

2 May 2016, 12<sup>th</sup> Rail Forum – Florence School of Regulation

# **The role of competition in passenger rail services: performance and incentives**

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- Introduction: rail performance and competition
- The UK rail competition landscape
- Possibilities for greater 'on-rail' competition
  
- Back-up information

- Performance can be defined in a number of ways, depending on:
  - Type of stakeholder/interest
  - Objective
- Competition advocates usually focus on
  - consumer welfare
  - allocative and dynamic efficiency
  - information / incentives
- Those aspects could be more complex to define and pursue in the rail industry than in other markets because its economic, operational and financial aspects, eg:
  - Need of extensive public funds (to finance loss-making services / investment) → distributional and accountability aspects are relevant
  - Consumer benefits depends to a great extent also on operational / systemic issues → coordination of all actors is fundamental

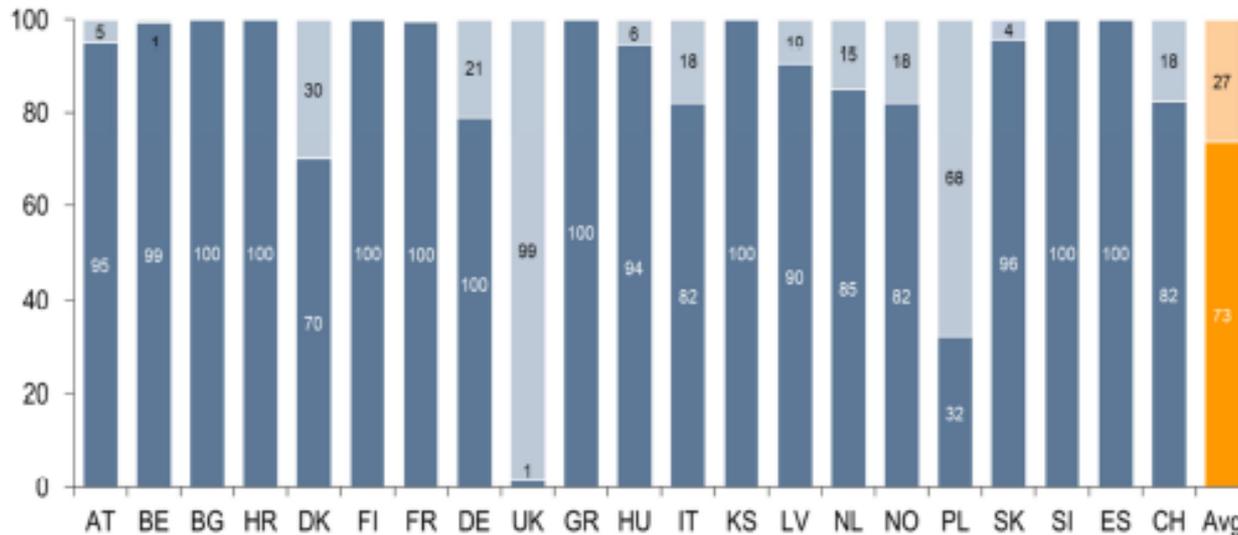
- Need to improve the performance of the overall rail system or some aspects
- The usual answer is to develop indicators and build robust benchmark to inform policy decision-makers / regulators → ie developing a yardstick competition
- What about actual competition ?
  - Competition ‘for’ the market
  - Competition in the market
- What is its role to enhance the industry performance?
- What are the trade-offs? How can they be addressed?

# The UK competition landscape /1

- UK seems to be an outlier in terms of competition

■ Incumbent    ■ Other companies

## Market shares in passenger trains - 2014 passenger train km



Source: IRG-Rail (16) 1 – Fourth market monitoring report

- Indicators have to be interpreted

- The main features of UK competition landscape
  - Complete vertical separation between network operation and downstream services
  - Competition ‘for’ the market through the competitive award of franchises
- The ‘franchising system’ is delivering benefits
  - Passenger numbers are growing and satisfaction has increased
  - Relatively low impact on public funds and taxpayers’ money
  - Enhancements, such as smart ticketing, are coming on-stream
  - Recent reforms to the system are granting franchisees greater scope to respond to passenger demand and to innovate

- However:

- Competitive pressure within a franchise period is minimal
- Service and service obligations are still very specified in the franchise contracts, which (i) limits the flexibility and scope for innovation and differentiation; (ii) increases the risk of allocative inefficiencies
- Franchise contracts have an extensive scope, bundling profitable and unprofitable services and creating a system of cross-subsidies
- Fares are relatively high, mainly due to cross subsidies system based on extraction of quasi-rents on profitable services

