of competition 'in' the market is that it provides incentives for the efficient use of available resources.
- 5.53 Competition between overlapping and parallel franchises has also provided incentives to innovate and invest in the network. For example, on the London–West Midlands route, Chiltern Railways undertook major upgrade work on the network in partnership with Network Rail, in response to faster and more frequent services launched by Virgin Trains.
- 5.54 As highlighted in paragraphs 3.47 and 4.34, competition from Virgin Trains on the West Coast main line and from the parallel Chiltern Railways franchise was one driver in London Midland investing in new capacity in order to grow its revenue and to limit the opportunity for scarce paths to be consumed by competitors (which would, in turn, limit its ability to expand in the future).³⁰³ The timing of London Midland's proposal to increase capacity coincided with the end of Virgin Trains' moderation of competition clause in 2012 and was only made possible by the lifting of the restrictions.
- 5.55 London Midland minimised the requirement for new rolling stock by focusing on a modification to existing units. Services operating on key flows from Euston were accelerated from 100mph to 110mph through rolling stock modifications and a small procurement to fulfil the additional requirement at

³⁰² See Network Rail, *Access Rights Policy*, September 2015.

³⁰³ ORR/CT/14-63, *Incentivising better capacity management on GB rail: Case study evidence from other industries*, Credo, March 2015.

peak times. London Midland's project team found that this allowed it to operate two services in a single train path, as opposed to the original two. This allowed an additional service to be added into each off-peak hour in 2012 and two additional morning peak services and five evening peak services to be added from December 2014. This produced around 4,000 extra seats in the morning peak and around 8,000 in the evening peak.

- 5.56 In this example, competition was a driver for the capacity increase in two ways – the incentives from competition between train operators and, during the options evaluation process, competition to produce the best solution and be granted access rights.
- 5.57 However, as discussed in Chapter 2, under many of the current franchise agreements, franchised TOCs have limited incentives to maximise the use of capacity on routes where they operate. In particular, once a franchise agreement is under way, there may be limited incentives to increase the number of services. This disincentive is most likely where franchised TOCs have a cap and collar risk-sharing mechanism with the government or where the franchised TOC operates under a management contract with the government bearing full revenue risk (such as in the Thameslink, Southern & Great Northern franchise). Franchised TOCs that are exposed to the full revenue risk of the franchise (such as Chiltern Railways) and those with new risk-sharing mechanisms will have greater incentives to run more trains.³⁰⁴
- 5.58 We welcome the DfT's reforms to the franchising system in order to develop franchised TOCs' incentives to innovate responsively to passenger demand and to reform the mechanism for sharing risk between franchised TOCs and government. We note that additional flexibility is important in allowing franchised TOCs to respond to on-rail competition and, in turn, to allow the dynamic benefits of greater on-rail competition to be realised.

Access to rolling stock

Rolling stock scarcity

- 5.59 The ROSCOs own rolling stock and lease them to TOCs on a commercial basis. This upstream market was created in 1993 in order to promote competition and remove entry barriers.³⁰⁵

³⁰⁴ The Rail Delivery Group noted that, although cap and collar franchises are no longer let, operator margins are low with profit-sharing mechanisms cut in at low levels of turnover.

³⁰⁵ Due to the hefty investments required to manufacture a brand new piece of rolling stock, the access to these assets could in fact represent a considerable barrier to entry. This is particularly true when train companies

5.60 However, in 2009, the Competition Commission found that there was:

a restricted choice of rolling stock available to TOCs, arising partly from operational and technical restrictions on substitutability, but also because of direct or indirect specification of rolling stock in Invitations to Tender for franchises, the costs and risks involved in switching to alternative used or new stock, and the operation of the franchise system which reduces opportunities for competition.³⁰⁶

5.61 We understand that, currently, the availability and cost of rolling stock is still a concern and may be a barrier to entry. This seems to be a particular concern for certain rolling stock types³⁰⁷ and for OAOs, which have a shorter horizon and less certainty over the length of their track access rights.

5.62 However, in the near future, rolling stock is likely to become less scarce. As part of the InterCity Express Programme, new rolling stock (known as IEP units) will enter service on the East Coast main line from 2018 and on the Great Western main line from 2017. As a result, High Speed Trains (commonly known as 'InterCity 125' trains³⁰⁸) currently utilised on the Great Western route and Mk4 electric trains³⁰⁹ currently utilised on the East Coast main line will become available when new trains are introduced on these routes. If OAOs have an opportunity to access this rolling stock, this has the potential to improve competitive conditions for re-leased rolling stock, supplementing OAOs' ability to procure new rolling stock.³¹⁰

5.63 ORR noted in its consultation response that recent investment in rolling stock and electrification is likely to free up existing rolling stock, reducing this potential barrier to entry.

5.64 Furthermore, where operators have sufficiently long access rights, there is evidence to suggest that obtaining rolling stock is not a barrier to entry. This

operate on a short- to medium-term horizon, as the average economic life cycle of rolling stock is 30 years or more. See 'New opportunities for the railways – Privatisation of British Rail', presented to Parliament by the Secretary of State for Transport by Command of Her Majesty, July 1992.

³⁰⁶ Competition Commission (7 April 2009), [Rolling Stock Leasing market investigation, final report](#).

³⁰⁷ For example, we have been told that there is a limited supply of Class 180 diesel multiple unit rolling stock currently used by Grand Central and First Hull Trains and that this constitutes a barrier to entry.

³⁰⁸ This is the brand name of British Rail's high-speed train, built between 1975 and 1981.

³⁰⁹ Trains built between 1989 and 1992.

³¹⁰ FirstGroup told us that rolling stock availability represents a constraint for introducing greater competition in the market, as the release of old stock might not be a viable option due to costs associated with extending their life cycle and bringing them up to the standards required for their continued operation. However, we note that Virgin/Stagecoach are proposing to use Mk4 intercity rolling stock in their application to run fast services from London to Edinburgh and that ScotRail is to start using High Speed Trains to improve services on longer-distance intercity routes, partly due to their popularity with passengers on the competing services operated by Virgin East Coast.

has been the case in the international examples of on-rail competition that we considered in Chapter 3. In Great Britain, we also note that Alliance Rail is procuring new Pendolino units to operate its services from London to Blackpool under the Great North Western Railway brand.³¹¹

- 5.65 In relation to the potential impact on delivering government-led rolling stock renewals, such as IEP, where both franchised TOCs and OAOs are active on a route, the impact assessment commissioned by ORR also noted that the rolling stock market seemed to be reverting to operator – and ROSCO – led procurement, which is more compatible with a multi-operator railway. Moreover, we note that First Hull Trains, an OAO on the East Coast main line, has ordered five IEP units and will therefore operate the same rolling stock as the incumbent franchised TOC (which will continue to operate older Mk4 trains).

Demand uncertainty

- 5.66 Rolling stock lease costs represent one of the main cost drivers faced by train operators.³¹² We therefore considered whether increased competition could lead to greater uncertainty in the demand for rolling stock, leading to a price increase.
- 5.67 However, in our view, if the overall effects of greater competition are considered, demand for rolling stock should not be negatively affected as a result of greater on-rail competition. As described in paragraph 5.85, on-rail competition is likely to lead to growth in passenger volumes. Therefore, despite potential shifts in franchised TOCs' market shares, we consider there to be only a low risk that there will be a drop in demand for rolling stock. Moreover, in a more dynamic market for passenger services, the possibility of rolling stock 'secondary trading' taking place between operators could further insulate against any such perceived risk. This potential risk was not highlighted as a concern in any of the consultation responses received.
- 5.68 Furthermore, we note that increased on-rail competition could indirectly benefit the competitiveness of the rolling stock leasing market: (a) more commercially driven behaviours by train operators would support greater competition in the used/re-leased segment of the rolling stock market; (b) as seen from the recent open access applications on the East and West Coast main line services, OAOs are potential new entrants in the rolling stock market

³¹¹ Great North Western Railway has proposed new tilting trains, with similar traction characteristics to the rolling stock operated by the intercity incumbent on the West Coast main line.

³¹² In 2013–2014, around 15 to 20% of all train services' operating costs were driven by rolling stock leasing (ie £1.3 billion out of £8.9 billion – £6.5 billion excluding charges paid to Network Rail).

(whereas franchised TOCs are not), and this could serve to discipline incumbent ROSCOs. Recent open access applications made by Alliance, Grand Central and East Coast Trains Limited for the East Coast and West Coast main lines were all predicated on ordering new rolling stock fleets.

Financial issues: funding the network and operators' financial viability

Introduction: loss-making services and their funding mechanism

- 5.69 As set out in our discussion document, the rail sector is fundamental to the economy of Great Britain.³¹³ This point was emphasised by the DfT, Transport Scotland, ORR and a range of respondents to the consultation, including several regional transport partnerships. In particular, a number of respondents highlighted the importance of providing services which meet social and economic needs, but which would not be commercially viable without a subsidy.³¹⁴
- 5.70 The unprofitable element of a train service operated on a route could concern:
- the entire route;
 - specific stopping patterns, ie only certain stops on a route could be loss-making; or
 - services operated at a particular time of day (for example, the first and last train services may be loss-making).
- 5.71 In order to fund unprofitable elements of services, a system of cross-subsidies has been put in place: loss-making and profitable services are often bundled together in a single franchise, so that the franchised TOC finances unprofitable services to some extent through cross-subsidy from its profitable services.
- 5.72 As described in Chapter 2, in 2013–2014 the government made an overall net contribution to franchised operators of £0.1 billion (as a result of £2.0 billion paid as subsidies and £1.9 billion received as premium payments). In addition,

³¹³ See, for example, [What is the contribution of rail to the UK economy?](#) Oxera, prepared for the Rail Delivery Group (July 2014).

³¹⁴ Most of these services are defined and specified by the government. As set out in Chapter 2, the government's approach to service specification and procurement has evolved over the years.

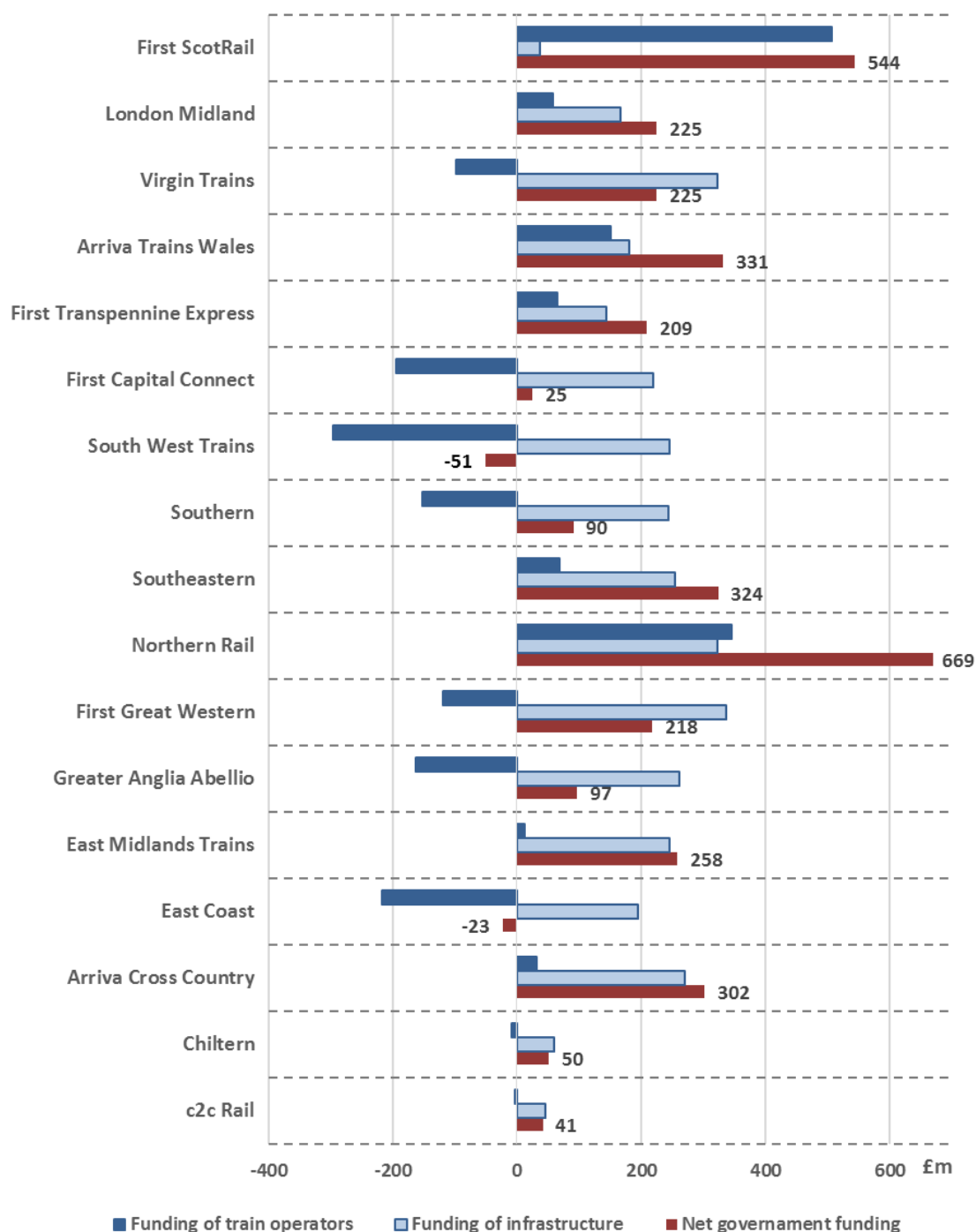
over the same period, the government contributed a total of £3.7 billion to the funding of the network in all franchise areas via the network grant.³¹⁵

- 5.73 From an economic point of view, in order to identify and quantify loss-making services, it is necessary to consider the industry value chain as a whole. Therefore, in addition to the revenues and costs associated with running the trains, the relevant portion of expenditure and revenues associated with the management of the upstream assets, ie track, stations and other essential facilities, should be identified.
- 5.74 Figure 14 below provides a simplified description of the premiums paid (negative figures) or subsidies received (positive figures) by franchised TOCs (dark blue bars), as well as notional allocation of the government's funding of the network infrastructure for each operator (light blue bars). The net government funding per operator is illustrated by combining these two components (red bars).³¹⁶

³¹⁵ The network grant increased to £3.8 billion in 2014–2015.

³¹⁶ The network grant has been allocated to each franchise area in proportion to the residual Network Rail income less expenditure calculated for each franchise.

Figure 14: The contribution of government funding to Network Rail and train operators in 2013–2014 analysed by operator



Source: Analysis of data from ORR, GB rail industry financial information 2013–2014.

5.75 The figure shows that there are relatively few operators paying premiums to the government (negative dark blue bars). In absolute terms, as described above, these premiums initially offset the subsidies. However, taking into account the allocation of government infrastructure funding, there are only two franchised TOCs which receive no subsidy, ie East Coast and South West Trains (negative red bars).

The impact of on-rail competition on government funds

How on-rail competition may threaten government funds

- 5.76 As set out above, the share of industry costs that is not met through passenger fares is financed through a mixture of direct government funding of infrastructure and cross-subsidisation between franchised TOCs through the franchise bidding process.
- 5.77 In the absence of suitable restructuring of the current charging arrangements, a consequence of greater on-rail competition could be to increase the level of government subsidy required. This section considers the degree to which this might happen and provides the context to our proposed approach to managing this risk as part of any implementation of greater on-rail competition.
- 5.78 Within the franchise bidding procedure, participants mainly compete for the market in terms of the level of subsidies (positive or negative) needed from the government to operate the rail services. An increased level of competition in the market is likely to reduce franchised TOCs' overall revenues, because (a) consumers are partly transferred from the franchised operator to the competitor(s), and (b) prices decrease due to competition.³¹⁷
- 5.79 Any significant reduction in premium payments could threaten:
- (a) the funding of network infrastructure investment (ie new entrants 'free-riding' on incumbents' investments – which could, in turn, undermine the business case for the government to make new investments³¹⁸); and
 - (b) the funding of services deemed socially valuable even if uncommercial (ie loss-making or of limited profitability), such as PSO operations (ie 'cream-skimming').
- 5.80 This risk is currently tackled by: (a) re-mapping the franchise area to limit franchise overlaps and competition;³¹⁹ and (b) moderating open access competition, by allowing entry only if it is not expected to be primarily abstractive of revenue from the franchised TOC (ie the NPA test).³²⁰

³¹⁷ In this regard, Virgin/Stagecoach stated in their consultation response that the East Coast main line franchise has produced significantly lower revenue growth compared with other intercity franchises over the last 15 years because of open access revenue abstraction and impact on timetable optimisation.

³¹⁸ For example, franchise premiums were a critical element of the business case for major investments such as the InterCity Express programme for new rolling stock.

³¹⁹ Policy is implemented by the DfT in the franchise design.

³²⁰ As set out in paragraph 2.95, the NPA test is an economic assessment conducted by ORR and has the function of balancing its objectives of enhancing competition and preserving government funds.

- 5.81 Before considering the impact of greater on-rail competition on government funds, we note that there is a trade-off between the delivery of passenger benefits and the impact on government funds.
- 5.82 Some consultation respondents told us that our primary concern should not be to ensure that there is no impact on taxpayer funds, but that any impact is compensated by greater passenger benefits and efficiency in the rail sector. For example, Which? told us that the goal of the regulatory system for rail should be to deliver the quality of service that consumers are willing to pay for at the lowest possible combined cost, whether that cost is funded by passengers or taxpayers.
- 5.83 However, given that government funds are used for financing a range of social objectives, including investment and unprofitable but socially valuable services, we consider the impact of on-rail competition on government funds in greater detail below.

Impact of on-rail competition on fares, costs and demand

- 5.84 Increased on-rail competition would be expected to exert downward pressure on fares and therefore reduce the level of cross-subsidy to unprofitable services from profitable services (on which competition would be likely to emerge). This would therefore increase the amount of government funds that are necessary to finance the system – although it would also generate a positive impact in the form of passenger benefits.³²¹
- 5.85 The magnitude of the impact may be mitigated by greater on-rail competition incentivising franchised TOCs to become more efficient (as discussed in Chapter 4). We also note that the impact may be further mitigated by greater on-rail competition generating demand growth. This could occur in two ways:
- OAOs targeting previously unmet but existing demand; and
 - on-rail competition improving the quality of service, lowering fares and growing the market by leading to a transfer of passengers to rail from other transport modes.

In Chapter 3, we present evidence from Great Britain and other European countries, which suggests that greater on-rail competition can generate growth in demand.

³²¹ Currently, almost 70% of the industry funding is derived from passengers (see paragraph 2.45).

- 5.86 We also note that our options for reform, set out in Chapter 6, seek to address the impact on government funds resulting from on-rail competition. The impact of our options for greater on-rail competition on government funds was also considered in the impact assessment commissioned by the ORR, details of which are set out in the assessment of each option considered in Chapter 6.

The impact of on-rail competition on recent franchise awards

- 5.87 We considered the impact of on-rail competition on historical franchise bids. We found limited empirical evidence that on-rail competition had a negative impact on franchise awards, since in a number of recent tenders for franchises, bids have increased in value notwithstanding the presence of actual or potential on-rail competition.
- 5.88 As an example, we note that on the East Coast main line franchise premiums increased on routes with significant current and prospective open access operations. GNER, the winner of the 1996 franchise competition, bid on the basis of an average premium of £130 million per year. In 2007, National Express won the franchise competition, bidding on the basis of an average premium of £190 million per year despite First Hull Trains having launched services in competition with the franchised TOC in 2000 and the award of access rights in 2006 for Grand Central to offer services from London to Sunderland.³²²
- 5.89 In the 2014 East Coast franchise competition, Stagecoach and Virgin bid on the basis of an average premium of £410 million per year, despite the growth of First Hull Trains and Grand Central since 2007 (including Grand Central's introduction of services to Bradford in 2010). However, in the 2014 competition, bidders were indemnified against 80% of any revenue loss from failing to obtain sufficient train paths on the network to deliver the franchisee's key specified services, eg as a result of new open access services commencing during the period of the franchise.
- 5.90 We note that it is extremely difficult to assess how high bids would have been absent on-rail competition. For example, the West Coast main line franchise has not been re-let and the East Midlands and Greater Western franchises changed in size when they were re-let.
- 5.91 There are also a number of examples of on-rail competition leading to franchised TOCs increasing the number of services they run, including Chiltern Railways' main line services from London to Birmingham and London

³²² We note that, for a number of different reasons, the GNER and National Express franchises ultimately failed before the completion of their franchise terms.

Midland's West Coast main line services, thus growing the value of the franchises. Moreover, we note that the most recent East Coast franchise specifies new services to destinations originally identified and made commercially viable by OAOs, such as Sunderland, again growing the value of the franchise.³²³

- 5.92 We have had some indication from the DfT of the potential impact that the approval of recent open access applications would have on the finances of the franchise holder for East Coast main line routes which, as noted in paragraph 5.89, would be indemnified for a proportion of the revenue loss should it be unable to secure the necessary train paths to deliver the key services specified in its franchise – and note that the financial impact would be significant.³²⁴
- 5.93 However, we note that this financial impact is largely a consequence of the **current** open access regime in which: (a) franchise bidders face uncertainty about the future level of open access operations at the time of bidding; (b) OAOs pay only variable track access charges; and (c) there is no mechanism for the government to levy a charge on OAOs to contribute to the cost of unprofitable but socially valuable services. The options that we propose for greater on-rail competition involving open access in Chapter 6 are specifically designed to overcome these current issues.
- 5.94 In this regard, Virgin/Stagecoach, the incumbent operator on the East Coast main line, told us that it was particularly concerned about the impact of greater on-rail competition in the current system in which there was no visibility at the time of franchise bidding of the level of on-rail competition that would be faced during the life of the franchise and in which there was limited ability to respond to on-rail competition given the specification of the franchise. As set out in its consultation response, Virgin/Stagecoach therefore support a greater degree of on-rail competition on long-distance routes if the current system is reformed.³²⁵
- 5.95 ORR stated in its consultation response that the current system carries risks for the taxpayer in that open access has an uncertain set of revenue impacts, including the potential for open access to abstract some revenue from franchised TOCs and affect revenue streams to the government. However, ORR also noted that this abstraction risk may be offset by the extent to which

³²³ We also note that the UK government's stake in Eurostar was sold in 2015 at a high price (more than £750 million) despite the prospect of increased competition from other operators, including DB.

³²⁴ We note, however, that the assessment does not take into account the dynamic benefits of on-rail competition, for example in relation to passenger and efficiency benefits.

³²⁵ The Virgin/Stagecoach consultation response is discussed in more detail in Chapter 6.

competition from OAOs improves the performance of franchise operators and/or highlights opportunities for further market growth.

- 5.96 In summary, we note that the DfT, ORR and a range of train operators have highlighted concerns regarding the way in which the current system of open access is operated, particularly in relation to the uncertainty regarding the future level of open access competition at the time of franchise bidding and a limited ability to respond to such competition given franchise specification. We have therefore sought to address these concerns in designing the options for greater on-rail competition set out in Chapter 6.

The effect of greater on-rail competition on investment business cases

- 5.97 The business cases for new investment in infrastructure are based on the expected costs and economic benefits of the investment. It was put to us that having multiple operators on a route may undermine the business case for investment as the government is less able to forecast the utilisation of the new infrastructure (as it will not be fully specified and not operated solely by a franchised TOC).³²⁶
- 5.98 In particular, DfT noted that when making an investment decision, it takes account of the potential for the new revenue generated to offset, to some extent the investment costs. If an OAO enters and captures this revenue, it can have a dramatically negative impact on the investment case. The DfT also noted that it considers a variety of non-revenue related benefits which, in its view, an OAO will ignore. The DfT also stated that it tends to have a longer-term outlook than a commercial operator when considering the case for investment.
- 5.99 We recognise the importance of investment in the network and rolling stock in ensuring that the railway is able to meet the needs of passengers and society in the future, particularly as passenger demand continues to grow. We have therefore considered how major investment projects would be safeguarded in an environment where there is more on-rail competition and we have also considered the potential for on-rail competition to drive greater private sector investment.

