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Are Horizontal Mergers and Vertical Integration a Problem?

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ARE HORIZONTAL MERGERS AND VERTICAL INTEGRATION A PROBLEM?

Analysis of the rail freight market in Europe

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The views expressed in this paper are those of the authors and do not necessarily represent positions of Oxera, the OECD or the International Transport Forum.

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1. INTRODUCTION

This report examines market power in rail markets in Europe arising from horizontal and vertical mergers in the sector, and is intended to provide a high-level basis for discussion at the round table itself. It presents factual information on horizontal and vertical merger cases involving rail freight operators, highlighting the processes used by competition authorities to determine the circumstances in which such mergers should be approved. It also provides commentary on the economics of these markets and, hence, the likely prospects for their future shape.

The topic of the report is timely. The first set of results are available from a preparatory study for the European Commission on whether policy objectives with respect to moving freight onto rail can best be achieved by giving freight more priority on the rail network.¹ The ‘Problem Definition’ section of the paper highlights the finding that the ‘legislative initiatives put forward so far have not produced the expected benefits’ as a reason why rail freight’s market share declined up to 2005. The perceived limitations of the legislative framework have led the Commission to consider a ‘re-cast’ of the key access charging Directive 2001/14/EC in order to improve outcomes.

In addition, a number of recent mergers in the rail freight sector have proceeded following investigation by competition authorities. Mergers have included Deutsche Bahn (DB) buying both Transfesa and EWS at the larger end of the scale, and Freightliner buying freight terminals at the smaller end. The need to balance increased competition both now and in the future are crucially important in any discussions around such corporate activity.

The report considers several issues of importance to the assessment of transport mergers by the competition authorities. Section 2 discusses how rail freight fits into the supply chain, and considers how horizontal, vertical and other mergers might occur (and have occurred) in markets involving rail freight operators. Section 3 examines horizontal mergers in these markets, the issues arising and how they might be assessed. Similarly, section 4 considers vertical mergers in these markets and whether the typical outcome (that there are limited competition issues) is seen here. Section 5 looks at some other types of merger, while section 6 concludes with some thoughts on the future role of rail in the European logistics market, and questions for discussion at the round table.

Each section is illustrated with evidence from competition authorities’ decisions on horizontal and vertical mergers involving rail freight companies together with an assessment, from an economic standpoint, of how the issues raised are likely to be taken forward in the future.

2. OVERVIEW OF THE RAIL FREIGHT MARKET

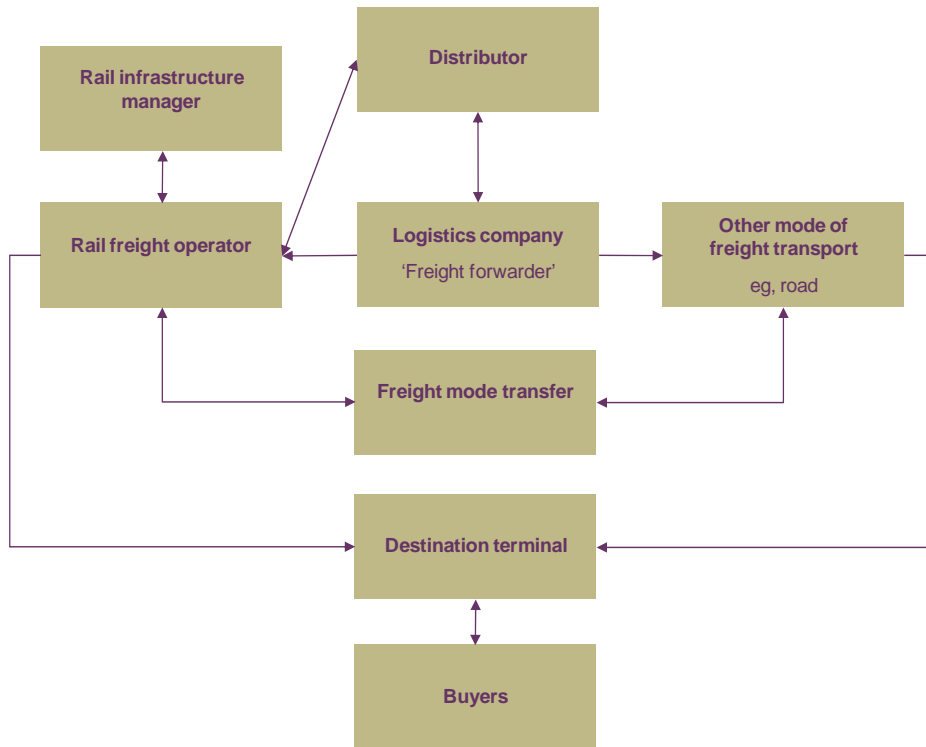
Rail freight operators provide services to logistics companies and producers of intermediate and final goods, typically transporting heavy goods over long distances between freight terminals. In a broad sense, rail freight is in the business of transporting goods and as such faces a degree of competitive pressure from all forms of freight transport.