- Competition in the market → there is a very small degree of on-rail competition
  - There are a number of legal barriers to greater on-rail competition in the current framework, ie ORR access criteria (NPA test)
  - Open access operators offer a range of new connections but account for just 1% of GB passenger miles
  - Overlapping franchises have reduced over time but deliver some passenger benefits – particularly through a wider range of fare options

- To assess whether it is (a) **desirable** and (b) **feasible** to build on the success of franchising by introducing a **greater degree of on-rail competition in GB's passenger rail market**
- In doing so, our objectives have been:
  - To secure **passenger benefits** in terms of downward pressure on fares, enhanced service quality and innovation
  - To unlock **efficiency gains** at the train operator level and the 'upstream' network management level

- **We have been mindful of:**
  - Avoiding any disruption to franchise awards and the need to protect investment and taxpayer funds
  - Ensuring no adverse operational effects (i.e. on punctuality/reliability and interconnectivity)
  
- **Having:**
  - Selective approach taking into consideration the status-quo by assessing what incremental benefits on-rail competition could bring to the franchise system in certain areas and how to minimize/compensate potential risks and costs
  - Strong cooperation with ORR:
    - CMA to feed into existing ORR review activity
    - Sharing objectives (promoting Competition is one of ORR's statutory duties)
    - Concurrency regime

# The benefits of greater on-rail competition

- **Passenger benefits:**

- downward pressure on fares and
- upward pressure on service standards and innovation



There are evidence from

- existing on-rail competition in Great Britain
- On-rail competition examples in continental Europe (SE, IT, CZ, AT)
- Examples from other transport sectors (e.g. GB rail freight, EU airline deregulation)

- **Efficiency at train operator and network management levels**

- At 'retail' level: OAOs are able to achieve lower unit cost (e.g. through operational flexibility)
- At the upstream level: (i) pressure on Network Rail to be more efficient (eg, capacity identification; correct incentive for performance/capacity max trade-off)



Examples from existing on-rail competition and other sectors following downstream liberalisation (e.g. airlines/airports and water retail/wholesale)



Econometric assessment of potential efficiency gains

# Feasibility: potential barriers to consider

- **Franchise premium payments and funding the network**
    - Funding of socially valuable but unprofitable services (i.e. possible ‘cream-skimming’)
    - Funding network infrastructure enhancements and investment (i.e. possible ‘free-riding’)
  - **Operational issues**
    - Network capacity constraints / efficient use of capacity
    - Interconnectivity / slot allocation, timetabling
    - Punctuality/Recovery from disruptions
    - Retail ticketing complexity
- ⇒ **Seek to address funding and operational issues**
- No insurmountable barriers identified
  - Scope to reduce some of the risks that exist today
  - Consideration given in design of options

- We made four general recommendations to facilitate greater on-rail competition:
  - Continuing to reduce the level of specification of franchise contracts on routes where there is on-rail competition
  - Reforming the structure of track access charges to support more effective competition between different types of passenger train operator
  - Improving the ‘system operator’ function to ensure that track capacity is effectively utilised and allocated between train operators
  - Encouraging the use of smart ticketing so that real passenger journeys are tracked within the system
- Steps are already being taken to address each of these recommendations

# Definition four options for greater on-rail competition

- Focus on the three main intercity routes
- For franchises 2023 onwards
  
- **Option 1** – giving open access operators an increased role alongside franchisees. Addressing funding issues through fully cost-reflective access charges and a ‘PSO levy’
- **Option 2** – two successful bidders for a franchise, with services being divided symmetrically or asymmetrically between franchisees
- **Option 3** – redesigning the franchise map over time to generate more overlapping franchises
- **Option 4** – replacing formal franchises with multiple licensed operators

# Assessment criteria & summary

We assessed the options against criteria that our research showed were relevant and were important to stakeholders

Our assessment is informed by our evidence base and stakeholder views

Options 4 and 1 assessed most highly

	1 Greater Open Access	2 Split franchises	3 Overlapping franchises	4 Licence system	0 Base case
Passenger Benefits	✓✓✓	✓✓	✓	✓✓✓✓	-
Funding and risk	X	X	-	X	-
Considerations within the network including operational issues	✓	-	-	✓	-
Wider social benefits	✓✓	✓✓	✓	✓✓✓	-
Implementation ease	XX	X	X	XXX	-

“-” Indicates no or limited change from base case

## Options Assessment Framework

### 1. Passenger benefits

- Prices and fares, quality, cost efficiency, innovation.