Safeguarding investment

- 5.100 A key element of safeguarding investment in the railway is to ensure that the business cases for major projects are not adversely affected by on-rail

³²⁶ This risk was emphasised by FirstGroup, which mentioned that the existing strategic (public) investments were financed on the basis of the current industry situation; any changes need to take this fact into account.

competition. In theory, if the business case is economically credible and the demand forecasts accurate, the investment is likely to be fully utilised on commercial intercity routes regardless of the identity of the operators.

5.101 As set out above, there is evidence that greater on-rail competition leads to growth in passenger numbers, and to more efficient discovery and use of capacity, which should boost the business case for investment. In this regard, we note the example, cited above at paragraph 4.36, of First Hull Trains seeking private sector finance to electrify the line from Selby to Hull – an initiative that both it and franchised TOCs would benefit from.³²⁷ Moreover, the wider economic case for investment, including socio-economic benefits, should not be adversely affected by on-rail competition.

5.102 In Chapter 6, we consider a number of safeguards and mechanisms for ensuring that greater on-rail competition does not undermine investment business cases. In summary:

- First, we note that ORR would continue to have a role in determining open access applications, including the rolling stock used. As an example, if an OAO applied to use diesel rolling stock on a route undergoing electrification upgrade work, a mechanism would be in place to prevent this.
- Secondly, there are a number of mechanisms through which the cost of investment could be recouped for the taxpayer from competing operators. For example, Arriva told us that investment costs could be recouped through rebate payments made by operators who utilise the infrastructure and who benefit from the enhancement (this was the approach taken in the Chiltern route enhancements, as discussed below at paragraph 5.106).

Driving greater private sector investment

5.103 It is important to consider the distinction between privately and publicly funded investments. Some consultation respondents argued that private investment in the railway network, under the current framework, is low relative to some other sectors.³²⁸

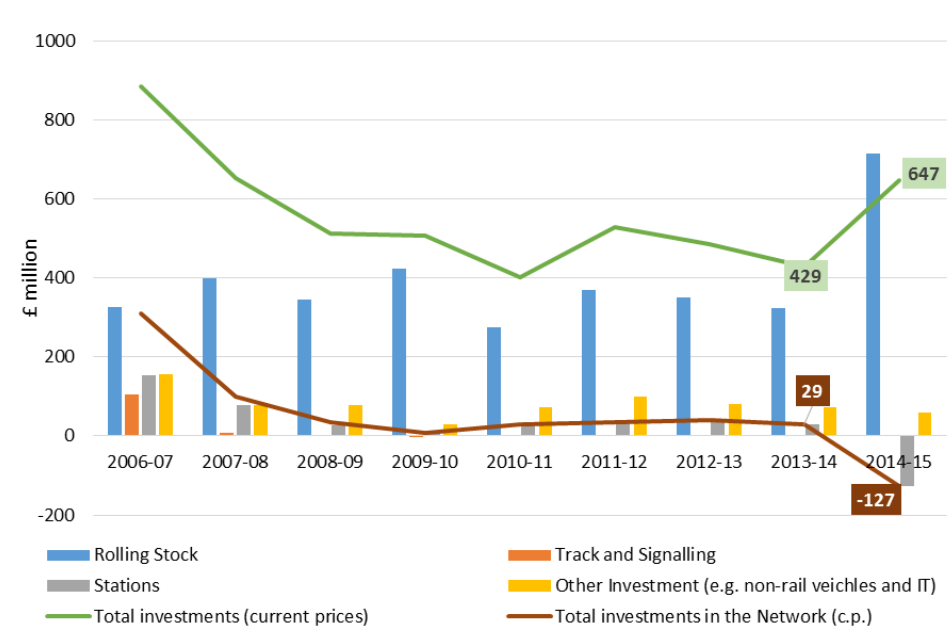
³²⁷ ORR noted that this investment has the potential to benefit TransPennine Express as its Trans-Pennine services to Hull will be capable of being operated by electric trains earlier than they would otherwise.

³²⁸ Arriva agreed that there is limited and small-scale 'genuine third-party' investment in the infrastructure. Another consultation respondent, REGUTRAIN, noted that increased competition could affect the cost of investment in new infrastructure and the proportion between private and public investments in the sector.

5.104 Arriva also told us that if industry arrangements were developed to reduce constraints on operator business planning timescales, there would be significant opportunity to leverage genuine third party investment into the industry, with larger-scale open access acting as the catalyst for moving away from reliance on infrastructure funding by government to operators with longer-term access rights.³²⁹

5.105 Figure 15 shows that a net total of £647 million was invested by private companies (excluding Network Rail) in the rail industry during 2014–2015 (green line). This represents an increase of 53% from the previous year (51% in real terms). However, private investment in network infrastructure (ie in stations, track and signalling) is much lower and declining (brown line). In 2014–2015, less than £1 million of net private investment was made in track and signalling; in addition there was a net sale of £128 million of station assets (exceeding station investment) which made the overall private investments in the railways network negative in 2014–2015 (ie –£127 million).

Figure 15: Private investment in the rail industry (excluding Network Rail investment)



Source: ORR. Rail Finance 2014-15 Annual Statistical Release.

5.106 We note that increased on-rail competition could drive greater private sector investment, especially on the commercially attractive intercity routes where operators have strong commercial incentives. Moreover, greater certainty in the open access application process and the possibility of longer access rights would allow operators to have a longer business planning timescale, possibly

³²⁹ Arriva noted that The Railways Infrastructure (Access and Management) Regulations 2005 (as amended) already provide the legal framework for access contracts in this respect.

allowing a fair return on larger investments. There could be a number of mechanisms in a competitive environment in order to recover the costs of investment in infrastructure, for example it would be possible to charge a fee to train operators using new infrastructure. This approach was adopted in order to finance the Chiltern Railways 'Evergreen 3' project which enhanced capacity between London and Birmingham.³³⁰ A similar mechanism is proposed in the plan by First Hull Trains to electrify the line from Hull to Selby (see paragraph 4.36).

- 5.107 In addition to undertaking major upgrade work on the London–West Midlands route in partnership with Network Rail in response to on-rail competition, Chiltern Railways has planned new services that will run from London Marylebone to Oxford for the first time, starting in late 2016 (with services running as far as Oxford Parkway since September 2015).
- 5.108 This project involved constructing new track and stations at Oxford Parkway and Bicester Village.³³¹ Chiltern Railways invested £130 million of the total £320 million cost of the new line and stations, with Network Rail contributing the remainder.³³² A number of innovations are planned on the new route, including free 4G wi-fi contactless payment for services between London and Oxford Parkway. As noted in Chapter 3, the new line introduces on-rail competition between Chiltern Railways and the parallel route from London Paddington to Oxford operated by First Great Western.
- 5.109 A further example is Grand Central's investment in stations. Following the extension of its operating licence in 2014, Grand Central pledged additional capital investment in order to further improve passenger facilities (ie upgrading the station building, parking facilities and waiting rooms) at Wakefield Kirkgate and Northallerton stations, in cooperation with Network Rail, local authorities and station facility owners.

Impact of on-rail competition on public funds identified from other European experiences

- 5.110 We considered the impact of on-rail competition on public funds identified from other European experience. As described in Chapter 3, on-rail competition has developed in a number of other European countries, ie to a limited

³³⁰ The Evergreen 3 project involved £250 million of infrastructure investment. Network Rail made the initial investment which Chiltern Railways is repaying by way of a facility charge.

³³¹ The stations were specified by Chiltern Railways and built by Network Rail.

³³² Under the agreement, Network Rail will provide the capital for the upgrade and recover this through a facility charge over the next 30 years, payable by the existing Chiltern Railways franchise and by subsequent franchisees.

extent in Germany and, more extensively, in Austria, the Czech Republic, Italy and Sweden.

- 5.111 In most of those countries, there is a clear separation between commercial and PSO services and competition ‘in’ the market takes place exclusively on purely commercial routes (see Chapter 3).³³³ Therefore, in these cases, the development of open access competition has only had an indirect impact on PSOs and government funds, which cannot be easily assessed. Public subsidies and funds allocated to rail passenger services directly depend on policy decisions in individual countries as to which public services to provide and how these should be financed.
- 5.112 For example, in some European countries (eg in Germany and Italy), a policy choice has been made to sustain the development and complete liberalisation of high-speed services with public funds (implying lower passenger fares) due to the overall positive impact on the economy this is likely to have. In Italy, the scope of PSOs has been redefined at regional and intercity level for services other than high-speed so that, effectively, the requirement to stop at certain stations has been eliminated and some prices have increased.³³⁴ However, the OAO in Italy told us that some regional and intercity services, traditionally covered by PSOs and subsidised by the government, could be run as commercial services, should legal barriers to open access entry be removed.
- 5.113 In Sweden, liberalisation and competition have been expressly supported by government. In order to sustain a greater level of competition in the market, commercial services can be modified by commercial operators agreeing with regional public authorities to run certain PSOs, applying a licensing system of ‘voluntary obligations’.
- 5.114 In the Czech Republic, the impact of open access competition on the revenue of incumbent operator – and, therefore, on the subsidies and public funds required to support its operation on services included in PSCs – appears to be low. Specifically, despite the high market share of OAOs operating on the route, competition has not resulted in a significant demand abstraction from

³³³ This is due to: (a) the clear conceptual identification of PSOs (which often relate to technological/ economic dimensions, ie non-high-speed services and/or commercially unprofitable services); (b) the much more limited scope of PSOs, especially for long-distance services; and (c) the fact that OAOs tend not to enter into the market and compete on those services for which the incumbent receives subsidies, although in most cases open access entry is neither restricted nor subject to an economic impact assessment. In Italy, open access entry is subject to an economic impact assessment, similar to the case in Great Britain. However, in 2012, PSOs in Italy were defined for 54% of the market (21% for long-distance services), while in Great Britain, PSOs are bundled together with profitable services in franchises which cover 99% of the market.

³³⁴ The newly established Italian regulator is considering introducing a PSO/universal service obligation levy on commercial services to compensate for this.

the incumbent operator due to the significant generation of new demand and the increased connectivity that OAOs have created (see paragraph 3.80).

Fixed access charges and the network grant

5.115 In this section, we consider the contribution of OAOs to fixed network costs in the current framework and the potential for OAOs to pay more cost-reflective access charges.

The contribution of OAOs to fixed network costs

5.116 The current access charge framework scheme was not primarily designed to sustain or promote a high level of competition in the market, especially from OAOs.

5.117 As described in paragraph 2.58, OAOs currently pay only variable charges, not contributing (or contributing to a smaller extent)³³⁵ to the fixed costs of the network. This reflects the risk involved in building a commercially viable OAO operation and incentivises the efficient use of otherwise underused capacity. Moreover, compared with franchised TOCs, OAOs have marginal and limited access to the network.³³⁶

5.118 However, within a scenario of increased open access competition where OAOs enjoy access rights similar to franchised TOCs, OAOs could be asked to pay an increased contribution to network costs through increased track access charges, as considered in our options for reform set out in Chapter 6. Within a proper time frame and adopting a cost-reflective approach to setting access charges, OAOs could contribute to the fixed costs of the network through some form of mark-up.

5.119 As described in Chapter 2, ORR is currently considering as part of its structure of charges review whether OAOs should pay cost-reflective charges, which would also cover some of the fixed costs of the infrastructure they use (especially where network capacity is scarce). In order not to impose an excessive burden on OAOs, ORR is also considering possible adjustments and transitional arrangements in order to take into account the existing market differences and long-term business decision taken by OAOs which are already in the market.³³⁷

³³⁵ OAOs do pay for certain infrastructure enhancements, ie any directly attributable CAPEX costs.

³³⁶ See decision of the English High Court (2006 EWHC 1942 (Admin)) concerning the alleged differentiated charging policy for franchised TOCs and OAOs, considered in paragraphs 2.62 & 2.63.

³³⁷ As previously noted, European legislation permits a charge that includes a 'mark-up' above 'costs directly incurred' only if the market can bear it.

- 5.120 Moreover, although in general terms the franchise premiums and subsidies approximately net off each other, franchised services are still in receipt of an indirect subsidy through the network grant. Consequently, across the whole network, revenues from passengers using a franchised service do not cover the costs of providing the network.
- 5.121 However, the netting-off conceals the fact that profitable franchised services cross-subsidise unprofitable ones. In so far as OAOs would reduce premiums paid to government, there is a case for OAOs to contribute to loss-making services.³³⁸ Furthermore, an OAO running an equivalent service to a franchised TOC would not currently pay FTAC and so would not make as great a contribution from ticket revenues to network costs as a franchised service.
- 5.122 In principle, as we discuss in Chapters 6 and 7, different compensation mechanisms could be adopted, eg a universal service levy³³⁹ or some obligations to operate unprofitable but socially valuable services being imposed on new entrants³⁴⁰ as well as incumbents or a combination of these mechanisms.
- 5.123 We are conscious that higher access charges and any PSO levy should not act as an unjustifiable economic barrier to entry and specifically sought the views of potential entrants on this question in our consultation. In Chapter 6, we therefore consider how access charge reform and the payment of levies could be introduced without acting as a disincentive to entry.³⁴¹
- 5.124 We consider the potential for OAOs to make a greater contribution to the cost of the network through a level playing field in track access charges with franchised TOCs and the payment of a PSO levy in Chapters 6 and 7.

³³⁸ As noted above, the actual level of contribution should account for any efficiency gain affecting the profitability of PSOs. OAOs may be able to profitably operate some of the PSO services currently subsidised.

³³⁹ A similar system has been adopted in the UK postal sector, where Ofcom has the power to establish a Universal Service Compensation Fund (see section 44 of the Postal Services Act 2011) and in postal sectors in other European countries (eg Austria, France, Hungary and Spain). Universal access and service funds (UASFs) are also adopted in the telecoms sectors of some countries in South America, Africa and Asia. Arriva expressed support for this solution, envisaged by Article 12 of Recast Directive 2012/34. On the other hand, a consultation respondent – REGUTRAIN – suggested there could be a risk that a PSO levy might not work as an effective substitute for cross-subsidisation, if the necessary PSO funds are a large proportion of the overall industry turnover.

³⁴⁰ This solution has been adopted in Sweden (see paragraph 5.113). The Railways Consultancy Ltd, in its consultation response, was of the view that OAOs could negotiate the provision of PSOs with the DfT. As a general point, the allocation of PSOs to OAOs could increase the general profitability of those services and lead to savings of public funds to the extent that the new entrants are more cost-efficient than the franchised TOCs.

³⁴¹ FirstGroup focused on the different impact that changes to access charges would have on OAOs compared with franchised TOCs, given that franchised TOCs are currently indemnified for any such changes during the franchise period. As a general point, an increase in charges would be reflected by franchised TOCs in the bidding process and most likely passed on to the government in terms of higher subsidies requested or lower premium paid.

Cost-reflective access charges

- 5.125 In the current funding and charging model, access charges reflect the short-term variable costs imposed by operating trains on the network, but recover fixed costs from franchised operators in a way that does not closely reflect the longer-term costs of their use, or the scarcity of capacity.
- 5.126 As described in Figure 1, the total costs of operating the network are currently much higher than the amount raised each year through FTAC, with the differential mostly covered by direct government subsidy to Network Rail, ie via the network grant.³⁴² Since the network grant is not directly linked to costs, almost 70% of Network Rail's income comes from sources which are not cost-reflective (ie 62% from the network grant and 7% from FTAC).³⁴³
- 5.127 The existing charging structure therefore has limited ability and incentive to reduce costs and to encourage efficient decision-making both for franchised TOCs and new entrant OAOs. In particular, since the charges for using the network are not fully cost-reflective, if new entrants were to face these costs, they would not receive the right signals as to whether the benefits of running their services outweigh the (actual) costs. If charges were more cost-reflective, eg if they distinguished more between areas with higher demand/cost and lower demand/cost, this could send more effective and informative signals to new entrants.
- 5.128 In CP5, ORR embraced a more cost-reflective approach to access charge definition. ORR substantially increased the capacity charge, in order to ensure the recovery of network costs according to network performance. ORR also undertook a general recalibration of all charges in order to improve the extent to which charges reflect underlying infrastructure costs. ORR used up-to-date estimates on costs (eg on the electricity asset usage charge³⁴⁴ and coal spillage charge³⁴⁵) and improved its cost models (eg on the traction electricity charge³⁴⁶ and the variable usage charge³⁴⁷). Moreover, ORR considered some avoidable network costs which were not previously recovered by other

³⁴² At present the network fixed costs and investments are financed by the network grant paid by government for around 89% and the fixed track access charges currently paid by franchised operators only for 11%.

³⁴³ ORR (10 December 2015), [Network Charges: A consultation on how charges can improve efficiency](#), p5. Under the current system, the split between fixed access charge and network grant is not defined on the basis of an economic rationale, but mainly according to Government budgeting criteria.

³⁴⁴ The electricity asset usage charge mainly recovers the cost of maintenance and repair of electrification assets that vary with traffic.

³⁴⁵ The coal spillage charge recovers the cost of coal spillage from freight operators transporting coal.

³⁴⁶ The traction electricity charge recovers the cost of providing electricity for traction purposes and is now charged on the basis of metered consumption.

³⁴⁷ The variable usage charge recovers maintenance and repair costs that vary with traffic and is now set based on new research and evidence on how variable costs vary by vehicle.

charges and reflected those costs in the charging scheme (eg a new freight-specific charge³⁴⁸ was introduced).

- 5.129 In addition, as outlined above, ORR is working with the industry to implement a comprehensive review of Network Rail's structure of charges aimed at removing some of the distortions in the current funding structure. The new structure of charges should be in place by the start of CP6 in 2019, before any of the changes we are proposing would come into effect.

Franchise scope and service specification

Scope of franchises and public service contracts

- 5.130 In Great Britain, franchises often include a bundle of profitable, potentially competitive, routes and loss-making routes. The adoption of this funding approach has resulted in the majority of passenger rail services – around 99% – being included in franchises,³⁴⁹ covered by PSCs (franchise agreements), and therefore potentially considered PSOs.

- 5.131 A number of stakeholders are supportive of PSOs being more clearly defined in PSCs and distinguished from commercial services, as a prerequisite for introducing a higher level of on-rail competition in the market.³⁵⁰ In this regard, some consultation respondents are of the view that the government could be less involved in the commercial parts of the industry with the DfT limited to franchising PSOs.

- 5.132 This extensive designation and allocation of unprofitable but socially valuable services, including PSOs, represents an obstacle to greater on-rail competition³⁵¹ because it allocates the great majority of the available capacity (which is a scarce resource)³⁵² to franchised TOCs and creates exclusive rights (and obligations), limiting market-oriented behaviour.

- 5.133 Due in part to the need to protect profitable services from competition, franchise overlaps have been progressively reduced in recent years. Moreover,

³⁴⁸ The freight-specific charge recovers some of the network-wide fixed and variable costs that would be avoided by Network Rail in the absence of freight traffic and is payable for the haulage of coal for the electricity supply industry, spent nuclear fuel and iron ore.

³⁴⁹ In 2012, the average percentage of PSOs in Europe was 65% in terms of passenger miles.

³⁵⁰ This point was made by Arriva, which refers in this regard to the obligations to define PSOs under EU regulation 1370/2007 and by the Rail Delivery Group. A number of other respondents supported a clearer distinction between profitable and unprofitable services.

³⁵¹ As previously highlighted, PSO services in Great Britain are generally awarded by way of a competitive franchising process, thus resulting in competition 'for' the market.

³⁵² Currently there are two main ways in which capacity is identified: (i) DfT specification in the franchise agreements; or (ii) OAOs' (or franchised TOCs' additional track access) applications to Network Rail and ORR.

additional commercially driven services would be likely to abstract revenue from franchised TOCs on both profitable and unprofitable services.

- 5.134 In most European cases considered where on-rail competition has developed, the percentage of PSO services over total services is much lower, especially on high-speed and long-distance routes where the average is around 30% against more than 80% for Great Britain (see paragraph 3.93).³⁵³ Furthermore, in those cases, there is often a clear-cut distinction between commercial and PSO services, ie the PSO services are more clearly defined to cover unprofitable but socially valuable services and open access competition focuses only on non-subsidised areas.
- 5.135 Some train operators told us that on routes such as the East Coast main line there would be very few, if any, PSO services. However, the majority of regional services may, in the view of operators, be classified as PSOs. We were told by operators that the data required to identify which services are PSOs and those which are not is already available. Given that the definition is a key component of introducing any levy on commercial services to fund PSOs, we consider the point further in the design of our options for greater on-rail competition in Chapter 6.

Franchise agreement specification

- 5.136 As described in Chapter 2, many franchise agreements in Great Britain have historically been tightly specified, even in those areas where the market could provide the right signals. A number of changes were made to the franchising programme following the Brown Review in order to maximise the benefits of competition 'for' the market, including allowing franchised TOCs more commercial freedom in areas such as rolling stock procurement.
- 5.137 However, the prescriptive nature of some franchise specifications can limit the ability of operators to adapt to passengers' changing demands. A number of consultation respondents highlighted that the current degree of rail passenger service specification restricts the freedom of franchised TOCs to respond to competition.³⁵⁴
- 5.138 In addition to limiting the potential for competition, this approach implies some hidden costs which should be considered in a broader cost/benefit analysis. These costs arise due to the lack of transparency in market dynamics and signals, the limited ability for operators to respond to market evolution and

³⁵³ The European countries considered are Austria, the Czech Republic, Germany, Italy and Sweden.

³⁵⁴ First Group, Virgin/Stagecoach, Arriva and Network Rail expressed this view, as well as some consultants.

consumers' preferences and, finally, the high risk of regulatory failure associated with a highly centralised approach to market design.

- 5.139 While franchise specification has the potential to limit the extent to which new operators can develop commercial strategies in response to passenger demand – and the extent to which incumbent operators can respond to competition – we note the important rationale for including a degree of specification in franchise agreements. In this regard, some regional representative groups³⁵⁵ expressed concerns about the impact of greater on-rail competition on the provision of non-profitable but socially valuable services interconnectivity, especially in the event that franchise service specification is relaxed.
- 5.140 Franchise specification has a particularly important role in ensuring the provision of unprofitable but socially valuable services and in safeguarding service and quality levels of routes facing little competition, such as commuter services. Services that are not commercially viable but which are socially valuable often require more intervention in order to secure the desired social benefits. On commuter routes, operators may have less incentive to deliver service quality and innovation given inelastic demand, crowding and fare regulation, meaning that greater specification is required. Nevertheless, as some industry stakeholders have indicated, there is potential for more dynamic service specification to allow service offerings to evolve in line with passengers' preferences.
- 5.141 On longer-distance intercity routes, it is important to balance the need for some specification (such as first and last trains) with the need to ensure that operators are able to respond to passenger demand and, where there is on-rail competition, to respond to the strategies of other operators. We consider this balance in more detail in our design of options for greater on-rail competition in Chapter 6. More generally, as stated in Chapter 2, we recognise that the franchising programme is already moving towards less tightly specified franchises.

³⁵⁵ Newark Business Club, Peninsula Rail Task Force, Transport for Greater Manchester, Scottish Association for Public Transport, Transport Scotland and Transport for London.