Rail freight operators provide a number of broad types of service.²

- 1) *Single customer-dedicated*—a one-to-one relationship between the customer and service operator, providing a flexible service. Such service is usually reserved for full trainloads.
- 2) *Scheduled intermodal*—use of scheduled routes, timings and paths that generally serve the major intermodal container hubs.³ This service does not require any fixed quantity as freight operators consolidate trainloads.
- 3) *Scheduled less than trainload network*—available through a single freight operator, enabling rail to be used for volumes of less than a trainload to be transported to a large number of terminals.
- 4) *Scheduled less than wagonload*—usually a regular timetabled departure on dedicated routes where capacity is marketed and sold on the basis of a wagonload or less than a wagonload, often through third-party logistics companies.

Figure 2.1 below shows the value chain for the rail freight industry and how the industry fits into the broader picture. Logistics companies are those that identify freight operators for a distributor's goods (as in service types 2–4 above). Intermodal journeys will require transfer services for containers, and terminals represent the destination point. Loosely speaking, horizontal mergers are combinations of companies in the same part of value chain (eg, two rail freight companies), while in vertical mergers companies from different parts of the value chain are combined (eg, rail freight and infrastructure managers). Traditionally, when rail freight operators and infrastructure managers were both publicly run, this value chain was vertically integrated. In recent years, however, there has been a move towards separation in the value chain.

Figure 2.1. Value chain of rail freight market

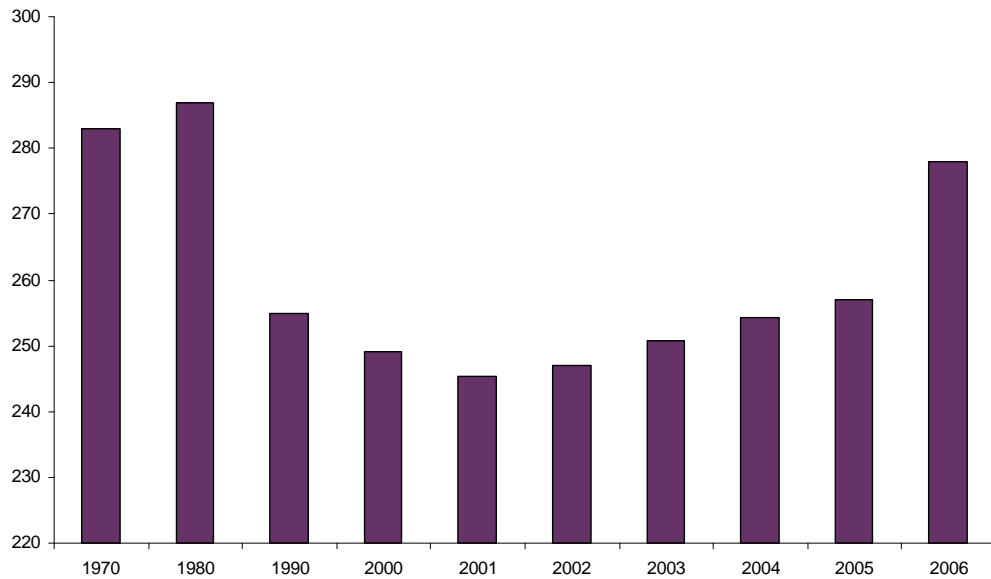


Source: Oxera.

2.1. Recent market trends

Historically, rail freight has largely focused on heavy and high-volume goods, such as coal. Over the past 30 years, demand for transporting these goods has fallen by nearly two-thirds.⁴ Compensating for this reduction has been an increase in the transport of manufactured goods in containers. Figure 2.2 illustrates the changing traffic in 15 of the EU Member States from 1970 to 2006, and shows a clear decline until the year 2000, after which usage has begun to increase gradually towards previous levels.