### 2. Funding and risk

- Impact on gov. funds,
- Risk for gov. and operators.

### 3. Network considerations, including operational issues

- Coordination issues, capacity utilisation, transaction costs.

### 4. Wider social benefits

- Externalities: regional economic growth and environmental benefits.

### 5. Implementation challenge

- Legal and operational feasibility
- Scale of policy and regulatory changes involved.

- **Option 1** is our lead option for introducing greater on-rail competition on key intercity routes
  - Could be piloted in one franchise area before being extended to other areas
  - Future scope to extend to Option 4 model – but given questions associated with its design, we recommend that more detailed consideration is given once the steps required for Option 1 are in place
- **Next steps:**
  - Budget 2016 and DfT Ministerial statement committed to further work with ORR and CMA on recommendations
  - ORR and DfT to lead on more detailed consideration of the PSO levy
  - Steering group to take forward other recommendations particularly around implementation
  - The ORR are taking into consideration the impacts of greater competition in the market on the structure of charges

# Thanks!

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# Back-up:

## Assessment of options /1

- **Option 1**

- Likely to generate significant passenger, efficiency and wider economic benefits
- Addresses the funding challenge from open access under the current system
- We did not find any legal or operational barriers
- But design of PSO levy would require further work

- **Option 2**

- Also likely to generate significant benefits – although scope of the benefits may be reduced as both operators subject to franchise specification
- Implementable under the current legal framework
- Given the diversity of the network in Great Britain, Option 2 may have potential to deliver benefits on parts of the network where Option 1 is less suitable

# Back-up:

## Assessment of options /2

- **Option 3**

- Less significant passenger and efficiency benefits compared to Options 1 and 2 given more limited degree of on-rail competition
- Merger control issues?

- **Option 4**

- Potential to generate the strongest on-rail competition, with three or more fully commercial operators competing on key flows, subject to licence conditions
- 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

# Back-up: Impact Assessment: Legal and operational feasibility

② & ③ require no significant changes

Can be achieved within the current framework through franchise specification

① requires a legislative change  
④ requires radical changes to the current system

① **PSO levy**  
EU Rail directive (2012/34) allows the imposition of PSO levy, but:  
1. Currently not transposed in UK legislation  
2. Can cover PSOs' costs and no more  
3. Levy needs to be accurately designed

**Licensing** ④  
1. Design challenge  
2. Need to ensure consistency with EU law  
**Auctioning**  
1. Design challenge  
2. Not clear how subsidies would be managed  
**System operator** as separate from network operator may require RA93 amendments

Topic	Option 1	Assessment
Timescales and Complexity of Implementation	Implementation and Governance	Light Green
	Legal implications and requirements for legislation	Yellow
Network Capacity and Operational performance	Network Capacity	Light Green
	Operational control and performance	Yellow
	Rolling stock	Dark Green
	Depots and stabling	Light Green
Management of a multi-operator railway	Managing timetable change	Yellow
	Managing network change and strategic projects	Yellow
	Station management	Light Green

Topic	Option 2	Assessment
Timescales and Complexity of Implementation	Implementation and Governance	Light Green
	Legal implications and requirements for legislation	Dark Green
Network Capacity and Operational performance	Network Capacity	Dark Green
	Operational control and performance	Light Green
	Rolling stock	Dark Green
	Depots and stabling	Light Green
Management of a multi-operator railway	Managing timetable change	Dark Green
	Managing network change and strategic projects	Dark Green
	Station management	Light Green

Topic	Option 3	Assessment
Timescales and Complexity of Implementation	Implementation and Governance	Light Green
	Legal implications and requirements for legislation	Dark Green
Network Capacity and Operational performance	Network Capacity	Dark Green
	Operational control and performance	Light Green
	Rolling stock	Dark Green
	Depots and stabling	Light Green
Management of a multi-operator railway	Managing timetable change	Dark Green
	Managing network change and strategic projects	Dark Green
	Station management	Dark Green