Impact of on-rail competition on operators' finances and business sustainability

'Price war' and operators' financial viability

5.142 We considered the risk that on-rail competition, in driving down prices, would threaten the financial viability and sustainability of operators.

5.143 In particular, we have considered the risk that once the core franchise payment schedule had been agreed at the start of the franchise, on-rail competition could drive prices down as low as the marginal cost of providing a service.³⁵⁶ This would mean that ticket prices would not cover relevant fixed costs, possibly leading to an operator ceasing to be financially viable and exiting the market.

5.144 However, there are a number of factors that mitigate this concern:

- First, we note that the cost-reflective track access charges that we propose would be paid by both new entrants and incumbents (set out in further detail in the Chapter 6) would constitute a 'price floor' for all operators.³⁵⁷
- Second, TOCs do not compete only on price but also on quality and there is some degree of product differentiation in the passenger rail market, eg high-speed/traditional services; 'no frills' solutions and services combined with bus tickets or car rental. This may limit the intensity of price competition.
- Third, capacity constraints exist on a number of rail routes in Great Britain. This may prevent prices from falling to marginal cost as, if a price war started and more passengers were attracted to services, some trains would become full and operators would find it difficult to attract additional passengers by lowering prices.
- Finally, as discussed in the next section, we note that financial viability concerns have not forced any OAOs in Europe to exit the market.³⁵⁸

³⁵⁶ This would form the level below which prices could not fall as if they were to fall any lower, the operator would be better off not running the service.

³⁵⁷ We also note that operators may have reduced incentives to engage in predatory pricing strategies (ie by driving down prices drastically to the point at which they force a competitor to exit), as fare regulation may prevent the incumbent from recouping its losses by raising prices after the competitor exits.

³⁵⁸ We note that predatory pricing by dominant undertakings is prohibited under Article 102 TFEU and the Chapter II prohibition in the Competition Act 1998, creating a deterrent effect.

5.145 This potential concern was set out in our consultation document but was not raised by respondents to the consultation.

Financial viability of open access operation in continental Europe

5.146 Some consultation respondents told us that the European experience of open access competition, described in Chapter 3, has led to uncertainty regarding the financial sustainability of operators and that several OAOs have faced financial difficulties.

5.147 In the European examples considered, where few entry restrictions and no PSO obligations were in place, open access competition has resulted in downward pressure on prices in a number of European countries. This has benefited passengers but in some cases it has also created concerns about the longer-term viability of some operators.

5.148 In the Czech Republic, open access competition on the completely liberalised Prague–Ostrava route put intense downward pressure on prices and led to concerns regarding the long-term sustainability of three operators competing on the same route.

5.149 After nearly four years of operations, one of the Czech Republic’s OAOs has not yet achieved profitability, although their financial performance is improving both in terms of EBITDA and overall losses.³⁵⁹ The other OAO reported a profit for the first time in 2015.³⁶⁰ In order to put this in context, it is important to note that, in contrast to Great Britain, on the Prague–Ostrava route all three operators (the two OAOs and the incumbent) run services on a purely commercial basis (ie no direct public subsidies or premiums are paid), and the incumbent is vertically integrated with all its other services being directly awarded. The competent public authority is considering a number of policy solutions, including establishing a licensing regime accompanied by licence obligations and/or defining basic essential services to be awarded through a competitive tendering process.³⁶¹

5.150 Separately to this, both Czech Republic OAOs allege that the incumbent operator has abused its dominant position to undercut its competitors by

³⁵⁹ Leo Express reported in Q1 2015 an EBITDA three times greater than the same period in 2014, while its losses were halved.

³⁶⁰ RegioJet reported a half-year profit in 2015 of around £200,000. For 2015, the company expects that its profits will range between £0.8 million and £1.2 million.

³⁶¹ These arrangements for defining minimum/essential services already exist in Great Britain.

adopting a predatory pricing strategy, sustained by cross-subsidisation and that this distortionary practice has had an impact upon their profitability.³⁶²

5.151 In Italy, the OAO experienced financial difficulties during its start-up period;³⁶³ however, the operator told us that it is expecting to generate profits in 2016 and, for this reason, its share capital was substantially increased in 2015. The Italian OAO also told us that its financial performance was negatively affected by what it considered to be a disproportionate level of access charges (later decreased by the newly established sector regulator) and the lack of level playing field due to the presence of a vertically integrated incumbent.³⁶⁴

5.152 Similar problems characterised the start-up period of the Austrian OAO's operation, which achieved low unit revenues due to intense price competition with the incumbent, which the OAO alleged to have been predatory.³⁶⁵ However, the OAO managed to adapt its business model in response and, after four years in operation, it is currently meeting its operating costs.³⁶⁶

5.153 In contrast, in Sweden, where long-term vertical separation has allowed a more level playing field and PSO services have been generally awarded by way of a competitive bidding process, open access competition does not seem to have created serious concerns about the longer-term viability of competing operators.

5.154 MTR, which recently commenced services on the Stockholm–Gothenburg route, told us that its revenues are showing a positive trend and are growing in line with its business plan. As set out in Chapter 3, because of the competitive pressure exerted by the new OAO, fares on the Stockholm–Gothenburg route have decreased. However, while MTR and the incumbent have offered fare discounts, they also compete on factors including service quality, and there does not appear to be any evidence of a 'race to the bottom' in fares. Another example relates to the incumbent, which terminated its Gothenburg–Malmö service in 2012 after an OAO introduced high-frequency services. However, after two years, the incumbent re-entered the high-speed services market, matching the new OAO's on-board service quality (eg with free wi-fi).

5.155 We note that, in each of these countries, OAOs commenced their activities relatively recently and that new entrants in capital-intensive sectors (such as

³⁶² The Czech Republic's competition authority is currently investigating this allegation. (Telephone conference calls with Czech Republic's OAOs.)

³⁶³ Losses amounted to €77.6 million in 2013 and €55 million in 2014.

³⁶⁴ Information provided by NTV, the Italian OAO.

³⁶⁵ The European Commission, Directorate General for Competition, is investigating alleged anti-competitive practices in the sector of rail passenger transport and related services, aimed at excluding competing rail passenger transport operators from the market. In October 2015, Commission officials carried out unannounced inspections. [European Commission press release](#).

³⁶⁶ Information provided by Westbahn.

railways, but also telecoms or energy) often experience losses during their start-up period. The capital-intensive investments and entry costs that a number of European OAOs have incurred (eg the purchase of new rolling stock in the Czech Republic, Italy and Sweden) may signal the medium- to long-term business objectives of these OAOs. This approach in their business model appears contrary to a 'hit and run' strategy, which might risk the financial stability and sustainability of the industry.

5.156 Moreover, in the countries examined, the market entry costs of OAOs have – in contrast to the system in Great Britain – been influenced by the presence of vertically integrated incumbent holding companies.

5.157 In summary, the experience of the European OAOs shows that there have been some financial sustainability issues. However, we note that these operators are still in the early years of operation and that some of the issues may be due to the presence of vertically integrated incumbents. In Chapter 6, we have considered the potential impact of access charges and levies on financial sustainability in designing our options for greater on-rail competition.

Potential adverse effects of an increased number of operators

5.158 Greater on-rail competition would be likely to lead to a higher number of train operators (either franchised TOCs or OAOs) using the network. It has been put to us that this could create a number of operational issues, including:

- inefficient use of capacity as a result of more operators, with varied journey times and stopping patterns and using a wider range of rolling stock with different performance and reliability characteristics (see paragraphs 5.160 to 5.165);
- interconnectivity problems (paragraphs 5.166 to 5.177);
- adverse impact on performance and greater difficulty in recovery from disruption (paragraphs 5.178 to 5.183); and
- conflicting slot requests and timetabling issues, which may also affect strategically important changes to facilitate the provision of new services, such as HS2 (paragraphs 5.184 to 5.191).

These operational issues have also been considered in the impact assessment commissioned by ORR.³⁶⁷ The operational impact of each option for greater on-rail competition is set out in Chapter 6.

5.159 We also note that an additional potential adverse effect of an increased number of competing operators could be the creation of a greater complexity in the system, in particular by creating:

- higher transaction and coordination costs for the industry players (paragraphs 5.196 to 5.197); and
- a negative impact on rail passengers, by a way of a more complicated ticketing structure, or by making the provision of interavailable fares more complex (paragraphs 5.198 to 5.206).

Operational issues

Suboptimal use of capacity as a result of an increased mixed use of the network

5.160 A number of consultation respondents³⁶⁸ expressed the view that having a multiplicity of operators on the network, with varied journey times and stopping patterns, using a wider range of rolling stock with different performance and reliability characteristics could lead to a suboptimal use of the existing capacity.

5.161 We are conscious that a multiplicity of operators on the network (including freight, commuter, regional and intercity services), while delivering important social objectives, reduces the number of services that can be operated relative to a theoretical maximum network capacity. We note that on two of the long-distance routes on which we are considering options for greater on-rail competition, there are already a significant number of operators. On the East Coast main line, for example, there are currently nine major operators.

5.162 However, greater on-rail competition on intercity routes would not be expected to lead to a significant increase in the complexity of operations as new operators would run intercity services using rolling stock that was approved by the ORR as having performance characteristics which would not adversely affect the timetable. There would be no change envisaged in the mix of service types (ie freight, intercity, commuter). It is therefore important that operational issues are judged on a case-by-case basis.

³⁶⁷ See ORR (31 December 2015), [Impact Assessment of the CMA's Options for Increasing On-Rail Competition - Final Report](#), p48.

³⁶⁸ Network Rail, Arriva and Peninsula Rail Task Force.

- 5.163 Network Rail told us that it did not consider that a greater number of operators would increase the costs of running the network or result in adverse performance issues (for example, in comparing the East Coast main line with the Great Western route). Nevertheless, Network Rail suggested in its consultation response that a greater mix of different services on the network would make it more important to have the right information and incentives to achieve the right balance between different types of trains and services.
- 5.164 In addition, Network Rail told us that increased on-rail competition should not result in less network capacity being granted to freight operators, which it highlights are of great importance in terms of both economic and social benefits generated. The need to ensure sufficient capacity for freight was also noted in the responses of some passenger train operators.³⁶⁹ A number of consultation respondents³⁷⁰ noted that trade-offs between ensuring the variety of the network's use and capacity optimisation exist; nevertheless, a mixed use of the network was feasible, in order to serve wider economic and social objectives.
- 5.165 Other respondents, particularly regional transport partnerships, expressed concern that more intercity services could interfere with commuter and regional services. However, our options for greater on-rail competition set out in Chapter 6 envisage competing services using existing intercity paths and, potentially, new paths that become available from capacity enhancements. Therefore, while we are conscious of the need for a mix of services to be operated in order to ensure that the railway delivers its wider objectives, our recommendations are designed to facilitate greater on-rail competition without adversely affecting non-intercity passenger services and freight services.

Interconnectivity

- 5.166 Rail services competing on a larger scale would require an increased focus on interconnectivity, ie ensuring that different train operators' service paths efficiently interconnect with each other at stations in order to exploit the full value of the network and the possible growth in demand and service frequencies. This task becomes more challenging when competing operators are different in scale.³⁷¹

³⁶⁹ This point was highlighted in Arriva's response.

³⁷⁰ Network Rail, Arriva, Peninsula Rail task force.

³⁷¹ This is because the main operator would not have direct incentives to schedule its train services so as to ease the interconnections with the services of smaller competitors.

- 5.167 A number of regional bodies expressed concerns that increasing competition would undermine the integrated nature of the transport networks which underpin the economic growth of their regions (eg Wales and Greater Manchester).³⁷² Interconnectivity is an important characteristic for regional routes and one local transport group mentioned in its consultation response that connections (including those with buses) are already inflexible under the current framework, suggesting that the problem is compounded when there is more than one operator on a route.³⁷³
- 5.168 Transport Scotland stressed that any arrangements to introduce greater competition on the East and West Coast main lines should not have an adverse impact on connectivity, frequency, service reach or quality within Scotland. A local transport group told us that whichever model of competition is used, connectivity should be maintained and enhanced for the benefit of the rail system, passengers and the nation as a whole, given that connectivity drives economic growth.³⁷⁴
- 5.169 Network Rail told us that, in the current framework, although consideration is given to connectivity in the timetabling process, there are many thousands of possible connections that passengers can make on the network and that the degree of interconnectivity that can be achieved is limited. We also note that in all our recommended options for greater on-rail competition detailed in Chapter 6, Network Rail (or the system operator responsible for the timetabling process) would retain the ability to timetable services to ensure connections are maintained.
- 5.170 Moreover, passenger train operators told us that, in practice, the timetable is designed by the industry on its own in a decentralised way and is driven by the access rights of the individual operators. In this framework, it is not evident that a greater number of operators would harm connectivity. We also note that where operators are competing more intensively for passengers, they may have greater commercial incentives to attract passengers from feeder services by ensuring good connections (and to offer onward connections to their own passengers).

Performance

- 5.171 Operating additional rail services on an already congested network could affect network performance (in terms of punctuality and reliability), as the

³⁷² See consultation responses of Powys County Council, Mid-Wales Transportation Partnership and Transport for Greater Manchester. This point was also made by Newark Business Club.

³⁷³ The Sherborne Transport Action Group.

³⁷⁴ The Peninsula Rail Task Force.

network would be more intensively used. This is more likely to occur if no additional capacity were made available as a result of network enhancements (ie using new technology) or improved network capacity identification and management.

- 5.172 It was suggested to us by a TOC owner group (without open access operations) that greater on-rail competition may have an adverse effect on punctuality by increasing the difficulty of coordinating traffic on the network. Moreover, with a greater variety of services operating within a more complex timetable, any deviation from on-time operation could have a wider knock-on effect on other services and on overall punctuality. Indeed, concern about the potential for overlapping franchises creating operational conflicts formed part of the rationale behind the franchise re-mapping and simplification carried out by the SRA in the early 2000s.
- 5.173 We found relatively limited empirical evidence in relation to this concern. Arup (2009) examined evidence on the Public Performance Measure (PPM), which reflects punctuality, finding that some franchise re-mappings which reduced franchise overlaps may have resulted in improved punctuality. However, Arup (2009) also found that punctuality on the East Coast main line improved in the period in which open access was introduced.³⁷⁵ There are currently nine major passenger operators on the East Coast main line plus a number of freight operators – yet average punctuality indicators have the highest score in that area.
- 5.174 This is consistent with the view put to us by some industry experts that the impact of on-rail competition on performance may be route-specific.³⁷⁶ For example, capacity bottlenecks on the network affect different routes to varying degrees and, in turn, the impact that a greater number of operators has on punctuality. The successful operation of three franchised TOCs between Newcastle and Edinburgh – a section of the East Coast main line with less severe capacity constraints – was cited by one OAO as evidence of this. Network Rail also cited the example of London Midland and Virgin Trains competing on the West Coast main line without an adverse impact on punctuality.
- 5.175 The extent to which the rolling stock and stopping patterns of competing operators differ may also determine the impact of competition on performance. Similar rolling stock operating services with similar calling patterns is less

³⁷⁵ Arup (2009) found that PPM on the East Coast main line improved on the routes that it examined between 2004–2005 and 2008–2009 from 81 to 86.9%. Grand Central's PPM improved to 'around 90%' in 2009 and First Hull Trains saw its PPM increase to 80.2% in 2009.

³⁷⁶ The DfT told us that, for this reason, operational issues should be assessed on a case-by-case basis.

likely to create operational conflicts, although we note that a number of franchises successfully operate with a mix of rolling stock (including the Greater Western, East Midlands and East and West Coast main line franchises). In this regard, we note that greater on-rail competition would provide an incentive for operators to compete to serve key stations with the latest rolling stock. Moreover, in reviewing open access applications, ORR examines the rolling stock that OAOs plan to use to operate their proposed services and would not grant access where there would be any significant adverse impacts on performance.

- 5.176 It was also put to us that the ‘Schedule 8’ indemnity that is included in track access agreements incentivises operators to plan their services in a way that will avoid disruption to services of other operators. Schedule 8 is also considered by ORR to incentivise Network Rail to coordinate the services of different operators as effectively as possible.³⁷⁷ Compensation payable covers fare revenue losses and costs (eg the cost of running replacement bus services).
- 5.177 Moreover, greater on-rail competition would help to provide the correct signals and information for deciding on market trade-offs, eg between capacity maximisation and performance (ie punctuality/reliability), more effectively than a centralised process (see paragraph 4.33).
- 5.178 It should also be noted that other operational factors, such as the requirement to provide unprofitable but socially valuable services (eg PSOs), which may include stops at less popular but nevertheless strategic stations, and to run suburban services alongside intercity services into key terminus stations in urban areas, will have some impact on performance regardless of whether there is greater on-rail competition.
- 5.179 As considered in more detail in our assessment of the options for greater on-rail competition in Chapter 6, we note that the impact assessment commissioned by ORR did not identify any significant operational barriers to greater on-rail competition.

Recovery from disruption

- 5.180 It was put to us by some consultation respondents³⁷⁸ that it would be more difficult for the network to recover from service disruption with a greater

³⁷⁷ Schedule 8 compensates train operators for the impact of unplanned service disruption due to poor performance which is attributable either to Network Rail or other train operators.

³⁷⁸ Newark Business Club, SEStran and a private individual.

number of competing operators having potentially conflicting commercial interests. It was also suggested that it would be necessary to designate operators of last resort.³⁷⁹

- 5.181 However, the system is already designed to work with multiple operators (with most routes having more than one passenger or freight operator). Network Rail actively manages the response to disruption and current rules provide arrangements for ticket acceptance across operators once a certain disruption threshold is reached. Part H of the Network Code³⁸⁰ includes a requirement for operators to comply with the Railway Operational Code, which obliges operators to work together to recover from disruption, having regard to the needs of passengers and freight customers. Operators also have a range of obligations to provide passenger information during disruption, stations already show passengers all trains operating, and ORR is able to deal with inadequate responses to disruption through operators' licences.
- 5.182 Moreover, the Rail Delivery Group plays an important part in promoting and developing operational best practices between passenger train companies, freight operators and Network Rail.³⁸¹ This has the effect of enhancing the proper functioning of the system and, also, minimising disruption.
- 5.183 Network Rail told us in its consultation response that increased competition from multiple operators may actually help performance and service recovery. This is because OAOs have a greater incentive to perform well, as they are seeking to attract new customers in new markets.

Conflicting slot requests and timetabling

- 5.184 Within the current framework, the slot allocation process prioritises existing access rights allocated within the franchise agreements. Once any additional service applications (either from open access or franchised operators) have been successful and resulted in a track access agreement (subject to ORR approval and guidance), the access rights set out in the track access agreement are converted into the working timetable through the process outlined in Part D of the Network Code.

³⁷⁹ Transport Focus.

³⁸⁰ The Network Code is a common set of rules and industry procedures that apply to all parties with a contractual right of access to the track owned and operated by Network Rail. Those common rules and procedures are incorporated into every regulated track access agreement between Network Rail and a TOC and concern areas where common processes are necessary or preferred, such as delay attribution (Part B), timetable change (Part D), vehicle change (Part F) network change (Part G), operational disruption (Part H), changes to access rights (Part J), performance (Part L) and appeals (Part M). Access Dispute Resolution Rules are set out in the Annex.

³⁸¹ The Rail Delivery Group was set up in 2011 to provide leadership to Great Britain's rail industry, bringing together train operating companies, freight operators and Network Rail.

- 5.185 The timetabling and timetable recasts are managed by Network Rail and based on demand traffic forecasts which are carried out following a transparent process that includes public consultations.³⁸² In the case of conflicting requests with equal priority, Network Rail decides which train slot to include into the timetable plan according to the criteria set in Part D of the Network Code, eg to make journey times ‘as short as reasonably possible’ and ‘enabling operators of trains to utilise their assets efficiently’. Network Rail can modify either or both train slots if timetable capacity exists.³⁸³
- 5.186 Greater on-rail competition may lead operators to propose timetables that include a higher number of conflicting slot requests. In an enhanced competitive environment, the system operator has to design a non-discriminatory and efficient slot allocation mechanism.
- 5.187 As set out in the next section, ORR is currently undertaking work with a view to improving Network Rail’s performance as a system operator, building on the commitments given in its PR13 determination. In particular, the project is looking at improving the availability of information about system operation activities, including through the publication of a system operation ‘dashboard’, and is also starting to consider how the regulation of system operation activities could be improved as part of the next periodic review.
- 5.188 Moreover, in the context of greater on-rail competition, different allocation systems could be considered, eg the airport slot allocation system.³⁸⁴ Although there may arguably be greater complexities in slot allocation in railways than in air transport (airport slots are for take-off and landing only, whereas rail slots must reserve track for the whole journey), Network Rail could take a more active role in managing the timetable, while reforms to access rights could increase flexibility, opening up more opportunities for new entry.

³⁸² The Long Term Planning Process identifies capacity requirements and interventions to meet them. This process has been designed to enable Network Rail and industry stakeholders to respond flexibly to growing demand for rail services (including entirely new services), while planning for the network’s long-term capability up to 30 years ahead.

³⁸³ The Network Code also contains rules for access dispute resolution, either through mediation or a determinative process, such as the timetabling panel, for which ORR is the final appeal body.

³⁸⁴ Airport slot allocation is regulated by Council Regulation 95/93 (amended by Regulation 793/04 and clarified by Communications adopted in 2007 and 2008). Its main principles are: (i) transparency and non-discrimination; (ii) ‘grandfathering’ – existing users retain slots subject to rules governing the frequency (at least 80% during the summer/winter scheduling period); (iii) slot switching – slots which are not sufficiently used by air carriers are reallocated, the so-called ‘use it or lose it’ rule; (iv) promotion of new entrants’ access – if the 80% threshold is not reached, the slots go to a slot pool for allocation and 50% of the pool slots are allocated first to new entrants (defined as a carrier with only a limited presence at an airport). Finally, the airport package adopted on 1 December 2011 explicitly allows airlines to trade slots with each other at airports anywhere in the EU in a transparent way (‘secondary trading’).

- 5.189 An alternative slot allocation mechanism could be based on a ‘cooperative approach’, ie having the system operator facilitate agreement between parties.³⁸⁵
- 5.190 Finally, there have been policy proposals looking at slot auctioning mechanisms, in particular combinatorial auctions, where participants make their bids contingent on getting a set or combination of the rights being auctioned rather than having to bid for rights individually.³⁸⁶ Network Rail told us that greater on-rail competition would necessitate having a bidding system for access rights in order to minimise the risk that capacity could be inefficiently left vacant.
- 5.191 In summary, an efficient capacity and timetabling allocation process is necessary for greater on-rail competition to deliver its potential benefits. As set out above, the current framework is designed to work with multiple operators and the mechanism for allocating capacity could be further strengthened in an environment of greater on-rail competition, as described in Chapter 6.

Operational issues and the role of a system operator

- 5.192 We note that the operational issues discussed above could be addressed by enhancing the role of the system operator, and focusing on a clear definition, and effective implementation of, the functions carried out by Network Rail.³⁸⁷
- 5.193 While a number of respondents,³⁸⁸ mainly regional bodies, suggested that a higher number of operators in the market would increase the fragmentation and operational issues in the rail system, other consultation respondents, including Network Rail,³⁸⁹ told us that these issues could be tackled by improving system operation and allowing an efficient, fair and transparent timetabling process.
- 5.194 As ORR sets out in its review of system operation,³⁹⁰ the benefits of having an effective system operator comprise:

³⁸⁵ This is partially similar to the slot allocation system in Sweden. We note that slot allocation takes place successfully in a number of European countries with on-rail competition.

³⁸⁶ This is because the latter would imply the risk of allocating a set of paths that (i) would not allow TOCs to provide a viable service and/or (ii) would not allow Network Rail to have an efficient outcome in terms of interconnectivity. See Cave and Wright (2010).