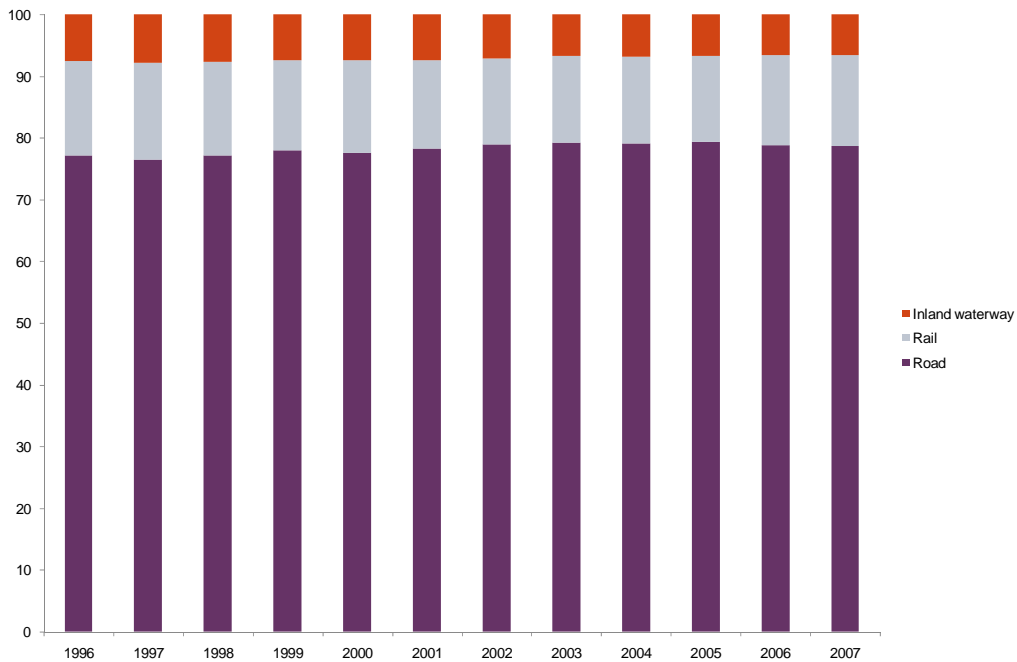
Figure 2.2. Rail freight traffic in 15 EU Member States (billion tkm)



Source: Eurostat (various years), Transport Data.

In comparison to road, the key alternative mode of transport, rail freight, by its nature, tends to transport higher volumes and over longer distances.⁵ At an aggregate level, data shows that road has a much higher market share than rail freight (see Figure 2.3). This differential has been less extreme in eastern European countries, although this has begun to change since the late 1990s. (Rail's share of the overall freight sector fell from 43.5% in 1998 to 39.1% in 2002.⁶)

Figure 2.3. Freight industry market shares, 15 EU Member States (%)



Source: Eurostat (various years), Transport Data.

A comparison of Figures 2.2 and 2.3 suggests that, despite the changes in volume of rail freight traffic, there has been little change in the proportion of overall freight going by rail over the past ten years. This may indicate limited substitutability between the two modes—although competition at the margins for transport of certain commodities (especially those moved in containers) can be fierce. In addition, rail's proportion of the market will be considerably higher for the transport of certain commodities (eg, coal) than lighter, less dense goods.

The European Commission is, however, clear that it is keen to promote the movement of freight by rail, explicitly recognising rail's environmental advantages over road freight. In its 2001 White Paper, the Commission states:

*The growth in road and air traffic must ... be brought under control, and rail and other environmentally friendly modes given the means to become competitive alternatives.*⁷

To achieve this objective, a number of packages have been introduced in recent years through several EC Directives,⁸ with the aim of opening up the EU rail freight market by encouraging competition in the market and stimulating usage levels. These packages have three broad objectives:

- to ensure non-discriminatory access charges and conditions for use of the infrastructure;
- to deal with barriers to competitors entering the market posed by safety regulation and lack of interoperability of rolling stock;
- to improve interoperability by introducing an international rail drivers' licence, together with incentives for improvements in quality.⁹

The final of the three packages was introduced in 2008. It is not clear whether these regulatory changes are responsible for the observed increase in rail freight traffic, particularly as the Commission's objective of substituting usage from road to rail freight does not appear to have affected the proportion of freight being moved by rail, suggesting that the increased usage of rail for freight is as much about an increase in freight traffic as a whole across all transport modes.

The Directives are aimed at increasing competition through ensuring non-discriminatory access to infrastructure—including both track and rail-related services such as stabling points. Liberalisation and unbundling freight operators from infrastructure managers are expected to deliver gains in efficiency, innovation and customer service.