Topic	Option 4	Assessment
Timescales and Complexity of Implementation	Implementation and Governance	Yellow
	Legal implications and requirements for legislation	Yellow
Network Capacity and Operational performance	Network Capacity	Yellow
	Operational control and performance	Yellow
	Rolling stock	Light Green
	Depots and stabling	Light Green
Management of a multi-operator railway	Managing timetable change	Yellow
	Managing network change and strategic projects	Yellow
	Station management	Light Green

# Back-up: Impact Assessment: quantitative results

- Impact assessment of the first 3 options.
- Applied to intercity routes (Great Western, ECML, WCML)
- Significant positive net present values
  - on all 3 options on all routes modelled
  - on central and high estimates

**Option 1 Quantitative Analysis: Net Present Value (£m 2010 prices and values)**

Scenario	Low	Central	High
East Coast Main Line	-£17m	£489m	£975m
West Coast Main Line	£66m	£915m	£1,720m
Great Western Main Line	-£250m	£262m	£758m

**Option 2 Quantitative Analysis: Net Present Value (£m 2010 prices and values)**

Scenario	Low	Central	High
East Coast Main Line (Asymmetric competition)	-£157m	£236m	£622m
East Coast Main Line (Symmetric competition)	-£237m	£95m	£420m
West Coast Main Line (Asymmetric competition)	-£195m	£151m	£492m
West Coast Main Line (Symmetric competition)	£4m	£166m	£505m

**Option 3 Quantitative Analysis: Net Present Value (£m 2010 prices and values)**

Scenario	Low	Central	High
Great Western Main Line	-£118m	£56m	£228m

# Back-up: Regulatory targets /1

- Network Rail has targets for each regulatory period (currently 2014/19 - CP5)

### Finance and efficiency

**Creating a cost-effective railway**

Network Rail achieved efficiencies of 15.5% in running the railway from 2009 to 2014. ORR has set it a new stretching challenge to deliver a further 20% in efficiencies by 2019.

Network Rail will receive more than **£21bn** over the next five years to fund the day-to-day running of the rail network.

ORR will require the company to bring down the cost of running the network by around **22%**.



### Safety

**Plans to improve safety at level crossings**

**£109m** to close around 500 level crossings and improve safety at hundreds more.

**£250m** to help improve safety of track workers, to be invested in new equipment and safer working practices.

ORR has also approved an extra **£571m** to upgrade structures such as bridges and tunnels.

Network Rail's safety role is enshrined in law – as it works towards ensuring zero passenger or workforce fatalities



Network rail will spend £38bn to deliver plans for safety, performance and value on GB railways between 2014 and 2019

### Network enhancements

**Meeting milestones for major improvement works**

**Stations** – Improving the facilities at stations, such as access arrangement, toilets, ambiance.

**Journey Time Improvements** – Improvements enabling decreases in journey times.

**Capacity** – Schemes allowing more or longer trains to run (such as new or longer platforms).

**Electrification** – Developing the network to enable electric trains to run.

**Power Supply** – To meet the power supply demands of increased capacity/services and on the network.

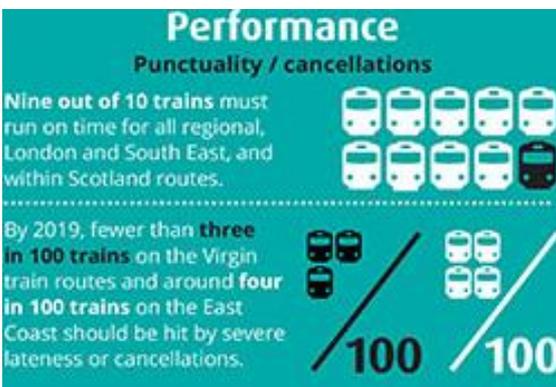


### Performance

**Punctuality / cancellations**

Nine out of 10 trains must run on time for all regional, London and South East, and within Scotland routes.

By 2019, fewer than **three in 100** trains on the Virgin train routes and around **four in 100** trains on the East Coast should be hit by severe lateness or cancellations.



### Network (assets) management

**We've asked Network Rail to:**

- Make the network more resilient to extreme weather – including hot temperatures, floods, ice and snow.
- Improve day-to-day running of the railways – moving from a 'find and fix' to a 'predict and prevent' way of working.
- Deliver planned volumes of network renewals, including track and other equipment such as signalling.

**More specifically, we will be:**

- Looking even more closely at Network Rail's performance, particularly how they are managing, maintaining and renewing the network.
- Getting information from Network Rail to decide whether it is performing as well as it can.
- Intervening at an early stage, so that emerging problems don't affect passengers.