³⁸⁷ See Cave, M, Stern, J, ‘Economics and the development of system operators in infrastructure industries’, *Utilities Policy*, 26 (2013), pp56–66.

³⁸⁸ ASLEF, Mid Wales Transport Partnership, Newark Business Club, Passenger Transport Executive Group, RMT, SEStran, Transport for Great Manchester and private individuals.

³⁸⁹ Network Rail, Arriva and private individuals.

³⁹⁰ ORR (2015), [System operation – A consultation on making better use of the railway network](#).

- achieving the most plannable capacity³⁹¹ out of the system;
- enabling all users and funders to make the right trade-offs between the cost of the network, the level of utilisation and the performance; and
- allocating capacity to the 'right service' so as to keep an appropriate balance between the cost of providing capacity and its value (including its non-financial value) to users and to society.

5.195 An effective system operator function would provide industry players and Network Rail with greater incentives to make efficient use of present resources. Moreover, developments in technology and regulation are also likely to have a role in achieving effective system operator capability in the future, facilitating the coordination of more services. Finally, as briefly described above, the work on developing a more flexible access rights policy is likely to assist in achieving efficient capacity allocation and performance optimisation as a consequence of a more flexible timetabling process.

Increased complexity of the system

Higher transaction and coordination costs for industry actors

5.196 Complexity could also result in higher transaction and coordination costs due to an increased number of 'interfaces' and 'interactions' within the industry, eg between the train operators, between train operators and public bodies (ie Network Rail, DfT, ORR), and also between public bodies.³⁹²

5.197 However, there are a number of factors which may mitigate possible concerns about an increase in transaction and coordination costs:

- First, as in other network industries (eg energy, telecoms and aviation), additional transaction costs resulting from an increased number of operators may be more than offset by efficiency and consumer welfare gains unlocked by greater competition (see Chapter 4).
- Second, an Oxera report (2010)³⁹³ found that rail sector transaction costs, while significant in absolute terms, may not be significant when compared

³⁹¹ The number of trains that could run over a route, during a specific time period.

³⁹² This issue has been raised by Network Rail within the consultation process. Moreover, the ARUP/Oxera (2010) report for the 'Value for Money' investigation, '[Review of rail cross-industry interfaces, incentives and structures](#)', considers a number of case studies of areas of the system where transaction costs or incentive misalignments exists, in particular within the performance regime, stations, timetabling, long-term planning through consultations and others.

³⁹³ Ibid.

with the greater efficiencies resulting from vertical separation and competition.³⁹⁴

- Third, within the current rail industry framework, additional transaction and coordination costs, resulting from an increased number of operators, do not seem to be significant in magnitude:
 - (a) The Oxera (2010) report did not reach a view on the exact value of transaction costs itself, but cited a paper by Merket which found that overall transaction costs within UK TOCs in 2007 were no more than 5% of TOC operating costs.³⁹⁵
 - (b) The report takes into consideration transaction costs due to the vertical disintegration of the industry (ie separation between upstream and downstream operations), which are not relevant for assessing the case for greater on-rail competition in Great Britain, where a framework of vertical separation is already in place.
 - (c) Some transaction costs resulting from an increased number of operators may be reflected as ‘diseconomies of density’ and already well considered in the industry analytical framework.
 - (d) Network Rail told us that it does not consider that the East and West Coast main lines are materially more expensive to run than a main line with fewer operators, such as Great Western.
- Fourth, an enhanced and effective system operation function, including an effective Network Code, would also reduce transaction costs associated with an increased number of interfaces and interactions by aligning the market players’ incentives providing the right signals to decide upon trade-offs.
- Lastly, we note that the level of transaction costs depends to a degree on the extent of public intervention in the market, ie the nature and scope of interactions between train companies and public bodies, and between public bodies. Greater competition in the market would be expected to result in a more decentralised approach to coordination, ie through market signals and decentralised use of disperse information rather than public

³⁹⁴ This outcome has been supported by a number of case studies within the rail industry (albeit many of the transaction costs discussed were related to vertical separation) and through inter-industry comparisons with energy and aviation.

³⁹⁵ Measured in terms of costs of management and administrative staff. Merket, R, ‘Changes in transaction costs over time – the case of franchised train operators in Britain’, *Research in Transportation Economics*, 29 (2010), pp52–59.

information gathering and central planning. This would reduce the magnitude of 'publicly driven' transaction costs.

Retail issues: ticketing complexity and interavailability

5.198 Transport Focus told us that passengers struggle with the complexity of existing ticketing arrangements. A number of other consultation respondents have argued that increasing on-rail competition could exacerbate passengers' confusion about the fare structure that applies.³⁹⁶ However, many respondents also recognised the passenger benefits that new types of fare (eg advance tickets) have delivered. Transport Focus suggested that increased competition would need to be accompanied by measures to address the concerns that passengers have about ticketing complexity.

5.199 We acknowledge that there is a degree of complexity in ticketing in the current system and that there may be scope for passenger confusion where there is a choice between operators in the current system (eg where franchises overlap). However, we note that much of this complexity results from the range of fares available and applies even on routes where there is a single operator. We consider that these issues are likely to reduce over time as new technology, including smart cards and mobile ticketing, is rolled out.

5.200 Moreover, a number of examples of ticketing complexity cited were on commuter and regional routes, where most passengers buy a ticket for travel on the day. The options for greater on-rail competition that we recommend in Chapter 6 are focused on long-distance intercity routes where, as noted below, the majority of passengers book their tickets in advance. In this regard, we were not told of any concerns about ticketing complexity resulting from current open access services or from competition on high-speed routes in Europe. We also note the significant passenger benefits available from the sale of new tickets including carnet and advance tickets (which were introduced following strong passenger demand) and that greater flexibility in ticketing will allow operators to match passenger preferences more closely.

5.201 We also note that operators would have commercial incentives to ensure that information regarding their services is made available. This model works well in other sectors, such as airlines, where there is often a greater choice of operators than would be the case in our recommended options, which would see a choice of two or three operators. Lastly, we note that ORR would also

³⁹⁶ See, for example, Mid Wales Transportation Partnership, SEStran and Sherborne Transport Action Group.

continue to have a consumer protection role in ensuring that ticket information is clearly presented to passengers.

5.202 In summary, we are mindful of the importance of passenger clarity regarding their choice of operator. As this is fundamental to ensuring effective competition, we also consider this question in designing our options for greater on-rail competition in Chapter 6.

Interavailability of tickets

5.203 As many passengers value the ability to change their travel plans, we have considered how competition may allow passengers to continue to ‘turn up and go’, ie boarding the first train service available.

5.204 In order to overcome this problem, interavailable tickets have been developed. The passenger pays for a ticket which can be used on any of the various competing train operators’ services, rather than dedicated tickets which are only valid on a single operator. Analysis by ORR indicates that passengers like this facility and the value and flexibility it offers. On many routes, passengers do not have the option of buying a dedicated ticket for travel on a competing operator. However, where passengers have a choice between a dedicated and interavailable fare, interavailable fares account, on average, for 37.5% of revenue, suggesting that many passengers value the option of cheaper dedicated tickets.³⁹⁷ Revenue from interavailable tickets is allocated among the train companies using a computerised system known as ‘ORCATS’.³⁹⁸

5.205 Although TOCs have an incentive to compete for passengers using dedicated fares, they cannot currently compete on price to attract passengers who value interavailable fares.³⁹⁹

5.206 However, the following should be noted:

- Fewer passengers require interavailable tickets services on intercity routes where, generally speaking, on-rail competition has the greatest potential to develop. Analysis by ORR indicates that in 2013–2014,

³⁹⁷ [ORR retail market review, emerging findings](#), June 2015. See, also, consultation response by Transport Focus.

³⁹⁸ ORCATS (Operational Research Computerised Allocation of Tickets to Services) is a computer system used on passenger railways in Great Britain. It is used for revenue sharing on interavailable tickets between train operators when a ticket or journey involves trains operated by multiple operators. It approximates the split between train operators based on factors such as journey time.

³⁹⁹ As noted in paragraph 2.79, interavailable fares are set by the lead operator (ie the operator with the greatest commercial interest on a certain route) and must be observed by all train operators selling tickets for that journey or operating a service on some or all of the route.

approximately 41% of passenger receipts came from interavailable journeys made on London and South East/ regional routes in comparison with 32% from interavailable journeys made on long-distance services.⁴⁰⁰

- In the case of OAOs, the percentage of passengers' journeys using dedicated and non-interavailable tickets is higher, eg over 60% of all Grand Central journeys in 2013–2014.⁴⁰¹ ORR noted in the emerging findings of its retail market review that while passengers benefit from the flexibility provided by interavailable fares, passenger take-up of this type of fare is at least 10% lower for longer-distance, intercity travel and that there may therefore be merit in relaxing the obligations on TOCs to create and sell interavailable fares on all routes.⁴⁰² This reflects the significant financial savings that passengers can achieve by purchasing dedicated tickets on long-distance routes.
- 'Mobile' and 'smart ticketing' solutions could help to tackle the problem of allocating revenue from interavailable tickets as they would increase the incentives on operators to compete for passengers as their revenues would directly reflect passengers carried, allowing for a closer link between actual passengers and revenue than is currently possible under the ORCATS revenue allocation mechanism.⁴⁰³ A number of consultation respondents expressed their support for 'smart ticketing' solutions as an option to enhance competition in this sector.⁴⁰⁴
- In order to address the concerns that interavailability limits the ability of train operators to compete on price, passengers could be offered greater choice on interavailable tickets. For example, a discount could be given if they buy non-interavailable tickets and passengers could pay to 'upgrade' to non-interavailable tickets when they require more flexibility (a system that would be much easier to administer in an environment of 'smart ticketing').

⁴⁰⁰ [ORR retail market review, emerging findings](#), June 2015, p37. The analysis is based on revenues from all ticket sales. The level of interavailability is measured as a percentage of train operator revenues earned from passenger journeys made on routes defined as interavailable (those with at least 5% of total route revenue allocated to more than one operator).

⁴⁰¹ AECOM analysis.

⁴⁰² In particular, relaxing the obligation to create interavailable fares could mitigate the need for such extensive TOC collaboration and provide increased incentives for innovation to be delivered through competition and normal response to market forces – [ORR retail market review, emerging findings](#), June 2015, paragraph 5.15.

⁴⁰³ Smart ticketing, such as Transport for London's Oyster card, allows individual passenger journeys to be recorded and different charges levied according to origin, destination and time of day or season.

⁴⁰⁴ See Rail Delivery Group, Transport Focus, Peninsula Rail Task Force, MDS Transmodal Ltd and certain individual respondents. Transport Focus and a respondent with experience of operating OAO services elsewhere in Europe suggested that passengers could 'tap in' by using smartcard readers when boarding a train so that revenues generated from interavailable fares can be effectively allocated between operators.

5.207 In considering our options for reform in Chapter 6, we also note that, if industry agreement were achieved, interavailable tickets could be retained as an option for passengers even if greater on-rail competition were introduced.

Conclusions

5.208 In this chapter we have considered the potential technical, economic and policy obstacles to greater competition in the passenger rail market in Great Britain and considered possible ways to overcome these obstacles.

5.209 The potential obstacles that we have considered fall into three main categories:

- access to infrastructure, network capacity and rolling stock;
- funding the network and loss-making services, and the financial sustainability of operators;
- an increase in the number of operators, which might lead to operational issues and to greater complexity of the system.

5.210 We have carefully considered the evidence on each of these obstacles including through discussions with the DfT, ORR, Network Rail, franchised TOCs and OAOs, passenger groups and regional transport partnerships.

5.211 We do not consider that any of the obstacles identified are insurmountable and summarise our conclusions in Table 5 below.

5.212 We cross-refer to our analysis of these issues in discussing the design of options for greater on-rail competition in Chapter 6 and also cite the technical and legal feasibility analysis for each of the four specific options conducted in the impact assessment commissioned by ORR.

Table 5: Summary of potential obstacles/risks from greater on-rail competition and mitigating factors

Potential obstacle / risk from greater on-rail competition	Mitigating factors	Other regulatory or policy actions (Chapter 6 – Other recommendations to support greater competition, paragraphs 6.65–6.80)	Assessment necessary for the reform options (Chapter 6 – Assessment framework, paragraphs 6.81–6.84)
Access to infrastructure, network capacity and rolling stocks			
Lack of level playing field (obstacle) <i>Paragraphs 5.7–5.14</i>	Vertical separation and non-discriminatory framework to access the network (ie Sale of Access Rights Panel) Non-discriminatory obligations at retail level (ie Ticketing Settlement Agreement)	Review of structure of access charges to create a more level playing field	It is unlikely to be an obstacle to greater on-rail competition – no need for further assessment in Chapter 6
Network capacity scarcity (obstacle) <i>Paragraphs 5.15–5.58</i>	Increased competition using existing capacity Expected network enhancements increasing available capacity (eg ERMTS, HS2, stations upgrades) On-rail competition giving incentives to identify additional capacity	Flexible access rights Review of access charges to better reflect value of capacity (ie enhanced capacity charge or charges reflecting scarcity) Redesign of franchise contract scope, clearly defining profitable services and PSOs	It is not a material obstacle to greater on-rail competition because of possibility of competing under capacity constraints. However reform options should be evaluated assessing their impact on: <ul style="list-style-type: none"> • utilisation of capacity and interconnectivity • cost efficiency at the upstream network level
Rolling stock scarcity (obstacle) <i>Paragraphs 5.59–5.68</i>	Future additional availability of rolling stock (ie as a consequence of IEP programme) Further private investment in rolling stock, especially when long-term access rights are granted	Longer access rights, incentivising further private investments	It is unlikely to be an obstacle to greater on-rail competition - No need for further assessment in Chapter 6
Funding the network/ loss-making services and financial sustainability of operators			
Impact on funding of unprofitable services (risk) <i>Paragraphs 5.76–5.96</i>	Positive impact of on-rail competition on productive efficiency implying the possibility of reducing the overall scope of loss-making services On-rail competition having a positive impact on demand growth (ie previously unmet demand, transfer from other transport modes) Limited empirical evidence of negative impact of on-rail competition on recent franchise awards	Alternative to current cross-subsidies (eg PSO levy) Structure of charges (ie cost-reflective/ symmetric, OAOs making greater contribution in return for greater access) Redesign of franchise contract scope (profitable services vs PSOs) Reducing risk in franchise bids through greater <i>ex ante</i> clarity of future level of on-rail competition	Impact on government funds Social inclusion and connectivity

Potential obstacle / risk from greater on-rail competition	Mitigating factors	Other regulatory or policy actions (Chapter 6 – Other recommendations to support greater competition, paragraphs 6.65–6.80)	Assessment necessary for the reform options (Chapter 6 – Assessment framework, paragraphs 6.81–6.84)
Impact on funding of network investments (risk) <i>Paragraphs 5.97–5.109</i>	Balanced business case for new investments to be neutral to identity of train operators Greater private investment in network could be incentivised by increased on-rail competition	Longer access rights, incentivising further private investment Funding mechanisms aimed at recovering investment costs (ie access charge on new investments, rebate mechanisms) Structure of charges (ie cost-reflective/symmetric, correctly remunerating the use of the network)	Impact on government funds Social inclusion and connectivity
Tight specification of franchised services (obstacle) <i>Paragraphs 5.130–5.141</i>	On-rail competition would put competitive pressure on train companies, giving incentives to match the demand/consumer preferences	Relax franchise service specification, especially in area where market could provide correct signals	Cost efficiency at passenger level
'Price war' and financial unsustainability for train operators (risk) <i>Paragraphs 5.142–5.157</i>	Competition on quality and product differentiation limit 'race to the bottom' in fares Level playing field in UK prevents anticompetitive exclusive pricing strategy (eg predatory pricing) from incumbent TOCs	Review of access charges in a cost-reflective way (building a price floor)	Impact on government funds Security of supply
Potential adverse effects of an increased number of operators			
Operational issues (risks): <ul style="list-style-type: none"> suboptimal use of capacity interconnectivity performance recovery from disruption conflicting slot requests <i>Paragraphs 5.158–5.195</i>	In many cases, competition would not imply a higher complexity of operations in the network as a number of different operators are already active There are regulatory tools in place aimed at coordinating operations and minimising operational issues ORR and Network rail would in any case keep a degree of control on operational issues, assessing possible trade-offs with competition enhancements Limited empirical evidence that on-rail competition has negative impact on performance	Network Rail as enhanced system operator Alignment of industry incentives through market signals and decentralised coordination (eg Rail Delivery Group) Alternative slot allocation mechanisms	Coordination issues and transaction costs Utilisation of capacity and interconnectivity

Potential obstacle / risk from greater on-rail competition	Mitigating factors	Other regulatory or policy actions <i>(Chapter 6 – Other recommendations to support greater competition, paragraphs 6.65–6.80)</i>	Assessment necessary for the reform options <i>(Chapter 6 – Assessment framework, paragraphs 6.81–6.84)</i>
Higher transactions costs (obstacle) <i>Paragraphs 5.196–5.197</i>	Possible higher transaction costs are not significant compared against efficiency gains	Alignment of industry incentives through market signals and decentralised coordination (eg Rail Delivery Group) Alternative slot allocation mechanisms	Coordination issues and transaction costs
Retail issues: <ul style="list-style-type: none"> • Ticketing complexity (risk) • Ticket interavailability (obstacle) <i>Paragraphs 5.198–5.207</i>	Passenger preference for interavailable tickets is more limited on intercity routes	Policy measures to raise consumers awareness and address possible higher retail complexities Mobile/smart ticketing solutions and greater flexibility (ie possibility to spot upgrade/discount on non-interavailable/interavailable season tickets)	Passenger experience

6. Options for reform

Introduction

6.1 In our discussion document, we set out the following four lead options:

- Option 1: existing market structure, but significantly increased open access operations.
- Option 2: two franchisees for each franchise.
- Option 3: more overlapping franchises.
- Option 4: licensing multiple operators, subject to conditions (including public service obligations).

6.2 In this chapter we first describe the options on which we consulted in detail. We then assess and compare each option in the light of consultation responses we have received and against an assessment framework, taking into account our goals (set out in Chapter 1), the benefits of competition (discussed in Chapters 3 and 4), and the obstacles and risks (discussed in Chapter 5).

6.3 In Chapter 7, we set out our conclusions and recommendations, including the steps and timings necessary for our recommended options to be implemented.

Approach to assessing the options

6.4 In assessing the costs and benefits of the four options, we refer to the findings of the impact assessment undertaken on behalf of ORR by two consultancies, Arup and Oxera, with considerable technical, legal and economic expertise and knowledge of the railway sector.⁴⁰⁵ The impact assessment examined the legal and operational feasibility of each option. It also undertook both a quantitative and qualitative assessment of the options, considering the impact on passenger outcomes (such as fares and service quality), meeting social objectives (such as investment and accessibility), wider benefits (such as facilitating economic growth), impact on industry costs and efficiency and impact on rail industry funding and affordability.⁴⁰⁶ In doing so, we take account of the further consultation responses received following the

⁴⁰⁵ ORR (31 December 2015), [Impact assessment of the CMA's options for increasing on-rail competition: Final Report](#).

⁴⁰⁶ The impact assessment follows DfT's standard Webtag [guidance](#).

publication of the impact assessment (which are published alongside this policy document).

- 6.5 In order to consider the incremental benefits⁴⁰⁷ of the options we compare them against a baseline counterfactual of a continuation of the current system under which franchises are awarded in the framework adopted following the recommendations of the Brown Review with some incremental improvements.⁴⁰⁸ This is consistent with the approach taken in the impact assessment, which used as its baseline a 'do minimum' scenario in which government policy on franchising broadly continues the existing arrangements.
- 6.6 The key assumptions made in the impact assessment are set out in Box 3.

⁴⁰⁷ A number of consultation responses, including the DfT's, noted that it was important to consider the incremental benefits of any options for reform relative to the current framework.

⁴⁰⁸ For example, we reflect that the franchising system is continuing to evolve with franchises becoming less tightly specified and being designed to better incentivise innovation by franchised TOCs (see paragraphs 2.106 & 2.107).

Box 3: Key assumptions in the impact assessment

The methodology used to model the impact of the options structured around three main mechanisms through which competition impacts can occur:

- **Price benefits:** entrants competing on price, but offering a similar product;
- **Efficiency gains:** from new entry of more efficient operators that encourage efficiency in incumbents; and/or
- **Service benefits:** entry on the basis of a differentiated product which better matches passenger preferences.

The underlying assumptions include:

- Entrant fares – evidence on existing OAO fares
- Track access charges – as stated in ORR’s CP5
- PSO levy – estimated from existing franchise premiums based on the proportion of total franchise revenue earned by each service group in the ‘do minimum’ scenario and calculated as an implied premium per passenger km
- Some operator costs (staff, rolling stock) – evidence on OAO costs
- Timetable scenarios

These assumptions are applied to standard rail industry demand and revenue models to generate quantified estimates of:

- Fares and passenger revenue
- Journey times
- Operator costs
- Franchise premiums

Non-quantified impacts include impacts on product offering and service quality, impact on the efficiency of Network Rail, positive or negative spillovers outside the intercity routes considered.

Addressing potential barriers to competition

- 6.7 In developing the four options, we have considered the potential financial, operational and implementation barriers to increasing competition outlined in Chapter 5. The options have been designed to achieve the maximum benefits of competition while mitigating the potential negative effects.
- 6.8 In developing the options, we also considered the proposals for on-rail competition prepared for ORR by Martin Cave and Janet Wright in 2010,⁴⁰⁹ the proposals in the 2011 and 2013 ORR consultations and lessons from the experience of on-rail competition in Europe (described in Chapter 3). We have

⁴⁰⁹ Cave, M and Wright, J (2010), *Options for increasing competition in the Great Britain rail market: on-rail competition on the passenger rail market and contestability in rail infrastructure investment – Final report to the Office of Rail Regulation*.

considered how our preferred options could be implemented, and in doing so have assessed their technical, economic and commercial feasibility.

Scope and timing

- 6.9 In assessing the options, we focus on those parts of the network in Great Britain where they are likely to deliver the greatest benefits. We consider these to be the three main intercity routes: the East Coast main line, the West Coast main line and the 'Great Western' route linking London with South West England and South Wales.
- 6.10 We consider these routes to have the most potential for greater on-rail competition because they are the most financially viable, they have the fewest interconnections, and because passengers using long-distance services tend to be more willing to book in advance rather than primarily valuing a 'turn up and go' service.⁴¹⁰ We consider there may also be greater potential for operators to compete on price and quality by introducing dedicated fares and differentiated service offerings on these routes.⁴¹¹
- 6.11 We note, however, that some elements of our proposed options could be applied nationally, for example, to allow for open access growth elsewhere (with the Midland main line intercity route in particular being another candidate if it were isolated from the wider East Midlands franchise). This focus on the potential for on-rail competition on long-distance intercity routes is in line with the practice in other European countries.
- 6.12 We consider that there may be potential for the options to be implemented on HS2 given the premium nature of the product, the potential for service differentiation and the fact that many HS2 services will continue onward to different final destinations using the classic network.⁴¹² We note that many of the examples of on-rail competition in other European countries are on dedicated high-speed lines.
- 6.13 The opening of Phase 2 of HS2 in around 2033 might also create potential for on-rail competition. Services will operate in a 'Y' shape from the West Midlands up towards Manchester and the North West and up towards Leeds and the North East. We understand that it is possible that different operators

⁴¹⁰ Franchise premiums paid for intercity routes are indicated in Figure 14. The proportion of advance tickets bought for intercity routes is considered in paragraph 5.206.