Since Member States' market structures—in terms of the degree of separation between infrastructure and operations—vary considerably, any response at an aggregate EU level may be difficult to identify in the short term. The differences at the national level are discussed next.

2.2. National rail freight markets

Within the EU, the structure of each national rail freight market can vary owing to a number of factors, such as the degree of privatisation. As the Member States begin to implement the EC Directives (discussed earlier), there may be closer alignment between markets, although the magnitude of change required may vary.

The key differences in national markets are in the structure of ownership of freight operators and infrastructure managers. The degree of separation between these two components of the value chain is relevant when considering vertical integration. If not separate, the potential control over the infrastructure can give a certain freight operator a competitive advantage. Part of the EC Directives aims to ensure that this advantage is minimised in national networks, to facilitate a more open market.

In addition to these structural differences, the average quality of service can vary between markets. This is measured by the number of delays, and is cited as a typical problem encountered with rail freight services.¹⁰ This is particularly important to businesses that employ distribution systems based on ‘just-in-time’ principles. By stimulating competition, market forces may result in an improved quality of service and help to boost the industry further.

In the context of service quality, mergers (both vertical and horizontal) may give companies more control over the distribution of goods. An example of this may be in the increased level of cooperation and communication present when moving through the value chain if certain components are vertically integrated. If delays are reduced as a consequence, this might allow rail freight to compete more effectively on quality with road freight services.

3. FRAMEWORK FOR COMPETITION ASSESSMENTS

The European Commission’s promotion of competition in rail freight is predicated on the fulfilment of several factors, such as fair and non-discriminatory access conditions for use of the infrastructure and the removal of barriers to entry.¹¹ It is therefore important to ascertain whether the competitive effect of mergers between rail freight companies may lead to a significant impediment to effective competition.

With evidence from actual decisions taken by competition authorities, this section provides a conceptual framework for the competition assessment of mergers involving rail freight companies. Setting out an overview of the methodologies and principles applied by competition authorities, it shows the analytical steps involved in a competition assessment.

Mergers affecting the rail freight industry broadly fall into three categories.

- **Horizontal mergers**—mergers between firms that produce and sell competing products. Examples in the rail freight industry may include mergers between two or more rail companies providing freight-forwarding services, as well as companies supplying logistic and ancillary services, such as inter-modal inland terminal handling services.
- **Vertical mergers**—mergers between firms in a buyer–seller relationship. In the rail freight industry this could include mergers between a freight-forwarding company and a company providing maintenance services to rail companies.
- **Conglomerate mergers**—mergers between firms that are not operating in the same market and do not have a buyer–seller relationship. An example of a conglomerate merger is that between a sportswear company and a soft drinks company. There are few, if any, examples of this type of merger in the rail freight industry.

The preliminary step in a competition analysis is the definition of the relevant market, which determines the relevant set of competing products and services. The analytical steps involved in identifying the relevant product and geographic markets are similar for all three types of mergers. The European Commission's Notice on the definition of the relevant markets for the purpose of Community law provides guidance on identifying competitive constraints faced by the merged identity.¹²

Once a relevant market has been defined, competition authorities evaluate the impact of the proposed merger on the competitive environment. Central to this assessment is whether the merger would lead to a significant lessening of competition in any of the relevant markets. There may be more than one economic market relevant to a given merger. As the anti-competitive effects of the three types of mergers differ, this report discusses separately the competitive assessment of horizontal, vertical and conglomerate mergers in the rail freight industry (see sections 4, 5 and 6 respectively).

3.1. Market definition

Answering the question of whether a merger would lead to a significantly lessening of competition requires a thorough understanding of competing products and services that may be affected by the merger. Consequently, a market definition exercise is conducted to determine the competitive pressure that each product of a firm places on other potentially substitutable products.

There are two dimensions to conducting a market definition: defining a relevant product market and a relevant geographic market. The former will include all the products (which may differ by the time of day the product is needed, and the type of purchaser), and the businesses supplying these products, that constrain the behaviour of a company with regard to each of its products and, consequently, all those companies supplying services that end-consumers regard as substitutes.¹³ The definition of the latter determines the extent to which demand switches between companies based in different locations, and consequently whether a market is local, regional, corridor- or origin-destination-based, national or international in geographic scope.