# Back-up:

## Regulatory targets /2

- ORR monitoring activity
- It publishes each six months Network Rail performance data review and analysis
- Network Rail Monitor: quarters 1-2 of Year 2 of CP5 (April - October 2015)

### Safety



Network Rail has made good progress in reducing safety risk at level crossings. However, in other areas such as track worker safety there is significant scope for improvement. Network Rail needs to maintain a focus on wider risks including those arising from the failure to deliver effective occupational health management on the ground.

### Performance and punctuality



Network Rail entered CP5 at a lower performance point than anticipated and it put in place a plan to return performance to targeted levels by 1 April 2016. Although it is largely delivering on the plan's milestones, these are not improving train performance as much as predicted.

### Train cancellations



East Coast Mainline performance has been strong – the three long distance operators on this route all exceeded their cancellation and severe lateness (CaSL) targets. However, performance for many operators on other routes is behind plan.

### Asset management



Network Rail has reported delivering less renewals work than it planned to do. We are reviewing the company's plans for the remainder of the control period to understand whether this under-delivery will be recovered and whether there is any impact on the safety and sustainability of the network.

### Enhancements



Network Rail is responsible for delivering over £12bn of infrastructure enhancement expenditure over the five years of CP5. Following a relatively successful CP4, the company's performance on delivery of its enhancement portfolio has worsened. At the end 2014-15 Network Rail had missed 30 out of its 84 planned milestones in its Enhancements Delivery Plan.

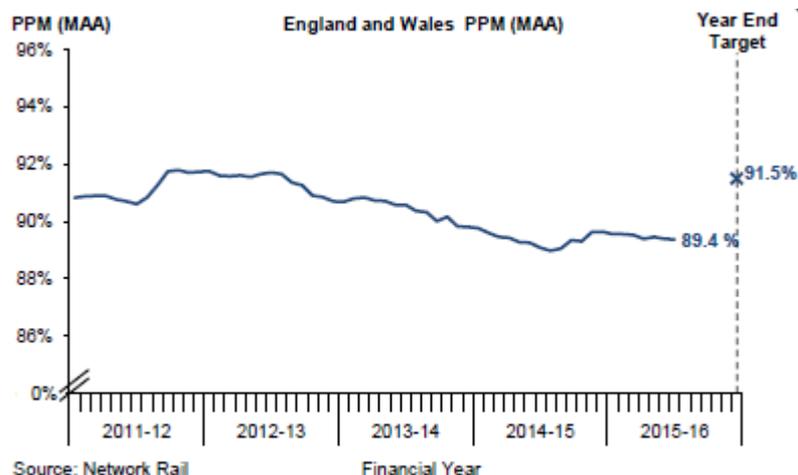
### Expenditure and finance



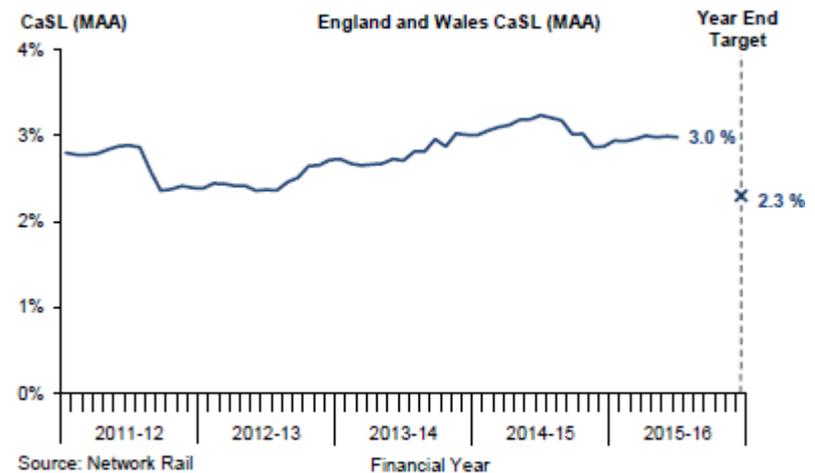
Network Rail overspent its budget by around £230m and ORR expects the company to underperform the regulatory financial performance measure by around £430m in 2014-15. Operating, maintenance and renewals (OMR) efficiency has reduced by 2.2% and the company is now forecasting a cumulative efficiency gain of around 16% by the end of CP5 compared to the 22% forecast alongside the CP5 Delivery Plan.