⁴¹¹ We consider that branding and distinctive product offerings such as those of Virgin Trains and the long-distance OAOs are good examples in this regard.

⁴¹² Virgin/Stagecoach noted in its consultation response that HS2 could be one pilot route for greater on-rail competition. FirstGroup noted in its response that there is a challenge as to how HS2 capacity will be allocated, used and charged for and that planning for this will need to start now.

might run the 'easterly' and 'westerly' parts of the route, creating the potential for on-rail competition between London and the West Midlands.

- 6.14 We note that the government has not yet decided whether HS2 will be franchised or the number of operators that will run on HS2. In deciding whether to implement on-rail competition on HS2 in the future, we note that policymakers may take account of a range of other factors in addition to the potential benefits of on-rail competition (eg in relation to achieving lower fares) including the impact of on-rail competition on the HS2 business case (considered in Chapter 5) and capacity utilisation. HS2's eventual dedicated track access and charging structure will also be a relevant consideration.
- 6.15 To protect existing and imminent franchisees against uncertainty and risk of significant, unforeseen revenue abstraction as a result of policy changes, we would not envisage any of these options coming into effect until after the end of the current rail franchise terms (or, where new franchise tenders are imminent, after the terms of those franchises about to be tendered), which would mean 2023 at the earliest.
- 6.16 In addition, we note that there are a number of difficulties in introducing on-rail competition on commuter routes – for example (a) capacity constraints on routes to London and other major urban centres, and (b) the particular desire of commuters to take the first available train, which implies greater dependence on interavailable tickets and hence less price competition.
- 6.17 We consider that implementing options to increase competition on regional routes would come with challenges as these routes are typically less profitable than the intercity routes which are the focus of this report. This may mean, for example, that OAOs would not by themselves choose to run services in these areas.

Option 1 – existing market structure, but significantly increased open access operations

- 6.18 In this option, the existing system would be adapted to allow a significantly increased role for open access alongside franchised TOCs. For example, there could be a 70:30 allocation of capacity between the franchised TOC and an OAO. In return for greater access to the network, OAOs would be required to pay an appropriate share of the costs of network infrastructure and to pay proportionately towards unprofitable but socially valuable services by way of a universal service levy or other appropriate funding mechanism, to avoid cream-skimming, as described in paragraph 5.79.

- 6.19 This would allow the current franchising framework to continue broadly as it operates today, but support a significant increase in the role of open access. Under this option, we envisage that OAOs would make a similar contribution to network costs (following reforms to access charges) and the funding of loss-making services as incumbent franchised TOCs. Option 1 would also provide the government with flexibility to adjust the balance between franchised TOCs and OAOs in a more revenue-neutral way by, for instance, increasing or reducing the allocation to OAOs once the actual impacts on pilot franchises are observed.
- 6.20 An alternative to establishing a new source of revenue for the funding of socially desirable but unprofitable services, through a PSO levy or other appropriate mechanism, would be for a reduction in government funds from greater on-rail competition being funded from general taxation. There may be some arguments in principle for this – for example it may be viewed as less ‘distortionary’ for funding of unprofitably but socially valuable services to be borne by the economy as whole, rather than the rail sector alone.⁴¹³ In this regard, we note in paragraphs 5.81 to 5.83 that there is a trade-off between the benefits of on-rail competition in terms of consumer surplus and the impact on government funds. However, given that current government policy is to ensure that taxpayers do not fund a greater proportion of the operation of the network, we have proposed options that seek to address the reduction in government funds from on-rail competition.
- 6.21 In view of current capacity constraints, an expanded role for open access could be achieved over time by using new capacity which is expected to become available in the longer term (see Chapter 5) and/or through reducing the proportion of services that are allocated to franchises specified by the DfT.
- 6.22 In order for OAOs to retain full freedom to adapt their operations in a commercial manner, and on the basis that there will be no obligation for OAOs to apply to run train paths, in this option we envisage that all or the vast majority of unprofitable but socially valuable services in a franchise area would need to be undertaken by the franchised TOC.⁴¹⁴ This would include the unprofitable but socially valuable aspects (ie essentially unprofitable destinations, unprofitable stops, and unprofitable stopping times) and the less profitable routes and connections which are valuable for social reasons but which may not be prioritised by a purely commercial operation.

⁴¹³ A ‘distortion’ may be considered to arise in this sense if a tax such as a PSO levy raised the price of travelling, and some marginal passengers who would have otherwise done so chose not to travel by rail, or not to travel at all.

⁴¹⁴ An alternative would be for them to be ‘bundled’ with profitable paths as part of any allocation process.

- 6.23 Nonetheless, it may be more efficient for an OAO to undertake some of these services, for example by adding an extra stop to one of its services when there are no franchised TOC operated services passing at a particular time, running an extra service late at night or early in the morning when balancing its rolling stock location in preparation for the next day, or taking into account calling times at stations for interconnecting regional services.
- 6.24 Moreover, OAOs might be able to operate some of the unprofitable but socially valuable services currently provided by franchised TOCs and subsidised by the government in a commercially viable way. This could generate cost savings for the government and would, therefore, go some way to compensate for revenue abstraction from franchised TOCs. In this scenario, unprofitable but socially valuable services could be allocated to an OAO by an enhanced system operator.⁴¹⁵
- 6.25 Option 1 would be implemented in conjunction with changes to the structure of track access charges so that OAOs pay charges which are reflective of the fixed and variable costs of the infrastructure they use in return for greater access to the network. In this framework, OAOs and franchised TOCs would face broadly similar risks and broadly similar charges.
- 6.26 A mechanism would also need to be established for allocating rights to the OAOs or operators within a franchise area in the likely event that more than one company wanted to operate those rights. As considered further in paragraphs 7.44 to 7.47, there are a number of possible allocation mechanisms which could be used, including an administrative process or an auction.

Designing a PSO levy or other appropriate funding mechanism

- 6.27 OAOs would contribute to the funding of unprofitable but socially valuable services, which would continue to be provided within franchises, through the payment of a PSO levy.
- 6.28 In our discussion document we considered that a levy could be calculated on a per-passenger-mile, per-train, or per-carriage basis. Some further work on the design of a levy has since been undertaken by the ORR for the purpose of the impact assessment but, as noted in Chapter 7, further design work is required.

⁴¹⁵ Alternatively, the franchised TOC could sell these obligations to run unprofitable but socially valuable services in a secondary market for such services – although we note that there are potential legal barriers to this (see paragraph 6.60).

- 6.29 In the absence of a developed model for a PSO levy at this stage, the impact assessment models an approach in which OAOs are charged based on the level of abstraction from franchises estimated using the MOIRA model,⁴¹⁶ in conjunction with an estimated share of franchise premiums associated with the service from which abstraction occurs. The levy itself was modelled on a pound-per-passenger-mile basis.⁴¹⁷
- 6.30 In order to overcome short-term barriers to entry, the levy that OAOs pay could be phased in over time to allow OAOs a reasonable period within which to establish a viable commercial operation.⁴¹⁸
- 6.31 Arriva, the parent company of one current OAO, Grand Central, and one proposed service which has been granted access rights, Alliance Rail, stated in response to our consultation that:
- Article 12 of Directive 2012/34 allows operators of commercial services to support clearly defined PSOs by way of payment of a levy. Arriva is supportive of arrangements of commercial operators to be charged a levy in accordance with Article 12 in order to support PSOs and has discussed such mechanisms with DfT.⁴¹⁹
- 6.32 While we consider a PSO levy to be a leading candidate for funding unprofitable but socially valuable services under Option 1, we recognise that there may be alternative methods for OAOs to contribute to the funding of these services. For example, an auction of OAO paths, which could also be used for path allocation, could raise revenue to supplement higher access charges paid by OAOs.⁴²⁰

Option 2 – two franchisees for each franchise

- 6.33 This option would see suitable franchises tendered such that there would be two operators for each existing franchise area. Appropriate design of these franchises would ensure on-rail competition between franchised TOCs on all, or the majority of, flows by taking routes currently operated by only one

⁴¹⁶ MOIRA is a standard model of the rail industry supply side, used to estimate the likely level of abstraction as a consequence of a new operator's entry. MOIRA is used jointly with the Passenger Demand Forecasting Handbook database, which models the rail demand side by identifying and quantifying demand drivers.

⁴¹⁷ Further detail is set out at section 7.6.1 of the impact assessment.

⁴¹⁸ This is also suggested as a possibility by ORR in its consultation response (see paragraph 31). The DfT told us that, in its view, while a short-term phasing-in period may be appropriate, the context is that the levy is intended to manage the overall risks for taxpayers and the short time should therefore be limited to what is absolutely necessary.

⁴¹⁹ Arriva's consultation response to the CMA.

⁴²⁰ This possibility was noted by Virgin/Stagecoach.

operator and sharing them between two operators running similar services but with lower frequencies. This would incentivise competition between these operators.

- 6.34 There are a number of ways this could be implemented, which were modelled in the impact assessment:⁴²¹
- (a) two franchises of similar size in terms of revenue, number of services, and number of unprofitable but socially valuable routes;
 - (b) asymmetric franchises, for example with a 60:40% split in terms of service frequencies and unprofitable but socially valuable routes;⁴²²
 - (c) one 'anchor franchisee' responsible for the vast majority of unprofitable but socially valuable services and, most likely, some degree of profitable services, and one other franchisee responsible for the remainder of services, which would all be profitable.
- 6.35 The chosen specification would need to strike the right balance between the benefits of competition from operators competing directly and the risk of operators engaging in tacit collusion to set fares.
- 6.36 Under Option 2(a), with two equal franchises, there would be on-rail competition on the majority of flows operated. This may create stronger downward pressure on fares than Options 2(b) and 2(c) and therefore a larger impact on government funds. Higher track access charges and greater efficiency may mitigate this effect, and some socially desirable but less profitable service aspects in the areas where the franchises were run could be 'bundled' into franchises which were profitable overall. This point is considered further in our assessment of the options below.
- 6.37 Another potential concern under Option 2(a) is that the franchised TOCs engage in tacit collusion. There are a number of factors that may facilitate tacit collusion, including there being two symmetric operators in the market, the existence of barriers to entry to the market, possible cross-ownership and other links between competitors and observability of fares and service offerings. This may enable operators to align their commercial strategies and to sustain a collusive outcome.
- 6.38 The consideration regarding symmetry in franchise design and the stability of any collusive outcome can be outlined using an indicative example:

⁴²¹ See section 7.5 of the impact assessment.

⁴²² The split could be more asymmetric (eg 80:20).

- (a) If there were two services operated by different companies leaving one after another on the same flow, eg London–York, both operators would have a good idea of the cost of running that service, and the demand from passengers at that time. Both operators would therefore know an ideal ‘monopoly’ price to set, from which they would both benefit as long as they both charged it.
- (b) If the second operator were to set a significantly lower price and was able to attract more passengers and, therefore, make a higher profit at the expense of the first operator, which lost customers, the first operator would realise that the second operator was deliberately undercutting it. Each operator would be unlikely to take such action in order to avoid a price war.
- (c) This can be contrasted with a situation with two operators running more dissimilar services, eg one directly to York and another to York but continuing on to another station on track which had not been electrified and so requiring the second operator to use diesel-powered rolling stock. If the second operator lowered its price, it would be harder for the first operator to be sure that this was a deliberate attempt to win its customers rather than a change in diesel prices or some other cost associated with diesel rolling stock which it did not face. The first operator may therefore respond to the change in prices, sparking a price war.

6.39 The possibility of tacit collusion was highlighted in Cave and Wright (2010), although few consultation respondents raised the concern.⁴²³

6.40 Option 2(b) would seek to address the problem of potential tacit collusion by implementing a degree of asymmetry between the operators. Other factors are also relevant, including the degree of product differentiation between the operators. As we note in paragraph 3.105, Spain is proposing to introduce duopoly competition on certain long-distance routes and is planning to ensure that the operators are asymmetric in order to mitigate the risk of collusion.

6.41 We note that asymmetric operators would be less likely to collude because they would have different cost structures and may have different business models.

⁴²³ One exception was Prof Juan Montero on behalf of REGUTRAIN, who noted that duopoly situations may result in tacit collusion – although, as considered in paragraph 3.105 – duopoly competition was considered the most practical first step in introducing on-rail competition in Spain.

- 6.42 We also note that the greater the degree of asymmetry, the more limited the extent of on-rail competition would be. This would limit the potential passenger benefits, although it would also reduce the impact on government funds.
- 6.43 Option 2(c) would seek to maintain a degree of competition between asymmetric operators while providing unprofitable but socially valuable services in a coherent manner.

Option 3 – more overlapping franchises

- 6.44 A franchise overlap occurs where two franchised TOCs provide some, but often not all, of the same services along a route or in their area of operation. Current examples are listed in Table 3 of Chapter 2.
- 6.45 The SRA, the body responsible for franchising from 2001 to 2006, decided to reduce the number of franchise overlaps in the Great Britain passenger rail sector.⁴²⁴ As described in Chapter 3, the stated rationale for this was primarily to ensure there was only one operator at each London terminal, with the intention of improving coordination of traffic and so improving punctuality and other KPIs.^{425,426}
- 6.46 This option would reverse the SRA's policies by redesigning the franchise map to encourage more overlapping franchises. It would therefore create more flows on which there would be competition between franchised operators.⁴²⁷
- 6.47 Competition between franchised TOCs may reduce the franchise premiums attached to bids, although we note in Chapter 3 that there is some evidence to suggest that franchised TOCs exposed to on-rail competition – notably London Midland and Chiltern Railways – have generated value in a more competitive environment. The fact that the government would retain control over where and when competition takes place would reduce uncertainty for bidders.
- 6.48 Unprofitable but socially valuable services would be provided, as under the current system, by franchised TOCs.

⁴²⁴ [SRA franchising policy announcement](#), 19 December 2001. The SRA reduced the number of franchises from 26 to 19.

⁴²⁵ [SRA Strategic Plan 2003](#), p65.

⁴²⁶ We note that the SRA did not eventually fully implement the policy of there being a single operator at each London Terminus. Following consultation multiple operators remained at stations including Euston and King's Cross. Nonetheless, the number of overlaps between franchised TOCs did reduce at this time.

⁴²⁷ The DfT told us that more franchise overlaps might, in any event, be created in the future as part of a wider policy decision to reduce the size of some of the current franchises in order to reduce the level of financial risk in the system.

- 6.49 Less detailed specification of franchises would be particularly beneficial under this option as it would allow the benefits of competition to extend beyond price competition to service provision that better reflected passenger demand and innovations that franchised TOCs could deliver, including investment in new technology. Less detailed specification would also allow franchised TOCs to better respond to the competitive incentives to reduce costs.

Option 4 – licensing multiple operators, subject to conditions (including public service obligations)

- 6.50 While the previous three options retain franchising, the fourth option is more radical, marking a significant departure from the current system in Great Britain.
- 6.51 Under Option 4, certain franchise areas would move from using a system of franchises to one using ‘licences’. In this option, operators are likely to be similar to OAOs, but subject to a licensing regime which would place some restrictions and obligations on their activities.
- 6.52 These licences would seek to ensure that unprofitable but socially valuable services would still be provided, but would do so in a less prescriptive manner, by allowing market forces to decide which operators would be best placed to undertake them.
- 6.53 We note that licensing or ‘authorisation’ regimes are used in a number of regulated UK industries such as energy, water, telecoms and postal services in order to require providers to undertake social activities which they may be unlikely to provide otherwise. This can cover both quality of service obligations and also requirements which ensure a minimum service for consumers.⁴²⁸
- 6.54 There are a number of ways such licences could be implemented in the passenger rail sector. We have considered the following options:
- (a) **Administratively designed licences (Option 4(a))**: this approach would mandate that if an operator wanted to operate (profitable) services between destinations *A* and *B*, at time *C*, it would have to stop at intermediate stop *X*; would have to operate a service to nearby destination *Y*; and/or would have to run an additional service at time *D*. A planning body

⁴²⁸ For example, in fixed-line telecoms and postal services, authorisation regimes oblige incumbents to provide a universal service to all customers. BT is required to offer a universal service, and mobile providers which hold spectrum licences are often required to provide threshold levels of coverage at designated fees, in particular to give greater coverage to rural customers who might not otherwise be offered a service.

- potentially the DfT, ORR or the system operator function of Network Rail
- would need to design the licences so that they produced an acceptable level of service and a coherently connected timetable in a financially viable framework. Depending on changes to access charges, it may be that some of the licences would need to have a subsidy attached.

For example, licence conditions could require that any operator running a train between London and Manchester on the West Coast main line between 3pm and 4pm would have to stop at a less heavily used station such as Stoke-on-Trent, and/or would have to run at least one train between London and Birmingham at 11pm. There could be a number of other licence conditions, designed such that all the unprofitable but socially valuable services as well as all the profitable routes were being utilised, would be undertaken. It would not specify which, or how many, operators provided these services, unlike in a franchise system.

- (b) **Licences with an associated ‘number’ of social obligations (Option 4(b))**: under this approach, alongside the licensed right to operate a service between *A* and *B*, there would be a condition that the operator must supply a certain number of unprofitable but socially valuable services, but without specifying where these were. There would need to be a ‘list’ of unprofitable but socially valuable routes drawn up by a central body from which operators could select. A trading system or platform could be implemented so that operators could trade these obligations between themselves, or could subcontract them to third parties.^{429,430}

An example of this approach would be a licence obligation which stated that any operator running a service between London and Manchester on the West Coast main line between 3pm and 4pm would need to run at least one unprofitable but socially valuable service each week, which it could choose from a list of such flows identified by the planning body. Again, unlike a franchise approach, the operators could use these licence obligations to put together a set of services designed by themselves rather than by a planning body.

- 6.55 The funding arrangements under Option 4 would need to be carefully considered. If the profitable rights were greater or equal in value to the unprofitable

⁴²⁹ This approach has been used in energy policy to require energy companies to insulate certain numbers of homes and to build specified capacities of renewable energy generation.

⁴³⁰ We note that trading of infrastructure capacity is prohibited by Article 38 of Directive 2012/34/EU. Further legal analysis of whether this would prevent a system of trading paths or slots such as we envisage here would need to be undertaken. If so, exemptions to this Directive may need to be sought.

responsibilities, no subsidy would be needed; the unprofitable parts could be funded through cross-subsidy.

- 6.56 At a route level, in the areas where we are suggesting that more on-rail competition could deliver the greatest benefits, we consider it likely that unprofitable but socially valuable services could be funded through licence obligations. This is because these routes pay considerable premiums and so are profitable enough overall to fund the unprofitable but socially desirable services within them.
- 6.57 If there were shortfalls in funding under Option 4, however, these could be made up in a variety of ways, including by universal service levies on licensed operators (similar to the levy proposed for OAOs in Option 1), by increasing the number of unprofitable services that licensees were required to provide under Option 4(b), or by raising revenue through the auction used to allocate access rights.
- 6.58 These two sub-options bear some similarities to other options we have considered. Option 4(a) would be similar to a franchising system except that the specification would be much less detailed and the level at which licence obligations would be attached to access rights would be much more detailed. This option could be described as comprising 'bundles of mini franchises'. Option 4(b) bears considerable similarity to the OAO component of Option 1, as services would be provided by commercial operators with considerable freedom to innovate and to tailor their services to customer demand, but these commercial operators would undertake social obligations themselves.
- 6.59 Under both sub-options, a mechanism would also be needed to allocate the scarce track access rights to operators. As mentioned under Option 1, this could be by way of an auction or an administrative process, as used in Sweden. As this option has no franchising component, and is also the most market-based option, we briefly consider the possibilities for using an auction-based approach for the allocation of capacity, the timetabling of services or the selling of bundles of paths.

Box 4: Rail capacity and auctions

The potential for train timetables to be drawn and operations to be allocated between companies by means of an auction process has garnered substantial attention from economists and auction theorists over the past 30 or so years. It was considered directly at the time of privatisation in Great Britain. We discuss this in more depth in the Appendix.

Our overall conclusion is that it is unlikely that an overall timetable can be drawn, or train service operation allocated in real time through an auction process. However, taking a timetable which has been designed by a central body and auctioning bundles of paths within it is likely to be possible and may achieve many of the potential benefits of an auction approach to facilitating competition.

- 6.60 Secondary trading would enable operators to exchange paths between themselves in order to optimise the efficiency of their operations. Further work would be required to identify how secondary trading of paths could be designed to remain compliant with European legislation.⁴³¹
- 6.61 Suggestions regarding auctioning bundles of paths were made in the consultation response by Virgin/Stagecoach and Network Rail.
- 6.62 As indicated in both responses, there would need to be rules in place to ensure that under Option 4 there was competition present on all or the majority of flows. This would effectively mean preventing operators gaining control of collections of rights which would allow them to exercise market power and so raise prices. If an auction mechanism were used, this would be likely to be best implemented through caps on the number of paths companies could win in particular areas.
- 6.63 For the trading-based Option 4(b), a mechanism would also need to be designed to decide which operators were assigned responsibility for particular unprofitable but socially valuable routes, as these would differ in how costly they were to provide or finance.
- 6.64 We consider that with multiple operators on each route, greater operational complexity may require a strengthened role for the system operator. This is also noted in the impact assessment's analysis of Option 4. An improved system operator function is a general recommendation we make below – but may be particularly important for this option.

⁴³¹ We understand this prohibition aims to prevent an unintended operational consequence of secondary trading, in terms of capacity reallocation not being supervised (and authorised) by the relevant infrastructure manager and this leading to inefficient use of rail capacity or inefficient interconnections.

Other recommendations to support greater competition

6.65 In our discussion document, we set out a number of more general ideas that could usefully be adopted alongside any of the options for greater on-rail competition coming into effect after 2023:

- reducing the level of detailed specification of franchise contracts (paragraphs 6.67 to 6.70);
- reforming the structure of access charges (paragraphs 6.71 to 6.78);
- improving incentives to facilitate better responsiveness of Network Rail in its 'system operator' function (paragraph 6.79); and
- encouraging the use of smart ticketing so that real passenger journeys are tracked within the system (paragraph 6.80).

6.66 In our evaluation of the options we assume that these changes (which are all under active consideration by DfT and ORR) would also be implemented.

Detailed specification of operators' obligations

6.67 We are conscious of the need for a degree of franchise specification, for example on commuter routes and on services which mainly deliver social objectives. We also note that a degree of specification is needed to ensure that certain services (eg appropriate first and last trains) are provided on commercial intercity routes.

6.68 However, we consider that the degree of specification in some of the current franchise agreements may significantly restrict the ability of franchised TOCs to manage their businesses commercially. We were told by certain operators that they are taking the role of 'service delivery contractors' rather than commercial operators. This detailed specification of services is likely to limit the ability of franchised TOCs to tailor their services to passenger demand (eg by adjusting service frequencies and introducing innovations), particularly as market dynamics evolve during the course of a franchise.⁴³² It may also restrict the ability of a franchised TOC to reduce costs. In turn, this may lower

⁴³² Virgin/Stagecoach noted that in order to achieve the benefits of greater on-rail competition, real flexibility should be given to franchisees. Arriva noted that where greater on-rail competition is allowed, operators of commercial services would be better placed to respond to commercial market opportunities and would need the flexibility and freedom to do so (which would, in turn, free government to focus on areas where the taxpayer is at risk or where broader policy aims need to be addressed). ORR also said that the prescriptive nature of some franchise specifications can limit the ability of operators to adapt to passengers' changing demands. This point was also noted in the impact assessment which stated that prescriptive franchise specifications can limit the scope for operators to innovate to maximise revenue or reduce costs.

customers' satisfaction. We were also told by some franchised TOCs that service specification blunts their incentives to run additional trains.