In general, when delineating relevant markets, competition authorities consider two sources of competitive constraint: demand-side substitution and supply-side substitution.¹⁴

Demand-side substitution assesses which products or services are regarded as substitutes for the focal services by end-consumers. The generally accepted approach to assessing the degree of demand-side substitutability is the SSNIP test. This considers whether a hypothetical monopolist would be able profitably to sustain a small but significant non-transitory increase in price (SSNIP) or lower the product offering equivalently in terms of quality or variety. A SSNIP test seeks to establish how many customers would switch to an alternative product if a hypothetical monopolist increased prices. A market is defined as a product or group of products and a geographic area in which a hypothetical, profit-maximising firm that would be the only seller of those products in that area could profitably raise prices by a small and non-transitory amount.¹⁵ In cases where it is not possible to obtain clear evidence as to the likely outcome of price rises, the SSNIP test still serves as a conceptual framework for the purpose of delineating the relevant product market.

Supply-side substitution evaluates whether suppliers can switch production in a timely manner and without incurring significant costs in response to a price increase in production. For example, in the *Deutsche Bahn/English Welsh & Scottish Railway Holdings* case, the European Commission adopted a national geographic market definition for rail freight services because it was considered to

be difficult to switch to international suppliers due to technical and procedural barriers, such as the lack of interoperability and national safety certificates and the need for specially trained staff with language skills and licences.¹⁶ When this is the case, such additional increases in supply would constrain the producer of that service in a similar way to demand-side substitution.

3.1.1. Relevant product markets in the rail freight industry

The objective of a product market definition is to identify the set of products that exercise competitive constraints on each other. Since the relevant product market definition is instrumental to the competitive assessment, it is important to establish which products and services compete with the products and services supplied by the merging parties.

In the rail freight industry, competition authorities have previously defined a number of different product markets, depending on the range of products and services supplied by the merging parties. Examples of relevant product market definitions adopted in merger cases between rail freight companies include the following.

- Freight forwarding—this market would comprise the organisation of transportation of items on behalf of customers. Freight forwarding has occasionally been further segmented into domestic and international freight forwarding, and freight forwarding by air, land and sea.¹⁷
- Contract logistics—the relevant market would consist of the planning, implementation and control of the efficient flow and storage of goods, services and related information from the point of origin to the point of destination.¹⁸
- Maintenance services—the relevant product market consists of freight wagon maintenance services.¹⁹

An important question raised in many merger investigations is whether the relevant product market comprises forwarding by rail and road, or just by rail. When analysing whether road freight forwarding exercises a competitive constraint on rail freight forwarding, in line with the framework for market definition, it is important to assess whether consumers perceive road freight forwarding as a substitute. For example, would a sufficient number of customers switch to road freight forwarding in the event of a 5–10% price increase in rail freight forwarding?

For example, in the *Freightliner Limited/Deutsche Post AG* case, the UK Office of Fair Trading (OFT) gave a market definition for the supply of inter-modal inland terminal handling services by road and rail (see Box 3.1 below). Drawing on customer surveys, the OFT concluded that the relevant market consisted of the haulage of inter-modal containers (IMCs) by road and rail. In the *Deutsche Bahn/Transfesa* case, the European Commission also acknowledged the existence of at least partial substitutability between freight-forwarding services by rail and road.²⁰ The formal market definition was, however, left open, as a broader market definition would not have changed the outcome of the competitive assessment.

The logistics of particular goods may also comprise a separate relevant product market. For example, in the case of finished vehicles logistics (FVL) service providers,²¹ suppliers often need to respond to numerous requirements from car manufacturers and must have dedicated equipment, such as special wagons and trucks. It is therefore highly likely that other logistics services are not viewed as close substitutes by consumers.²² There may also be a lack of supply-side substitutability because it may be expensive to switch supply in a timely manner.

Box 3.1. OFT product market definition in *Freightliner Limited/Deutsche Post AG*

This case, which received OFT approval in June 2008, concerned the acquisition by Freightliner Ltd, a UK rail haulage operator, of two inter-modal inland rail ports located at Daventry and Doncaster in the UK from Deutsche Post. The merging parties are both active in the supply of inter-modal inland terminal handling services to third parties in the UK. Terminal handling services refer to the provision of rail access to the terminal, which involves the lifting of IMCs between trains and lorries and the provision of other services, such as container storage. Freightliner provides only rail-based IMC haulage. In the UK, 80% of the volume of freight transported in IMCs is moved by road.