# Back-up: Train service performance and punctuality /1

- **Public Performance Measure (PPM)** is the percentage of train arrived 'on-time' = within five minutes (i.e. four minutes 59 seconds or less) of the planned destination arrival time for London and South East and regional operators; or ten minutes (i.e. nine minutes 59 seconds or less) for long distance operators. Non-franchised operators (First Hull, Grand Central and Heathrow Express) are recorded as on time if they arrive at their final destination within ten minutes of the planned timetable, except for Heathrow Express services which count as on time if they are within five minutes.
- **Cancellations and Significant Lateness (CaSL)** is the percentage of passenger trains cancelled or arriving at their final destination more than 30 minutes later than planned.

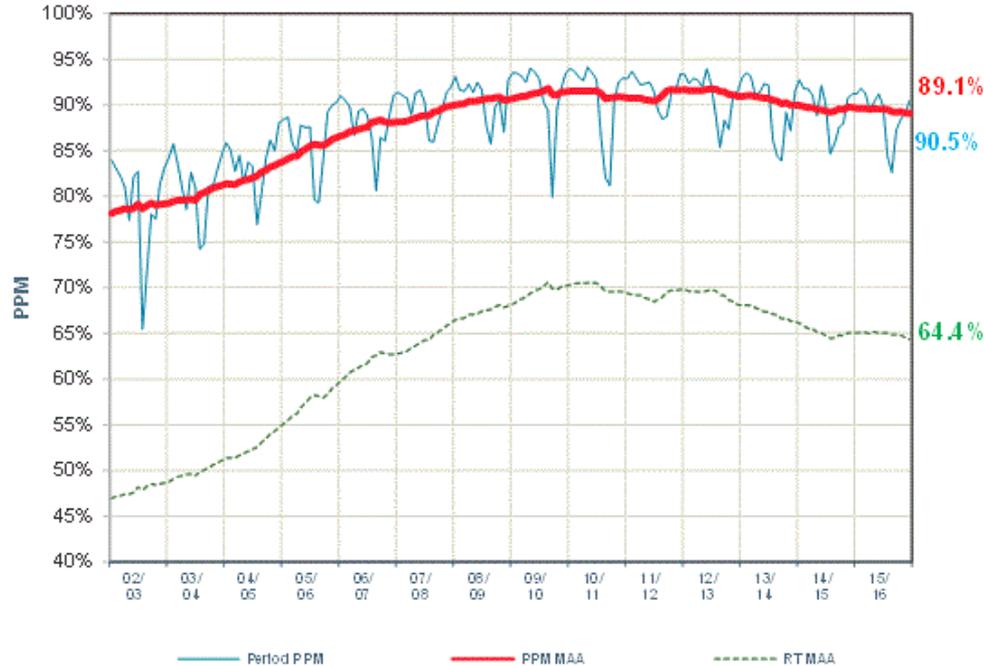


PPM is the proportion of trains arriving at their final destination on time. On time is within five minutes (or ten minutes for the long distance sector).



CaSL is the proportion of trains which fail to run at all or fail to call at all booked stops or arrive at their final destination 30 minutes or more later than planned.

# Back-up: Train service performance and punctuality /2



- **Freight Delivery Metric (FDM)** measures the percentage of freight trains arriving at their destination within 15 minutes of scheduled time. FDM covers delays for which Network Rail is responsible, i.e. not those caused by other train operators. FDM MAA at the end of period 7 stands at 94.3%, 1.8pp ahead of the annual target of 92.5%. The level of service delays to freight customers caused by the freight operators themselves has also declined during the first half of 2015-16.

\*\* **Moving annual average (MAA)** reflects the proportion of trains on time/cancelled significantly late in the last 4 quarters or 13 periods. For example, periodic PPM MAA data are calculated by taking the sum of the last 13 periods and dividing by the number of periods (13) → MAAs is used to smooth short term spikes in the data and highlight longer term trends and measure performance against the regulatory 25 targets (which are presented as MAAs)

# Back-up:

## Regulatory operational incentives

- **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).
- **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. It is paid by train companies to Network Rail, and grows exponentially in congested areas and therefore encourages Network Rail to make further capacity available
- **Volume incentive mechanism:** consists of symmetric payments made to/by Network Rail in the event that passenger train miles exceed/fall below a predetermined baseline. Volume incentive mechanism is designed to encourage Network Rail to make commercially oriented trade-offs when deciding whether to meet unexpected demand.