- 6.69 As set out in Chapter 2, the Rail Group is in the process of undertaking reforms to the system (most notably in the recent East Anglia Invitation to Tender).⁴³³ This changing approach is welcome. In this regard, we note that where franchise specification is less detailed, we have seen evidence of operator-led innovation, service improvement and growth.⁴³⁴
- 6.70 In order to realise fully the benefits of on-rail competition it is particularly important to ensure that franchises are not over-specified.⁴³⁵ For example, in Option 1, the franchisee would need sufficient flexibility to respond to open access competition, while in Options 2 and 3, the specification should be sufficiently flexible to allow the franchised TOCs to compete on factors other than price. This is a point that has been made to us by franchised TOCs which face competition from existing or potential OAOs.

Reforming the structure of access charges

- 6.71 We consider that a number of benefits to passengers and taxpayers could be delivered by reforming the structure of access charges.
- 6.72 As described in Chapter 2, ORR is currently conducting a review of the structure of access charges paid to Network Rail. ORR has identified four gaps in the current charging regime: (a) a limited ability to drive down costs; (b) a lack of specific and strong incentives to provide and allocate capacity most efficiently; (c) a potential inability to support effective competition between different types of passenger train operator; and (d) complexity.
- 6.73 Reforming the access charging structure would create a more level playing field in terms of the risks and charges faced by franchised TOCs and OAOs (eg by requiring OAOs to pay charges that are reflective of the fixed and variable costs of the infrastructure that they use and reviewing the indemnity that franchised TOCs enjoy against changes in track access charges during their franchises).

⁴³³ We also note that in response to our consultation the DfT stated that there are benefits from specification and that they aim to strike a balance between the benefits of specification and the ability of operators to innovate and provide new approaches to serving passengers. The DfT also told us that franchising policy, which will be applicable to future franchises, has become less restrictive in terms of both the bidding process and in allowing franchised TOCs to develop improvements during the lifetime of a franchise.

⁴³⁴ We cite the example of Chiltern Railways in Chapter 3.

⁴³⁵ Supplementary responses by the Rail Delivery Group and Virgin/Stagecoach following publication of the impact assessment.

- 6.74 Implementing cost-reflective access charges would also facilitate the implementation of reforms to increase competition. Under the current framework, if competition is introduced while the government continues to subsidise infrastructure through the network grant and fares fall, reducing franchise premiums, government may be left to provide funding for this shortfall through a higher network grant. If operators paid cost-reflective access charges this problem would be mitigated as a new, larger revenue stream would be created.
- 6.75 We note that changes in this regard are already taking place. In the summer 2015 Budget the government announced that it will change the way in which it channels public money through the industry, directing it through the franchised TOCs, rather than straight to Network Rail in the form of a network grant. This has the stated aim of encouraging Network Rail to focus firmly on the needs of train operators and, through them, passengers – encouraging customers of the railway to demand efficiency and improvements that matter to them and making the best use of scarce capacity on the rail network.⁴³⁶
- 6.76 Introducing access charges which were reflective not just of the resource costs of infrastructure used by operators, but of the opportunity cost, or value, would also allow scarcity to be reflected in the allocation of train paths, increasing the efficiency of the track allocation process.⁴³⁷
- 6.77 This ability of reformed access charges to mitigate the impact on funding the network and unprofitable but socially desirable services is demonstrated in the MVA report for the 2011 ORR consultation.⁴³⁸ MVA modelled a number of different access charges when applied in conjunction with a significant expansion of open access operations on the East Coast main line. One such scenario is shown in Figure 16 below:⁴³⁹

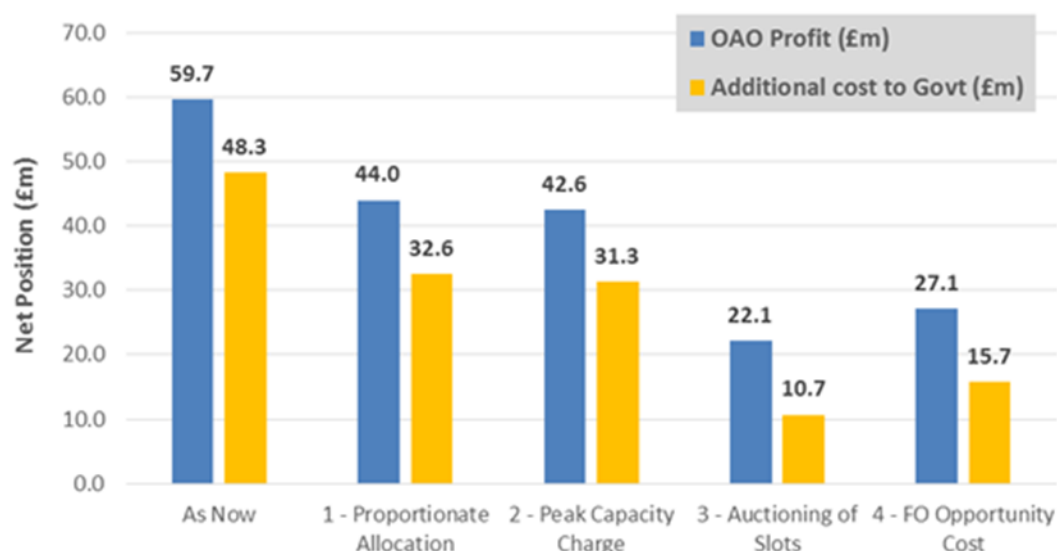
⁴³⁶ HM Treasury (July 2015), [Summer Budget 2015](#), HC264, paragraph 1.255.

⁴³⁷ We note that ORR is consulting on (a) an infrastructure costs package, which would lead to higher charges in more costly parts of the network and (b) a value-based capacity package, which would see higher charges where capacity is scarce.

⁴³⁸ See, MVA Consultancy (in association with Leeds University's ITS), Report for ORR (22 July 2011), Assisting Decisions: Modelling the Impacts of Increased On-rail Competition through Open Access Operation.

⁴³⁹ These access charges were: (i) 'As Now', with franchisees paying the current level of FTAC and OAOs not paying anything; (ii) 'Proportionate Allocation', where OAOs paid a share of the current FTAC; (iii) a 'Peak Capacity Charge', where OAOs paid a 50% higher charge for peak slots; (iv) an 'Auctioning of Slots' option where OAOs paid 90% of their profits as bids in auctions for slots; and (v) an 'FO Opportunity Cost' option where OAOs pay the difference between the revenue the franchised TOC receives if it faced competition and if it did not.

Figure 16: Comparison of different FTAC charging options



Source: MVA report, scenario 2, comparison of different FTAC charging options.

6.78 In the MVA report, FTAC charging options 2, 3 and 4 involve access charges where operators do not only pay the accounting costs of using the network, but also pay towards the opportunity cost of the access rights that they are using. This would mean they would pay more for more valuable access rights such as those at peak times on high-demand routes. As can be seen from the chart above, this has the potential to lower the cost to government of increasing competition and losing revenue from premium payments.⁴⁴⁰

Network Rail's incentives as system operator

6.79 We consider that the incentives placed on Network Rail in its role of 'system operator' should be sharpened in order to ensure that current infrastructure provides the highest feasible number of train paths for a given level of performance and cost.⁴⁴¹ As set out in Chapter 5, evidence shows that new entrants have greater incentives to put pressure on Network Rail to accommodate new entry and therefore to optimise the use of the network. ORR is currently reviewing Network Rail's role as a system operator. We see the strengthening of the system operator role as important to our options for reform as enhanced coordination of the network would be important for

⁴⁴⁰ Another scenario showed that the costs to government could actually be negative following the introduction of competition under some access charge systems, meaning that premiums would increase. However, this appeared to be driven largely by the choice of a scenario with an OAO running without competition on a large number of flows.

⁴⁴¹ We recognise that there can be a trade-off between the number of services run on a route and punctuality and other KPIs, due to the decreased capacity in the system to respond to service interruptions such as broken down trains.

managing the greater number of operators on the network. This is discussed further in Chapter 7.

Smart ticketing

- 6.80 We consider that the implementation of smart ticketing systems, which monitor the actual trains that passengers take, would be beneficial as it would allow revenue to be more accurately apportioned to operators.⁴⁴² The current ORCATS model, described in paragraph 5.204, allocates revenue from passengers travelling on interavailable tickets based on estimates of passenger demand and therefore blunts incentives for operators to attract more passengers.⁴⁴³

Assessment of the options

- 6.81 Our discussion document considered the advantages and disadvantages of four options for greater on-rail competition at a high level. We have built upon the factors discussed and the comments we have received during our consultation to produce the assessment framework outlined in Box 5 below.
- 6.82 The options assessment framework takes into account the risks and obstacles to greater on-rail competition described in Chapter 5, as well as the benefits identified in Chapters 3 and 4. We cross-refer to these chapters in our assessment where appropriate.

⁴⁴² This point was made by a number of consultation respondents, including Virgin/Stagecoach.

⁴⁴³ As described in paragraph 5.206, passengers' preference for interavailable tickets is stronger on commuter services than on the intercity routes.

Box 5: Options assessment framework

1. Passenger and efficiency benefits

- (a) Lower prices and fares
- (b) Improved overall passenger experience, including service quality, choice and complexity
- (c) Greater cost efficiency at the passenger services level
- (d) Dynamic or innovation benefits

2. Funding and risk

- (a) Taxpayer funding – impact on government funds
- (b) Impact on risk for government and operators
- (c) Impact on investment incentives

3. Network considerations, including operational issues

- (a) Impact on coordination and the level of transaction costs
- (b) Utilisation of capacity and interconnectivity
- (c) Impact on efficiency at the upstream network management level
- (d) Impact on safety

4. Wider social benefits

- (a) Externalities generated: regional economic growth and environmental benefits
- (b) Impact on social inclusion and connectivity

5. Ease of implementation, including legal and operational feasibility

Scale of policy and regulatory changes required

6.83 In the following paragraphs, we use the five elements of the framework to assess each of the four options against the base case scenario of the reformed franchising system continuing with incremental improvements.⁴⁴⁴

6.84 In assessing the options, we refer to the impact assessment which considered many of the elements in our assessment framework.

Passenger and efficiency benefits

6.85 In Chapter 3, we found that greater on-rail competition may be expected to bring passenger benefits in terms of lower prices or fares, improved quality of service and greater innovation. In Chapter 4, we also found evidence to suggest that greater on-rail competition may be expected to lead to cost efficiencies at the passenger service and upstream network levels.

⁴⁴⁴ The base case is described in more detail in paragraph 6.5.

6.86 The importance of examining these potential benefits was highlighted to us in consultation responses, for example from passenger and consumer groups.⁴⁴⁵ An additional factor relevant to the passenger experience highlighted in consultation responses was the level of complexity faced by consumers in purchasing tickets or planning their journey.⁴⁴⁶ We therefore also consider this in our assessment.

Lower prices and fares

6.87 The impact of each option on fares may relate to factors such as:

- The degree of on-rail competition introduced, as the greater the number of flows on which there is an overlap, the more flows there are on which price competition would occur.
- The extent to which operators compete, including:
 - the respective business models of the operators, including the extent of product/service differentiation;
 - the degree of freedom from specification of services (with greater freedom allowing more scope to lower fares, change business models and generate cost efficiencies); and
 - the charges and levies paid by operators.
- Whether firms could collude tacitly or otherwise to limit competition.

6.88 Options 1, 2 and 4 would each create direct competition between operators on many flows, while Option 3 would be likely to result in competition on a more limited number of overlaps.

6.89 In the baseline scenario, the degree of price competition between operators is relatively limited as many operators face no (or limited) on-rail competition on the flows they operate and are constrained in their ability to respond to competition where it exists by franchise specification and ticketing rules.

6.90 Option 4 would lead to the lowest degree of specification, as services on the long-distance routes would be entirely or mostly comprised of OAO-type operators.⁴⁴⁷ We consider that this is likely to result in the highest degree of

⁴⁴⁵ Responses by Transport Focus and Which?

⁴⁴⁶ Responses by Transport Focus, Which? and others.

⁴⁴⁷ Respondents to our consultation generally agreed with these conclusions, for example, the Chartered Institute of Logistics and Transport noted that operators remain franchisees in Options 2 and 3 with the limited risk and price innovation this implies. Virgin/Stagecoach argued that the franchise service obligations and fare agreements could restrict the benefits of competition in these options.

price competition. In Option 1, an OAO that was free from franchise specification would compete with the franchised TOC on a significantly expanded scale relative to the base case. In contrast, Options 2 and 3 would retain competition between franchised TOCs subject to franchise specification.

- 6.91 We note in paragraph 6.37 that Option 2 may create a risk of tacit collusion between operators. The likelihood of this concern arising depends on the degree of symmetry of the operators in terms of their size, cost base and business models. A more asymmetric split between operators is likely to reduce the risk of coordination between operators – although it would also reduce the degree of competition. We also note that the government would retain the ability to specify the types of services run by both operators (eg in terms of their rolling stock, calling patterns and strategy) and that operators might therefore be differentiated. In summary, while there is a risk of coordination between operators in Option 2, there is scope for this risk to be addressed.
- 6.92 We do not consider that tacit collusion would be a considerable concern under Option 1 as the franchised TOC and OAO would be differentiated in terms of their scale and business model. In Option 3, franchised TOCs would only overlap with other operators for part of their routes, reducing the risk of collusion. In Option 4, there would be multiple operators which may have different business models (eg to target premium or low-cost segments of the market), therefore reducing the risk of coordination.
- 6.93 The modelling in the impact assessment suggested that average price impacts from competition would primarily depend on the proportion of flows on which competition was introduced in the indicative scenarios they modelled.⁴⁴⁸ The modelling suggests that Option 1 would have a greater impact on fares than Options 2 and 3:
- The average impacts of the scenarios modelled for Option 1 on the East Coast and West Coast main lines range from 2.5% to 5.2% while for Option 2 the respective reductions range between 1.9% and 3.6%.⁴⁴⁹

⁴⁴⁸ The modelling approach uses 'exogenous' fare assumptions based on past evidence of comparisons between fares on flows with and without competition. The modelling assumed fares would be 10 to 20% lower for OAOs on flows with on-rail competition under Option 1, and 5 to 10% lower for franchised TOCs on flows with competition under Options 1, 2 and 3. The scenarios modelled led to a combination of flows with and without competition, and so average price reductions on the routes modelled varied accordingly.

⁴⁴⁹ This is the average of the overall results for the East Coast and West Coast main lines in the 'low' and 'high' scenarios reported in Table 25 of the impact assessment, compared with the average of 'low' and 'high' scenarios for symmetric and asymmetric options modelled on the East Coast and West Coast main lines in Table 26. We note that the Option 2 asymmetric East Coast main line scenario does, however, have greater fare reductions than the East Coast main line Option 1 scenario.

- The modelling of the Great Western main line finds overall fare reductions under Option 1 of between 1.4% and 2.9%, compared with reduction of between 0.6% and 1.3% under Option 3.

6.94 Taking these considerations into account, we therefore expect fares to fall the most under Option 4,⁴⁵⁰ followed by Option 1, Option 2 and then Option 3 (with fares falling relative to the base case under all four options).

Improved overall passenger experience

6.95 We consider that the factors set out in paragraph 6.87 which we considered important for driving price competition are most significant in determining the passenger experience, since operators facing strong competitive pressure and with minimal specification are more likely to compete strongly on quality.

6.96 As discussed in Chapter 5, we note that passengers may face a greater degree of complexity if their choice of operator increases, potentially leading to confusion (eg making it more difficult for passengers to buy the best available ticket for their journey). This is likely to increase with the number of operators on a route, and also with how frequently operators' services change. However, this must be balanced with the passenger benefits of new fare types, including lower fares and products which better match demand. We concluded in Chapter 5 that these issues are less likely to arise on long-distance routes, where most passengers plan their journeys in advance. There are also mechanisms for dealing with difficulties from complexity.⁴⁵¹

6.97 We consider that Option 4 has the potential to give passengers the best experience, as having multiple operators with the scope to set their own business models would create the strongest incentives for operators to differentiate their services and compete on quality. Option 1 would deliver these benefits to a degree as the OAO would be free from specification (and the franchised TOC could respond by introducing service quality improvements if its franchise specification allowed it to do so). Options 2 and 3 may create an improved passenger experience relative to the base case, although this would depend on the freedom for the franchised TOCs are free to introduce service quality improvements. The impact is likely to be more limited in Option 3 than in Option 2 given the more limited degree of on-rail

⁴⁵⁰ As noted above, the impact of Option 4 was assessed qualitatively rather than quantitatively. Our conclusions are based on our own assessment framework, taking account of the qualitative considerations in the impact assessment.

⁴⁵¹ For example, Transport Focus suggested that complexity could be addressed through mechanisms such as better provision of information for passengers.

competition. We consider that all four options would lead to an improvement compared with the base case.

Greater cost efficiency at the passenger services level

- 6.98 We consider that there is the potential for efficiencies to be achieved at the train operating level, which – in an environment of enhanced competition in the market – may be passed on to consumers through service quality improvements or lower fares.
- 6.99 As discussed in Chapter 4, efficiency gains are likely to be achieved by increasing open access competition. We also consider that there would be potential for improved efficiency from greater on-rail competition between franchised TOCs, although these effects may be lower (in particular given service specification and staff TUPE arrangements). In addition, any economies of density may be lost when services within a route are run by multiple operators, rather than one operator.
- 6.100 The impact assessment used similar assumptions and included potential adverse impacts on efficiencies due a reduction in economies of density in its analysis. As noted in Chapter 4, under Option 1, where OAOs expand, total industry costs fell under most of the scenarios.⁴⁵² The results for Options 2 and 3, in which greater on-rail competition between franchised TOCs is introduced, were more mixed.⁴⁵³ Efficiencies were not quantitatively modelled for Option 4, although the qualitative assessment suggested that Option 4 would create the strongest incentives for operators to reduce costs.
- 6.101 In summary, we consider that the extent of efficiency benefits would primarily be driven by the degree of open access operations relative to franchised services and degree of on-rail competition between operators. We consider that overall Option 4, followed by Option 1, then Option 2 and finally Option 3 would be most successful in this regard. We also consider that all four options would lead to an improvement in comparison with the base case.

⁴⁵² Total industry costs fell for the 'central' and 'high' scenarios on the East Coast, West Coast and Great Western main lines, and for the 'low' scenario on the East Coast main line. However, for the low scenario on the West Coast and Great Western main lines, costs rose. The 'high', 'low' and 'central' scenarios reflect the assumptions used, in this case with respect to cost efficiency gains resulting from competition. Further detail of the modelling and assumptions used is set out in Chapter 6 of this document.

⁴⁵³ For Option 2, total industry costs were higher in the low scenarios for the East Coast and West Coast main lines, higher in the central scenario for the East Coast main line and did not change on the West Coast main line under the central case scenario. Costs fell under the high scenarios for the East Coast and West Coast main lines. For Option 3, which was modelled only on the Great Western main line, total industry costs rose in the low scenario, fell marginally in the central scenario, and fell slightly in the high scenario.

Dynamic or innovation benefits

- 6.102 We would expect the scope for dynamic competition and innovation to increase with the degree of on-rail competition between operators and with the level of freedom from detailed franchise specification.
- 6.103 The impact assessment considered that increased competition would be likely to lead to innovation benefits,⁴⁵⁴ and highlighted that OAOs have introduced innovations in Great Britain and Europe to date.⁴⁵⁵ It also considered that Option 4 has the most scope to attract new operators to the Great Britain rail market and so may increase the likelihood of increased innovation.⁴⁵⁶
- 6.104 With the greatest freedom to introduce innovation, we would expect Option 4 to achieve the most significant benefits in terms of dynamic competition, followed by Option 1, then Option 2, then Option 3. We consider that all four options would lead to an improvement in comparison with the base case.

Overall

- 6.105 Our assessment above suggests that Option 4, followed by Option 1 then Option 2 and finally Option 3, would be most successful in delivering passenger benefits. We consider that each of these options would deliver benefits relative to the base case on long-distance intercity routes.

Funding and risk

- 6.106 As discussed in Chapter 5, greater on-rail competition may be expected to reduce government funds from franchise premiums. In relation to risk, we also note that, in the base case, franchised TOCs face uncertainty at the time of franchise bidding as to the extent of on-rail competition that they will face during their franchise. More generally, changing economic circumstances and shocks to the system may lead to the failure of a franchise (as happened twice on the East Coast main line).

Taxpayer funding – impact on government funds

- 6.107 Option 1 seeks to address this through OAOs making a greater contribution to the cost of the network through higher access charges and by way of a PSO levy. The implementation of these mechanisms is considered further in Chapter 7.

⁴⁵⁴ See p26 of the impact assessment.

⁴⁵⁵ See p46 of the impact assessment.

⁴⁵⁶ See p123 of the impact assessment.

6.108 As noted in paragraph 6.29, in the absence of a developed model for a PSO levy, the impact assessment models an approach in which OAOs are charged based on the level of abstraction from franchises in conjunction with an estimated share of franchise premiums associated with the service from which abstraction occurs. The levy itself was modelled on a pound-per-passenger-mile basis. This modelled PSO levy almost entirely offsets the impact on government funds in most scenarios measured, for example leading to a 3% fall in government income under the central scenario on the East Coast main line, and an equivalent 4% reduction on the West Coast main line. The impact was, however, greater on the Great Western main line, where a 15% reduction occurred under the central scenario.⁴⁵⁷

6.109 The DfT told us in its supplementary consultation response that the impact assessment does not propose any deliverable operational model for a PSO levy. In its view, further work should be undertaken regarding the design of deliverability of the PSO levy before a significant programme of reform to introduce greater on-rail competition is introduced. We discuss further work that should be undertaken in relation to the design of the levy in Chapter 7.

6.110 As noted above, we are aware of the limitations of the quantitative modelling in the impact assessment, but note that it provides a broad indication of the likely direction of the impact of the options. In relation to government funds, we also note that there are factors not modelled which might have resulted in a lower impact on government funds than estimated:

- OAOs are sufficiently profitable such that they may be able to pay a higher PSO levy and remain profitable.⁴⁵⁸
- If higher, cost-reflective, access charges are introduced, OAOs would pay higher access charges than are modelled by the impact assessment.

6.111 Option 2 is also likely to reduce government funds to a degree by lowering franchise premiums (with the impact depending on the extent of on-rail competition created in the design of the franchise split). However, as noted above, higher and more cost-reflective access charges would help to mitigate this effect. The government would also retain control of the flows on which on-rail competition would take place and, through franchise specification, the scope for the franchised TOCs to compete. As noted in Chapter 5, any impact on government revenue would need to be balanced by policymakers against improvements in consumer surplus.

⁴⁵⁷ Tables 34–36 of the impact assessment.

⁴⁵⁸ Ibid.

- 6.112 The impact assessment estimated that the impact on funding under Option 2 on the East Coast and West Coast main lines was slightly higher than under Option 1, with a 7% and 3–4% reduction, respectively, under central assumptions.⁴⁵⁹ The Great Western main line was not modelled for this option.
- 6.113 Option 3 would have a more limited impact on government funds as the degree of franchise overlap would be more limited. The impact assessment found a relatively small impact on government funds, with a reduction of 2% of premium on the Great Western main line.⁴⁶⁰
- 6.114 Option 4 would end franchising on the long-distance routes on which it was implemented, but the ‘licence’ system would be designed to ensure that all PSO services within the main line routes are provided by the OAO-type operators. Revenue raised from the auction mechanism (if this were the approach used), could be used to fund unprofitable but socially valuable services in other loss-making areas which are currently subsidised through franchise premiums on other parts of the network. The impact assessment did not model Option 4 quantitatively, but it noted that auction revenue raised from this process would be lower than that raised under franchising, as monopoly rents could not be raised to the same extent, and that licence auctions may therefore raise less revenue than franchising.
- 6.115 Overall, we consider that Option 1 has the potential to address the impact on government funds from greater on-rail competition, although noting that further work is needed on the PSO levy (we also note, however, that no such mechanism to address the impact of on-rail competition is available to policymakers today). Option 2 would be expected to have some impact on government funds, with Option 3 having a lesser impact. Further work would be required to examine the impact of Option 4 on government funds, although we note that significant funds could be raised from the auction of paths and that the system would subsequently function without ongoing central government involvement.

Impact on risk for government and operators

- 6.116 Government and operators face risks both under the options and the base case. Under the base case, there is a risk of there being an insufficient number of bidders for franchises. As discussed in paragraphs 2.113 to 2.115,

⁴⁵⁹ Tables 37 and 38 of the impact assessment.

⁴⁶⁰ Table 39 of the impact assessment.

this risk was noted by the NAO in 2015 and Public Accounts Committee in 2016.

- 6.117 The possibility of franchise failure, at which point the government may be required to step in as ‘operator of last resort’, is another risk under the current system.⁴⁶¹
- 6.118 By creating uncertainty for bidders, open access applications in the current framework may risk both the intensity of competition for a franchise and, if OAOs enter, the financial viability of a franchise. TOC owner groups also face the risk of losing key franchises which may mean that they are out of the market for a number of years, making it difficult for owner groups to balance risk across their portfolios.
- 6.119 We note that the options that we propose offer policymakers additional tools for strengthening the current system and addressing risks. In particular, Option 1 seeks to address the risk from open access applications by coordinating the timing of applications with franchise bidding rounds and seeking to address funding issues. Both Option 1 and Option 2 also create smaller franchises, potentially lowering barriers to entry and helping owner groups to balance risk across their portfolios.⁴⁶²
- 6.120 As we have noted, a potential concern with Option 1, using a PSO levy approach, is that OAOs may struggle to be financially viable if paying such a levy.⁴⁶³ However, OAOs responding to our consultation told us that they would be willing to pay such a levy in return for greater access to the network and, as noted in paragraph 6.30, the levy could be introduced over time. The modelling work in the impact assessment is consistent with this, with OAOs forecast to be profitable in the scenarios modelled, even after PSO levy payments.⁴⁶⁴ The impact assessment does, however, note that operators’ profitability would be dependent on the relative treatment of OAOs and franchised TOCs in terms of charging and funding.⁴⁶⁵
- 6.121 Under Options 2 and 3, the risks facing operators and government would be similar to those under the base case. However, as noted above, Option 2 may reduce the risk to operators of failing to win franchise competitions, as by

⁴⁶¹ The government’s obligation to ensure continuity of services applies only to franchised services.

⁴⁶² As noted in paragraph 2.113, the risk of there being an insufficient number of bidders for franchises was identified by the NAO.

⁴⁶³ This was mentioned in consultation responses from Prof Juan Montero on behalf of REGUTRAIN, who considered that it was doubtful if the universal service obligation levy principle successfully applied to telecoms in Spain could be extrapolated to become a substitute for the very significant cross-subsidies implemented under the franchise model in the rail industry in Great Britain.

⁴⁶⁴ Ibid, p97.

⁴⁶⁵ Ibid, p98.

splitting current franchises, competitions may take place more frequently. Security of supply considerations may be reduced as if one franchise were to fail, the other franchised TOC on the route, rather than the government, may be able to operate the failing franchised TOC's services. As discussed further in paragraph 6.171, the application of UK merger control to the award of franchises would also create a risk in Option 3 as bidders with overlapping services would face detailed competition scrutiny.

- 6.122 Under Option 4, a dynamic commercial market with multiple intercity operators would result and firms may enter and exit the market over time. This may involve some new risks for operators within the market, but this risk may not be substantially more severe than operators face under the base case, from franchise failure, OAO applications or from failure to win franchise competitions. Option 4 may reduce the security of supply risk, as there would be a greater number of intercity operators within a franchise area.

Impact on investment incentives

- 6.123 We consider the impact of greater on-rail competition on investment business cases and the potential for greater private investment to be incentivised in the network in a more commercial environment in paragraphs 5.97 to 5.109.
- 6.124 By increasing the scale of open access operations, Option 1 could incentivise greater private investment in the network. As considered in Chapter 3, on-rail competition may increase demand for rail travel, unlocking considerable social benefits and incentivising further investment.
- 6.125 We consider that Option 2 would be very similar to the base case in terms of investment incentives as franchising would be retained. There may be some impact on government funds, but increased passenger use of infrastructure would be likely to yield passenger and wider social benefits. Option 3 would be very similar in this regard, but with less pronounced effects. We do not consider that the incentives for operator investments would change considerably from the base case.
- 6.126 We consider that under Option 4, the creation of a more dynamic, market-based system may provide strong incentives for operators to invest, particularly if long-term access rights are granted to operators. This may represent a significant opportunity for harnessing private sector investment in the network in the longer term.

Overall

6.127 Overall, we consider that while Options 1 and 2 would be associated with some impact on funding and risk, they have potential to address some of the risks in the current system. We consider that Option 3 would lead to limited change from the base case. The risks in Option 4 are more difficult to model at this stage, although we note that this option has the potential to drive longer-term reductions in risk for government by creating a self-sustaining commercial model of operation.

Network considerations, including operational issues

6.128 As set out in Chapter 5, there are a number of potential adverse effects which could result from an increase in a number of operators on the network, including coordination and operational issues. In this section we consider the operational impact of the four options. We also consider the degree to which the options would incentivise efficiency at the upstream infrastructure provision level, the degree to which track capacity would be most efficiently used and whether there would be any impacts on safety.

Impact on coordination and the level of transaction costs

6.129 In Chapter 5, we concluded that there may be some operational issues in introducing greater on-rail competition, although no barriers were found to be insurmountable.

6.130 By introducing an OAO competing with the intercity franchised TOC, Option 1 may create some additional operational risk. However, as discussed above, we found that this risk would be manageable and would not be significantly greater than in the current system in which multiple franchised TOCs, OAOs and freight services operate on the network.

6.131 In Options 2 and 3, the government would, through franchise specification, retain operational control over the competing franchised TOCs. As such, there would only be minor implications for operational control and performance.

6.132 In Option 4, a strong system operator function would be required in order to manage the timetables of multiple intercity train operators. Changes to timetables and licences would have to be coordinated over time and with major projects. However, while the operational risk is higher than in the other options, we do not consider the issues to be insurmountable.

6.133 In relation to transaction costs, we consider that challenges in coordination issues in the rail network, and the transactions costs involved in internalising

these, would increase with an increase in the number of operators on the network, and the dynamism of the market. We therefore consider that transaction costs would be highest under Option 4,⁴⁶⁶ followed by Option 1, followed by Option 2 then Option 3, then the base case. However, as set out in Chapter 6, given the low magnitude of transaction costs currently in the industry, we do not consider that the magnitude of these differences would be very significant.

Utilisation of capacity and interconnectivity

- 6.134 We discuss the impact of on-rail competition on capacity utilisation and interconnectivity in Chapter 6.
- 6.135 The impact assessment considered that Option 1 and Option 4 may more efficiently match services to demand, and that OAOs have in the past successfully put pressure on Network Rail to find capacity, while Option 2 and Option 3 would be similarly effective to the base case in this regard.⁴⁶⁷
- 6.136 We consider that Option 4, if designed appropriately, would yield the best use of capacity and provision of interconnectivity, as it would be based on market signals and would give the flexibility for services to change in response to demand.
- 6.137 Option 1 would achieve benefits in this respect as it has the next greatest degree of open access services, which creates incentives to utilise capacity efficiently in response to market signals and to ensure connectivity. Option 2 and Option 3 are unlikely to lead to significant changes in this area.

Impact on efficiency at upstream network management level

- 6.138 The impact assessment considered this in its general considerations but did not model it explicitly.⁴⁶⁸ Its qualitative assessment suggested that competition downstream may be likely to have an impact on efficiency upstream.⁴⁶⁹ It also suggested that Option 4 provides strong incentives for operators to engage with Network Rail to ensure that it delivers performance and enhancements in a cost effective way.

⁴⁶⁶ This point was also made by The Railways Consultancy Ltd.

⁴⁶⁷ See the impact assessment, Chapter 9, sections on Product – Level of Service and Capacity. As discussed in paragraphs 5.32–5.36, even in scenarios when track capacity is full, there may be the possibility to more fully utilise train capacity, particularly at off-peak times.

⁴⁶⁸ See, for example, the impact assessment, Chapter 5.5, Review of Evidence on the Impact of Competition – Impacts on Network Rail Incentives and Behaviour, p47 and Table 20 – Non-Quantified Impacts, p61.

⁴⁶⁹ Ibid.

6.139 The potential for the options to generate efficiencies upstream depends on the intensity of on-rail competition and the degree of commercial freedom and incentives afforded to operators. We therefore consider that Option 4, followed by Option 1, would result in the strongest incentives to achieve upstream efficiencies. Options 2 and 3 may have a limited impact in this regard.

Impact on safety

6.140 Safety was cited by many consultation respondents as an important criterion against which the options should be assessed.⁴⁷⁰

6.141 Rail safety is a primary policy objective both at European and national level. An effective European regulatory framework for safety is in place as well as detailed national legislation and a safety management system.⁴⁷¹ Moreover a European Railway Agency, an independent national safety authority (in the UK, ORR) and an independent accident investigation body (the Rail Accident Investigation Branch (RAIB)⁴⁷² in the UK) have been established in all member states.

6.142 Europe's railways are among the safest in the world and Great Britain now has one of the safest railways in Europe.⁴⁷³ Consistent with the existing legislation and policy, safety is the primary consideration in the Great Britain rail sector.

6.143 We have not received any evidence that any of the four options under consideration would reduce safety on the railway. The options that we are considering would be implemented within the relevant national and European

⁴⁷⁰ Safety was raised as an important consideration in relation to rail by at least ten consultation respondents. However, none of these raised specific safety concerns in respect to particular options. See, for example, Network Rail's supplementary consultation response. A minority of respondents considered that there was no way to increase competition without adversely impacting on safety, see for example, ASLEF. We do not consider that there is any evidence of this in relation to the four options under consideration.

⁴⁷¹ The Railway Safety Directive 2004/49/EC: (a) creates a regulatory framework for the maintenance of safety management systems; (b) defines clear responsibilities between various players (operators, infrastructure providers, national safety authorities, etc); (c) develops common safety targets and common safety methods (developed by the European Railway Agency); (d) establishes safety authorities and accident investigation bodies, such as ORR in Great Britain. On this basis, ORR has worked with the DfT and the Rail Safety and Standards Board (RSSB) to develop the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended in 2011 and 2013), which implements the European Railway Safety Directive and provides the regulatory regime for rail safety. In addition there are a number of further national measures, as the Railway Safety (Miscellaneous Provisions) Regulations 1997, which cover a wide range of safety issues, such as prevention of unauthorised access to the railway infrastructure or providing adequate braking systems; the Railway Safety Regulations 1999 which required the installation of a form of train protection on the railways; and the Train Driving Licences and Certificates Regulations 2010, which brings the requirement to hold a licence and certificate to drive a train into force by 2018.

⁴⁷² The RAIB independently investigates accidents to improve railway safety, and inform the industry and the public.

⁴⁷³ See ORR, [UK NSA Annual Safety Report 2014](#) (September 2015); and ORR (July 2015), [Health and safety report for 2014-15](#).

safety legislation. In considering implementation, policymakers in Great Britain will be required by the relevant legislation to ensure that no steps are taken which would compromise safety.

Overall

- 6.144 Taking the above factors into consideration, we consider that Options 1 and 4 would lead to better outcomes at the network level than Options 2, 3 and the base case.
- 6.145 While Options 1 and 4 may lead to small increases in transaction costs, we consider they may also increase connectivity and capacity utilisation, and reduce infrastructure costs the most. Options 2 and 3 would see savings in infrastructure costs compared with the base case, but may also see higher transaction costs. Options 2, 3 and the base case would be the same in terms of capacity use and interconnectivity as they would all be based on centrally designed franchises.

Wider social benefits

- 6.146 As discussed in Chapters 3 and 5, there are a number of wider social considerations associated with the use of the rail network. In some cases this means that services are socially desirable even when they may not be profitable. In this section we assess the ability of the options to generate wider social and economic benefits.

Externalities generated: regional economic growth and environmental benefits

- 6.147 As discussed in Chapter 3, rail travel may generate wider economic benefits, for example by facilitating regional growth and reducing congestion on road networks. Rail may also help environmental sustainability when rail is less polluting than alternative forms of travel.
- 6.148 We consider that Options 1 and 4 would be most effective at generating the external benefits provided by the rail network. This is because they have the potential to grow demand by lowering fares and improving service quality. These options could also capture unmet demand at poorly served destinations by making better use of market signals. These options may also take passengers from more polluting forms of travel such as air and road where a degree of intermodal competition exists, and may also reduce congestion on these other transport routes which is in turn likely to have economic benefits. This is consistent with the findings of the 2011 MVA Report for ORR (discussed in Chapter 3), which modelled significant benefits from open access operations on the East and West Coast main lines.

6.149 Options 2 and 3 would be likely to generate some wider economic benefits compared with the base case, as price competition increases passenger volumes. This would, however, be lower than under Options 1 and 4.

6.150 The impact assessment modelled the environmental and wider economic benefits of the options. It suggested that Option 1 would have a greater impact than Option 2 and Option 3, and that all options produce positive results relative to the base case:

- Option 1 was found to produce benefits valued at between £144 million and £221 million on the East Coast and between £324 million and £671 million on the West Coast main line, in comparison with Option 2 which produced £131 million and £266 million and £59 million and £119 million, respectively, depending on how Option 2 is implemented.
- Option 1 was found to produce £50–£97 million on the Great Western main line, in comparison with £21–£41 million on the same line for Option 3.

Impact on social inclusion and connectivity

6.151 We consider that all the options would be the same in this respect, as franchise design under Options 1, 2 and 3, and licence design under Option 4 lead to the same pattern of service provision for less profitable but socially desirable services. Options 2 and 3 may, however, provide the simplest means to achieve these objectives. Some respondents emphasised the benefits of franchise-based options in safeguarding regional services, and considered that Option 1 might be less successful in this respect.⁴⁷⁴

Overall

6.152 We therefore consider that in terms of wider social benefits, the appropriate ranking would be Option 4 followed by Option 1, then Option 2, Option 3 and the base case due to the revitalised role the rail network could play for the UK.

Ease of implementation, including legal and technical feasibility

Scale of policy and regulatory changes required

6.153 There is a degree of variation in the policy and regulatory challenge in implementing any of the options. It was put to us during our consultation that

⁴⁷⁴ Response by SEStran.

we should consider the costs related to implementation of the options and whether these outweighed the net benefits generated by the options in comparison with the base case scenario.⁴⁷⁵

- 6.154 The impact assessment found that Options 2 and 3 could be implemented under the current framework. It found that Option 1 was legally and operationally feasible, although further examination of the PSO levy would be required. In relation to Option 4, the assessment found that while there would be significant challenges in implementation, these were not considered to be insurmountable.
- 6.155 Option 1 would require a change to the structure of track access charges and the introduction of a PSO levy. The former is already under way but, as noted above, the PSO levy would require careful design and possibly primary legislation. A system for allocating paths to an OAO would also have to be designed. However, we have not received any evidence to suggest that these challenges are insurmountable.
- 6.156 Options 2 and 3 could be delivered within the current legal framework, although a change of franchise policy and, potentially, franchise design, would be required. Option 3 could be implemented gradually as new franchises came up for renewal.
- 6.157 We note that there is the potential for outcomes similar to those envisaged in Option 3 to begin to arise under current policy conditions in some areas, as the DfT may seek to reduce the size of some current franchises in order to reduce the level of financial risk in the system.
- 6.158 Option 4 would require an overhaul of the current system in areas where it was implemented, including the design of licences and a mechanism for auctioning train paths.⁴⁷⁶
- 6.159 The base case does not include significant implementation challenges, as the current franchise framework is already in place.
- 6.160 Overall, we consider that Options 2 and 3 would be the most straightforward to implement as they could be introduced under the current legal framework. Option 1 would require some further steps to implementation, with Option 4 requiring an overhaul of the current system.

⁴⁷⁵ See, for example, Network Rail's consultation response.

⁴⁷⁶ Virgin/Stagecoach stated in their consultation response that, while Option 4 would be more difficult to implement than Options 1–3, they did not agree that it would require a major overhaul and be operationally complex.

6.161 We consider the steps required to implement our preferred options in Chapter 7.

Overall assessment

Impact assessment modelling

6.162 The impact assessment produced quantitative estimates of the overall impact of the options measured in terms of NPV of the costs and benefits for Options 1 to 3.

6.163 The quantitative assessment aimed to consider the likely direction and broad magnitude of the impacts under a range of scenarios intended to be indicative of the type of service pattern and other impacts that could result under each of the options.

6.164 The impact assessment found that all three options modelled led to positive net benefits relative to the base case in central assumption scenarios.⁴⁷⁷ Measured in terms of NPV of costs and benefits over a 20-year appraisal period,⁴⁷⁸ the findings (in 2010 prices) were as follows:

- Option 1 would generate £489 million of benefits under the central case assumptions on the East Coast main line, £915 million on the West Coast main line and £262 million on the Great Western main line.
- Option 2 was modelled as producing £95–£236 million of benefits on the East Coast main line and £151–£166 million on the West Coast main line.⁴⁷⁹
- Option 3 under the central case assumptions was modelled as producing an NPV on the Great Western main line of £56 million.⁴⁸⁰

⁴⁷⁷ Network Rail's consultation response suggested that the NPV of the options seem relatively low when compared with the industry overall revenue. We consider that a better comparator in this regard would be route-level revenue for the main line routes. Comparisons are not straightforward as the impact assessment's findings are in 2010 prices and are discounted. However, by way of context, the [Rail Industry Financials 2013-14](#) provides some comparisons. Revenue on the East Coast main line in 2013–2014 was £717 million, on the West Coast (Virgin Trains) £954 million and on First Great Western, £891 million. We therefore consider that the scale of benefits modelled in the impact assessment under the central case scenarios for Option 1 are similar to a full year's revenue on the East Coast and West Coast main lines and therefore not insignificant.

⁴⁷⁸ These comprise: (a) impacts on users (due to changes in fares and journey time); (b) impact on non-users (due to changes in car use); (c) impact on operators (due to changes in operating costs/efficiency and in passenger revenues); and (d) impact on government funds (due to changes in franchise premium payments, in revenue from access charges and levy and from indirect tax).

⁴⁷⁹ Figures for Option 2 are ranges under the central case as both symmetric and asymmetric sub-options were modelled. The impact assessment modelled Option 2 on the East and West Coast main lines only.

⁴⁸⁰ The impact assessment modelled Option 3 on the Great Western main line only.

6.165 Option 4 was deemed too difficult to model quantitatively in the time available due to the uncertain nature of the service patterns and exact regulatory framework which it would entail.

6.166 As set out in Box 3, a number of potential impacts of the proposed options, which we considered in our assessment framework, were not quantified in the impact assessment.⁴⁸¹ Non-quantified impacts include impacts on product offering and service quality, impact on the efficiency of Network Rail and positive and negative spillovers outside the intercity routes considered. Some of these may have made the net benefits of the options greater, while others may have had a negative impact on the net benefits.

6.167 The DfT raised this as a particular concern, noting that no fewer than ten distinct relevant issues were explicitly excluded from the quantification of impacts. A number of other consultation respondents raised methodological concerns about the impact assessment.⁴⁸² We have taken these concerns into account in the weight that we have placed on the modelling in the impact assessment in our overall analysis which, as noted in paragraph 6.163, aimed to consider the likely direction and broad magnitude of the impacts.

Conclusions – our preferred options

6.168 For ease of understanding we summarise our assessment of the options in Box 6 below. We note that this representation is indicative and intended as an aid to understanding rather than a definitive marking.

⁴⁸¹ These aspects are, however, qualitatively considered in Chapter 9 of the impact assessment. Network Rail told us that the financial value of these impacts could potentially be quite significant and could materially alter the outcome of the impact assessment. In particular, Network Rail stressed that the impact on freight operators of the four options has not been assessed at all.

⁴⁸² See responses by the DfT, Virgin/Stagecoach, Network Rail, Alliance Rail and the Rail Delivery Group.

Box 6: Summary of options against assessment criteria

	1 – Greater Open Access	2 – Split franchises	3 – Overlapping franchises	4 – Licence system	0 – Base case
Passenger and efficiency benefits	✓✓✓	✓✓	✓	✓✓✓✓	-
Funding and risk	x	x	-	x	-
Considerations within the network, including operational issues	✓	-	-	✓	-
Wider social/ economic benefits	✓✓	✓✓	✓	✓✓✓	-
Implementation ease	xx	x	x	xxx	-

6.169 Overall, we found that Option 1 would be likely to generate significant passenger, efficiency and wider economic benefits as a result of competition between two large-scale train operators on key routes, one of which would be an OAO that was not subject to franchise specification. Option 1 also has the advantage of addressing the funding challenge from open access, which is also a feature of the current system. We did not find any legal or operational barriers to implementing Option 1, although the design of a levy to mitigate the impact of greater competition on government funds would require further design work and possibly primary legislation. Option 1 received support from a number of stakeholders.⁴⁸³

6.170 We also found that Option 2 could provide benefits by introducing on-rail competition on key routes. Although the scope of the benefits – particularly those arising from dynamic competition – may be reduced by both operators remaining as franchised TOCs subject to franchise specification, Option 2 could generate large-scale on-rail competition and is implementable under the current legal framework. Given the diversity of the network in Great Britain, Option 2 may also have the potential to deliver benefits on parts of the network where Option 1 is less suitable.

6.171 We consider that Option 3 would produce lower passenger and efficiency benefits than Options 1 and 2 given the limited degree of on-rail competition that it would generate.⁴⁸⁴ The application of UK merger control to the award of

⁴⁸³ Arriva, FirstGroup, Chartered Institute of Logistics and Transport, Centre for Policy Studies.

⁴⁸⁴ We note that this option received support from only a small number of respondents. The ORR noted that Option 3 may be appropriate on some parts of the network, and could be implemented under the existing framework.

franchises would create a risk as bidders with overlapping services would face detailed competition scrutiny, possibly reducing their appetite for bidding and, consequently, the intensity of competition for the franchise award.

6.172 Option 4 has the potential to generate the strongest on-rail competition, with three or more fully commercial operators competing on key flows, subject to licence conditions. This option would require an overhaul of the current system in areas where it was implemented, including the design of licences and a mechanism for auctioning train paths. Although these barriers do not appear to be insurmountable, further work would be required to fully develop the framework.

6.173 In Chapter 7, we set out our final recommendations and consideration of the steps required to implement our preferred options.

7. Recommendations and next steps

Introduction

- 7.1 In this chapter we set out our recommendations for achieving greater on-rail competition and the key steps for implementing our preferred options to introduce greater on-rail competition.
- 7.2 As described in Chapter 2, the rail industry is complex and changes to the structure of the industry are ongoing. We are conscious of the importance of ensuring that the key stages in implementing our recommendations are coordinated with developments in the sector, such as the recommendations following the Shaw report into the future of Network Rail, ORR's structure of charges review and the development of HS2.
- 7.3 The publication of this policy document does not mark the end of the CMA's engagement in this area. The recommendations we have set out are for the long term and the CMA will continue to engage with policymakers, regulators and other stakeholders to advocate the report's recommendations and to consider further development of the options, as appropriate.
- 7.4 We also encourage industry participants and stakeholders to continue to consider the benefits that greater on-rail competition may bring, and to consider further ways in which opportunities to expand on-rail competition for the benefit of passengers and wider UK productivity may be pursued.
- 7.5 In setting out next steps, we focus first on general recommendations to lay the foundations for a dynamic, competitive industry, and then on the key steps for implementation of our options to introduce greater competition. In order to give future policymakers flexibility in a rapidly evolving sector, we do not attempt to set out the precise mechanisms by which the options would be implemented or the exact form which the options would take. We recommend that these questions are addressed through further discussions with government, the regulator, the industry and passenger groups.

General recommendations: laying foundations for a dynamic, competitive industry

- 7.6 In this section, we consider the steps required to implement the four general recommendations set out in Chapter 6 that we consider to be key to enabling full realisation of the benefits of greater on-rail competition. These were:
- further reducing the level of specification of franchise contracts wherever possible;

- reforming the structure of access charges so that charges are more cost-reflective;
- improving incentives for Network Rail in its ‘system operator’ function to manage traffic and capacity more efficiently and to become more responsive to customer demands; and
- encouraging the use of smart ticketing so that real passenger journeys are tracked within the system and potential distortions by the ORCATS system are removed.

Further reducing the level of detailed specification of franchise contracts

7.7 We recommend that, as noted in paragraphs 6.67 to 6.70, the government’s current direction of travel towards less tightly specified franchises continues and that further consideration is given to the appropriate level of specification on franchises where there is a degree of on-rail competition.

Reforming the structure of access charges

7.8 As set out in paragraphs 6.71 to 6.78, we consider that a number of benefits to passengers and taxpayers could be delivered by reforming the structure of access charges. These issues are being considered as part of ORR’s structure of charges review.

7.9 We also note that the government is changing the way in which it channels public money through the industry, directing it through the TOCs instead of the network grant, with the stated aim of encouraging Network Rail to focus firmly on the needs of train operators and, through them, passengers.⁴⁸⁵

7.10 We support these steps and consider that they are important in laying foundations for a more competitive, dynamic sector.

Improving the ‘system operator’ function

7.11 As set out in paragraph 6.79, we consider that an enhanced system operator would provide benefits for the rail network, by efficiently managing network capacity and assisting decisions regarding path allocation and investment decisions on the network.

7.12 Improving the system operation activities would be particularly beneficial if greater on-rail competition were introduced, as an enhanced system operator

⁴⁸⁵ HM Treasury (July 2015), [Summer Budget 2015](#), HC264, paragraph 1.255.

would facilitate the allocation of train paths between competing operators and minimise the potential adverse operational effects of an increased number of operators.

7.13 Again, we note that positive steps are already under way:

- ORR is currently conducting a review of system operation activities; and
- Network Rail has consulted on an initial system operation dashboard in order to improve the information available about how the system is operated. ORR's findings will feed into its PR18 work, which is now under way.

Encouraging the use of smart ticketing

7.14 As set out in paragraph 6.80, we consider that smart ticketing has the potential to strengthen the incentives of operators to compete by allowing revenue from interavailable ticket sales to be apportioned to operators based on the actual journeys taken. This would, in turn, encourage operators to compete to attract these customers, and would provide incentives to raise quality and to meet customer demands.⁴⁸⁶

7.15 Again, we note that some developments in this area are already under way. As of June 2015, 14 operators already offered smart cards to passengers.⁴⁸⁷ Moreover, the provisional findings of the ORR's retail market review included short-term recommendations to continue promoting and developing innovative ticketing solutions such as smart card and mobile ticketing.

Recommended options for reform

7.16 We set out our preferred options for reform in paragraphs 6.168 to 6.172. In this section we consider the steps required to implement these options.

7.17 We note that Option 1 and Option 4 share some similarities, with their benefits primarily coming from OAO-type operators, and some similar implementation steps such as establishing mechanisms for allocating paths to operators.

7.18 We also consider that the options we have set out are not exhaustive, and that industry, policymakers and regulators are likely to develop further

⁴⁸⁶ We note that improvements in this regard would be beneficial under the existing system where there are overlaps between franchises, and between franchised and open access services.

⁴⁸⁷ TOCs innovative ticket formats comprise smartcards (eg the C2C smartcard, the TSGN 'key'), as well as contactless payment cards, mobile phone ticketing and e-tickets. See Tables 3 and 4 in ORR's [Retail market review, emerging findings](#).

proposals for implementing increased competition between operators on the network, taking the spirit of these options forward and adapting to changes in the management of the network in the future.

- 7.19 Taking these considerations into account, we recommend that the foundations for introducing greater on-rail competition are introduced through our general recommendations.
- 7.20 We consider that the first opportunity for implementation of significantly greater on-rail competition would come on the East Coast main line franchise in 2023.⁴⁸⁸ However, there will be future opportunities to expand on-rail competition on these routes, with the subsequent West Coast main line franchise expected to be awarded in 2025 and the subsequent Great Western main line franchise expected to be awarded in 2026.
- 7.21 We note that the reformed structure of track access charges will come into effect in 2019. Moreover, given the links to the charging regime, the PSO levy would ideally be in place by the time that the new structure of track access charges is implemented in March 2019. It may therefore be possible to address some of the funding issues in open access applications from 2019 onwards. However, we note that capacity constraints might limit the scale of open access prior to 2023 (at which point capacity could be allocated to OAOs as part of the next East Coast franchise).

Recommended option: Option 1, a significantly greater role for open access on intercity routes

- 7.22 We consider that Option 1 is the lead option for introducing greater on-rail competition on key intercity routes for the benefit of passengers and wider society. This option could be piloted in one franchise area before being extended to other areas.
- 7.23 The first intercity franchise for which an Invitation to Tender will be issued following the implementation of the new structure of track access charges – and which would allow time for the other necessary implementation steps – is the next East Coast main line franchise, which will commence in 2023.

⁴⁸⁸ The Invitation to Tender for the West Coast main line franchise will be issued in November 2016, which would be too soon to put in place the necessary steps for greater on-rail competition. However, the Invitation to Tender for the Great Western franchise will be issued in January 2018 and may create an opportunity for policymakers to increase on-rail competition by splitting the franchise. As noted in Chapter 6, the DfT is already considering reducing the size of certain franchises. We note, however, that implementing Option 1 would not be feasible in the 2018 award of the Great Western franchise as the steps required, including the new structure of charges, will not be in place until 2019.

- 7.24 It would also form the first step in any future transition into the licensing model proposed under Option 4.
- 7.25 In order to implement Option 1, a number of changes are required which we consider in turn below:
- Reform of the structure of track access charges to create a level playing field between OAOs and franchised TOCs.
 - Designing a PSO levy (or other appropriate funding mechanism) and implementing the required legislation.
 - Providing capacity for OAOs on the relevant routes.
 - Establishing a system for allocating paths to OAOs.
 - Legislation to allow path trading (desirable but not strictly necessary).

Reform of the structure of track access charges

- 7.26 The first stage of this process is already under way. ORR's review of the structure of track access charges has identified a potential inability to support effective competition between different types of passenger train operator as a gap in the current system. ORR is therefore consulting on proposals for OAOs to make a greater contribution to network costs, particularly where capacity is scarce and most valuable. ORR's consultation notes that such changes might allow for a better allocation of capacity between OAOs and franchised TOCs, which may lead funders to be relatively neutral between them in terms of the revenue impacts on the taxpayer.⁴⁸⁹
- 7.27 As part of the review, ORR is considering whether OAOs should pay cost-reflective charges, thus covering some of the fixed costs of the infrastructure they use. In order not to impose an excessive burden on OAOs and to take into account the existing market differences and long-term business decision taken by OAOs which are already in the market. ORR is also considering possible adjustments and transitional arrangements.
- 7.28 Moreover, in its review of charges consultation document, ORR notes that the government is considering allowing some exposure of franchised operators to changes in track access charges within franchise periods.

⁴⁸⁹ ORR (10 December 2015), [Network Charges: A consultation on how charges can improve efficiency](#).

Designing and legislating for a PSO levy or other appropriate funding mechanism

- 7.29 We envisage a PSO levy being introduced to allow OAOs to contribute to the costs of unprofitable but socially desirable services, both on the routes on which they operate and in other areas. While we consider a PSO levy as the lead option for addressing the funding issue, we recognise that other appropriate funding mechanisms could be used as well, for example an auction of paths or slots for open access.⁴⁹⁰
- 7.30 Primary legislation is likely to be required to implement a PSO levy to mitigate the impact of greater on-rail competition on government funds, as the levy would be government imposed and distinct from the track access charges set by ORR.
- 7.31 EU legislation provides for member states to employ a levy to compensate for PSOs, but its imposition is discretionary, and the government has not transposed the relevant legislation into UK law to date.⁴⁹¹ Transposing the relevant EU legislation may be an alternative to making primary legislation in the UK. However, further work is needed to establish whether the levy under EU legislation would raise sufficient funds to compensate for the loss of government funding as it only permits the recovery of the cost of operating PSOs. The levy would need to be designed carefully to ensure that it fits with EU legislation regardless of whether it is imposed by primary legislation or the transposition of EU legislation.
- 7.32 It is important that the design and implementation of the levy is coordinated with ORR's proposals for the structure of track access charges.⁴⁹² Therefore, while primary legislation would fall to the DfT, we envisage that ORR and the DfT would work together closely in the design of the levy.
- 7.33 There are a number of aspects of a levy to consider, in particular:
- how the levy would be charged, for example on a per-passenger mile, per-train, or per-carriage basis;

⁴⁹⁰ Virgin/Stagecoach noted in their consultation response that paths could be auctioned for a one-off lump sum payment for ten years of access every ten years, accompanied by a guarantee that no further open access would be permitted during the franchise term. Over time, franchised operations could be reduced in order to move towards Option 4.

⁴⁹¹ Article 12 of Directive 2012/34/EU allows the authority responsible for passenger rail transport in an EU member state to impose a levy on rail operators providing passenger services to contribute to the financing of PSOs laid down in PSCs that have been awarded according to European law.

⁴⁹² In this regard, we note that ORR's December 2015 consultation on the structure of track access charges refers to the possibility of a PSO levy to address the funding of loss-making services.

- whether and how the levy would change over time, for example whether it would increase over time as OAOs establish their services;
- the interaction of the levy with Article 12 of the Recast Directive,⁴⁹³ including how to ensure the levy would be designed precisely enough to ensure it would not overcompensate for the cost of PSOs (which would not be compatible with Article 12 of the Recast Directive); and
- other more detailed considerations regarding the practical arrangements for charging the levy.

- 7.34 In terms of timing, the design and introduction of legislation for a PSO levy or other appropriate funding mechanism would need to be undertaken in advance of the implementation of Option 1 on an intercity franchised route in order to give bidders a clear understanding of the new framework. Any levy would need to be in place as soon as possible so as to inform open access entry decisions.
- 7.35 Given the links to the charging regime, ideally the levy should be in place by the time the new structure of charges is implemented in March 2019. In order for a PSO levy or other appropriate funding mechanism to be ready in time for 2019, development and drafting of legislation would need to begin a number of years in advance, potentially as part of a future Markets or Transport Bill.
- 7.36 We recognise that designing a PSO levy or other appropriate funding mechanism that meets the objectives of funding unprofitable but socially desirable services while not deterring entry by OAOs requires further work. However, we consider that this is both technically and legally feasible, as discussed in Chapter 6.
- 7.37 While OAOs responding to our consultation stated that they would be willing to pay a levy in return for greater access to the network, care would be needed to ensure that the levy did not act as an unjustifiable barrier to entry. It may also be appropriate to consider whether any levy should apply to current OAOs with small-scale operations focused on previously unserved destinations.
- 7.38 The DfT and ORR are best placed to take forward the design of the PSO levy, with the CMA providing input, as appropriate. We recognise that there are considerable complexities and challenges in relation to this issue, which will require further work to fully consider.

⁴⁹³ Directive 2012/34/EU.

Providing capacity for OAOs on the network

- 7.39 In order to facilitate a significantly expanded role for open access, Option 1 requires paths to be available on the relevant routes for OAOs. As set out in Chapter 5, we understand that while electrification programmes and other short-term enhancements will deliver some additional capacity, this is unlikely to be sufficient alone to facilitate full-scale open access operations in addition to current franchised services. In the longer term, ERTMS may deliver additional capacity, although the magnitude of this is still not clear.⁴⁹⁴
- 7.40 Towards the end of current intercity franchises we envisage franchise design being undertaken with the intention of leaving significant commercial flows available to OAOs. We anticipate that for the East Coast main line franchise beginning in 2023, this would mean the DfT taking this into account in advance of the intended issue of the franchise expression of interest documents for the East Coast in August 2021.⁴⁹⁵ This is likely to mean preparations beginning by early 2020 at the latest.
- 7.41 In terms of implementation, this would require the DfT to design a smaller franchise on the East Coast main line. This is likely to involve:
- First, the identification of elements of service provision which are unprofitable (or less commercial) but which are socially valuable.
 - Second, franchise designers at the DfT would need to design a franchise such that all, or as many as possible, of these aspects were included within the franchise. A number of the more profitable service aspects would also be bundled into the franchise in order to ensure competition with the OAO on commercial flows.
 - Third, consideration would need to be given to the services which OAOs would be likely to provide based upon this proposed franchise pattern.
- 7.42 It would also be necessary to ensure that the OAO's access rights were coordinated with the timing of the franchise bidding process in order to provide certainty for bidders regarding the future level of on-rail competition.⁴⁹⁶ Consideration should also be given to whether the OAO's access rights would expire at the end of the franchise (with another competition for open access rights potentially taking place at this point).

⁴⁹⁴ As noted in Chapter 5 and 6, HS2 may deliver greater capacity on the West Coast main line after 2026.

⁴⁹⁵ DfT, [Rail Franchise Schedule](#).

⁴⁹⁶ Measures would need to be put in place to ensure that the franchise operator and OAO did not have commercial links, while also ensuring that the franchise bidding market is not undermined.

- 7.43 We also note that it is important to retain flexibility to make changes to access rights during the course of the franchise in order to respond to changing market dynamics and changes in competitive dynamics. In order to give Network Rail the possibility of changing timetables over time, access rights could become more flexible during the course of the contract.

Establishing a system for allocating paths to OAOs

- 7.44 It would be necessary to establish a mechanism for allocating the paths reserved for open access. A system for allocating paths would be likely to be best carried out by ORR or a more developed system operator function undertaken by Network Rail. The design of this system could be undertaken by ORR or the DfT.
- 7.45 There are a number of possibilities as to how paths could be allocated. For example, there could be an economic assessment of OAOs' proposals (for example, by ORR), within which the PSO levy that an OAO would be willing to pay could be one assessment criteria. Alternatively, a bidding or auction process could be used (discussed further in the context of Option 4 in paragraphs 6.59 to 6.61). This could create a source of revenue for funding unprofitable but socially desirable services elsewhere on the network.
- 7.46 As with the design and implementation of the PSO levy or other appropriate funding mechanism, it would be important for this system to be in place before the Invitation to Tender is issued for the franchise on which it would be implemented. For new OAO applications taking advantage of new capacity prior to the first significant intercity franchise award in 2023, this would mean being in place by 2020.
- 7.47 These approaches would involve substantial policy design and consultative work with industry. The scale of this task is likely to be determined by the number of paths which would be transferred to OAOs and the number of operators which expressed interest.

Legislation to allow path trading

- 7.48 Although not a prerequisite for implementing Option 1, the ability of operators to trade paths could enhance the scope of on-rail competition by allowing operators to trade paths as competition between them develops. In practice there is likely to be a need for a system of supervision of path trading to ensure that operators are not able to achieve control of groups of routes which give them market power and raise prices.

- 7.49 We note that trading of infrastructure is prohibited by Article 38 of Directive 2012/34/EU, which specifically prohibits the trading of infrastructure between applicants for that capacity. Further legal analysis of whether this would prevent a system of trading paths or slots such as we envisage here would need to be undertaken. If so, exemptions to this Directive may need to be sought.
- 7.50 Network Rail's system operator function is likely to be the best placed organisation to run a supervised system for path trading. Design of this system could be undertaken by ORR or the DfT. However, this proposal would be likely to need primary legislation and so design may need to be undertaken by the DfT.
- 7.51 This proposal is likely to be most significant for full-scale implementation of Option 1, which we consider would take place at the earliest at 2023. In order for franchised operators to fully understand the context in which they were bidding, this feature, if it were to be implemented as part of Option 1, would ideally be in place by 2020.
- 7.52 We consider that this aspect of implementation would, if pursued as part of Option 1, involve substantial policy design and consultative work with industry. The scale of this task is likely to be determined by the number of paths which would be transferred to OAOs and the number of operators which expressed interest.⁴⁹⁷
- 7.53 As noted in paragraph 7.43, flexible access rights would, in any event, allow adjustments to the timetables of the franchised TOC and OAO to be made over time.

A vision for the longer term: Option 4, a licensing system for operators on main intercity routes

- 7.54 Option 1 could be extended towards the model of competition in Option 4 in the future. For example, instead of a TOC operating 70% of train paths for intercity services and an OAO the remaining 30%, three OAOs of a similar size could be licensed to operate all the paths.
- 7.55 This is an ambitious proposal and would require an overhaul of the current system.

⁴⁹⁷ While it would be significant, based on our experience of reforms in other markets, for example the trading of airport slots, it is likely to be achievable.

- The design of an auction or other process for allocating paths, including the design of licences themselves and a decision between administratively designed licences or a trading-based system of allocation, or a similar variant.
- The adaptation of national legislation regarding the licence system and fine-tuning with the EU framework.

Design of an auction for allocating paths

7.56 The implementation of this option will depend on the process used to allocate paths to operators. We envisage that this would be likely to be based primarily around auctions for a form of licence. Effective auction design would therefore be central to successful implementation.

7.57 In Chapter 6, we set out two sub-options within Option 4 regarding the form that licences might take:

- The first is for ‘administratively designed licences’, where a planning body would design licences so that they produced an acceptable level of service and a coherently connected timetable in a financially viable way.
- A second approach would be to have a licences with an associated number of social obligations where operators would have to provide a certain ‘number’ of unprofitable but socially valuable services which was tied, for example proportionally, to the profitable services they would run. These services could be chosen from a ‘list’ drawn up by a central planning body, and ideally a trading system or platform would allow these obligations to be traded between operators.

7.58 In Chapter 6, we considered that a system of auctioning bundles of paths or ‘mini franchises’ may be the most practical and effective way forward. This mechanism would be intended to be used for both allocating capacity and ensuring provision of unprofitable but socially desirable services, either through bundling with paths, or through raising revenue to help pay for their provision, or through a combination of the two.

7.59 Given that we recommend that Option 4 is only implemented after the introduction of Option 1, the policy work regarding design of an auction and associated choices would be likely to take place in the early 2020s. The design could be informed by the experience of allocating paths to OAOs under Option 1.

7.60 Designing an auction to allocate all paths on a route would present a number of challenges. However, we consider that an iterative process increasing in

ambition and moving in this direction over time, as we recommend in this chapter, would provide a feasible method for industry, policymakers and regulators to undertake this task.

Adaptation of national legislation regarding the licence system, and compatibility with the EU framework.

- 7.61 The licensing system for multiple operators we propose under Option 4 is an ambitious, fully competitive solution, which would be much more advanced than other systems currently operating in Europe.
- 7.62 In order to implement such a system a number of amendments to domestic legislation, in the form of the Railways Act 1993, are likely to be necessary. This may include the licensing of operators and with the role of a system operator as possibly distinct from the current network operator role.⁴⁹⁸
- 7.63 Although the principles underlying this option, and our other recommendations, are broadly in line with current EU legislation and the expected direction of travel, engagement with EU institutions would be necessary in order to establish the compatibility of the licensing system with EU law. In particular, it would be necessary to ensure compliance of Option 4 with the Recast Directive⁴⁹⁹ and any forthcoming EU legislation.
- 7.64 The DfT would be well placed to pursue such steps if it were minded to do so, given the requirement for primary legislation and policy engagement with EU institutions. In practice, this would be likely to be undertaken in consultation and conjunction with ORR and the industry.
- 7.65 The work to design the legislative process and interaction with EU institutions would need to begin some years in advance of implementation, for example in the early 2020s.

Our parallel recommendation: introducing Option 2 where it has the potential to deliver benefits on the network

- 7.66 In parallel to our main recommendations, we also recommend considering the introduction of Option 2 on areas of the network where it has potential to deliver greater benefits. This would allow policymakers a choice of tools to achieve greater on-rail competition in the future. Option 2 would be implemented under the existing regulatory framework.

⁴⁹⁸ See section 6.5 of the impact assessment.

⁴⁹⁹ Directive 2012/34/EU.

- 7.67 The franchises on which the option was implemented would need to be redesigned in order to ensure that there is appropriate competition between the two franchised TOCs on the selected routes, while retaining operational integrity.
- 7.68 Key steps for using Option 2 where it has the potential deliver benefits are as follows:
- Identifying the routes where it would deliver the greatest potential benefits.
 - Redesigning franchises to increase competition between franchised TOCs.
 - Reforming the structure of access charges so that charges are more cost-reflective.

Identifying the routes where these options would deliver the greatest potential benefits

- 7.69 This process would be undertaken by franchising and other regulatory bodies in conjunction with the industry and other stakeholders. The exercise would need to be completed in advance of the issuance of the expression of interest documents for the franchise(s) on which it were implemented (2021 in the case of the East Coast main line).

Redesigning franchises to facilitate greater on-rail competition

- 7.70 Services on the relevant routes would need to be divided between two franchises to ensure the provision of desired services and to achieve the desired degree of competition between the operators. This would require the franchise-letting body, the DfT, to redesign franchises in advance of tendering them.
- 7.71 This exercise would be similar to that required in redrawing franchise maps to allow Option 1 to be implemented. However, the process may be simpler as the dynamic of competition between a franchised TOC and an OAO would not need to be considered to the same extent and it would not be necessary to identify each PSO service.
- 7.72 Consideration would also need to be given to accommodating current OAOs and in dealing with future open access applications.

Reforming the structure of access charges so that charges are more cost-reflective

- 7.73 Option 2 could have a significant impact on government funds if extensive competition were introduced and no other changes to the industry framework were made. However, this impact could be mitigated by reducing the extent of on-rail competition (eg splitting the franchise 85:15). Moreover, reforming the structure of access charges to make them more cost-reflective, and therefore higher on key intercity routes where capacity is limited, could create an additional source of revenue for the government.

Conclusions on our recommendations and next steps

- 7.74 Overall, we conclude that implementation of our options may be expected to bring benefits to passengers and the wider economy. We conclude that these options are feasible and we have identified a number of steps by which a process towards establishing greater on-rail competition can be undertaken.
- 7.75 Our general recommendations seek to lay the foundations for greater on-rail competition. We note that many of these initial steps, for example access charges reform, smart ticketing and reducing franchise specification, are already underway.
- 7.76 We further recommend that Option 1 – a greater role for OAOs – is implemented in the medium term and that this could in turn lead to movement towards a system along the lines of Option 4, based upon multiple competing, licensed operators. Meanwhile we recommend that Option 2 be considered in parallel as a potential means to introduce competition between franchised TOCs on parts of the network where this may be most beneficial and as an alternative tool for policymakers.

Next steps

- 7.77 The publication of this policy document does not mark the end of our engagement in this area. The recommendations we have set out are for the long term and we will continue to engage with policymakers and regulators as appropriate to discuss how the benefits of on-rail competition can be harnessed on the network in the future.
- 7.78 We also encourage industry participants and stakeholders to continue to consider the benefits that greater on-rail competition could deliver, and to consider further ways in which opportunities to expand on-rail competition for the benefit of passengers and wider UK productivity may be pursued.