The OFT considered that the competitive constraints from road to rail are also relevant to the local assessment around the two inter-modal inland rail ports acquired by Freightliner from Deutsche Post. It found that a hypothetical monopolist supplier of the relevant rail-based IMC haulage would not be able to profitably sustain a small price increase because many customers would switch to road-based IMC haulage services in the UK. This conclusion was based on a customer survey and studies by the Office of Rail Regulator (ORR) and Network Rail, which concluded that road haulage is by far the most popular form of IMC haulage. Rail and road are thus deemed to be part of the same relevant market for IMC haulage in the areas around Daventry and Doncaster.

Drawing on this wider market definition, the OFT consequently concluded that the proposed merger would not result in a substantial lessening of competition, as the competitive constraints posed by road-based hauliers would prevent the merging parties from behaving anti-competitively.

Source: Office of Fair Trading (2007), 'Anticipated acquisition by Freightliner Limited of two inter-modal inland rail ports located at Doncaster and Daventry from Deutsche Post AG'. ORR (2006), 'Periodic Review 2008—Consultation on Caps for Freight Track Access Charges'. Network Rail (2007), 'Freight- Route Utilisation Strategy', March.

3.1.2. *Relevant geographic markets in the rail freight industry*

Another important element of market definition is the identification of the geographic boundaries of each relevant product market. For example, competition authorities have previously adopted the following relevant geographic markets in the rail freight industry.

- The relevant geographic market for freight-forwarding services has often been considered to be national rather than international due to the lack of supply-side substitutability between country-specific certificates and the language skills of staff in different countries.²³
- The geographic market definition for ancillary services has often been narrowly defined. For example, in the *Deutsche Bahn/Transfesa* case, the European Commission considered the relevant geographic market for axle-changing services to consist of stations located at the Spanish–French border.²⁴

An issue raised in many cases was whether certain corridors, which concern routes with similar origins and destinations, should be defined as separate relevant geographic markets.²⁵ The geographic dimension of such markets has often been delineated with the help of customer surveys.

In the *Deutsche Bahn/EWS* case, the European Commission considered whether the major north–south corridors from the Belgian, Dutch and German ports to northern Italy comprised a separate geographic market (see Box 3.2). The Rotterdam–Italy rail corridor was not considered to be a true O&D market by the European Commission as only some of the goods were transported the whole distance.

Box 3.2. Geographic market definition in *Deutsche Bahn/EWS*

The European Commission’s assessment of the acquisition by DB of EWS, a successor of the freight business of the former UK national rail monopoly, raised several issues in relation to the relevant geographic market definition.

Rail freight services were considered to be national because of different technical and regulatory requirements in markets and the need for specially trained staff to provide cross-border services.

The Commission also outlined the importance of certain ‘corridors’, primarily routes from the Belgian Dutch and German ports to northern Italy. Each particular route on these corridors may not be substitutable with others, from a demand-side perspective. Nevertheless, the choice of a harbour for incoming traffic to Europe is part of an overall transport solution, according to the Commission. Goods may use alternative routes to reach their destination, implying that the north-south corridors may include alternative points of origin and routes. The Commission furthermore questioned the importance of those corridors, as there are multiple stops between the origin and destination of a route.

The Commission consequently identified the relevant geographic market to be national in geographic scope, with the possibility of becoming larger than national in particular with respect to certain international routes being part of a corridor or having special characteristics.

Source: Commission of the European Communities (2007), ‘Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings’, November 6th.

In the *SNCF/Trenitalia/AFA* case, the European Commission also defined the relevant geographic market by OD pairs. The relevant geographic market was considered to consist of rail freight services on the Lyon–Turin axis, which links north-west Europe with north-west Italy. The degree of demand-side substitutability of different routes on this axis was determined through the use of a survey.²⁶ A similar approach was taken by the European Commission in the *Arcelor/SNCF/CFL Cargo* case, where the relevant geographic market was considered to consist of freight services that have an origination or destination in Luxembourg.²⁷

3.2. Competitive assessment

Following the identification of the relevant market, it is necessary to assess whether the proposed merger would have any anti-competitive effects on the market.²⁸ Central to such an assessment is whether the merger creates problems by limiting effective competition between firms operating in the same market. The European Commission’s horizontal and non-horizontal merger guidelines provide further guidance on the conceptual framework for competitive assessment.²⁹

As previously indicated, horizontal, vertical and conglomerate mergers may cause different competitive problems. By reducing the number of competitors in a market, horizontal mergers may create or strengthen market power. Non-horizontal mergers are generally less likely to engender competition concerns than horizontal mergers because they do not result in the loss of direct competition between merging firms in the same relevant market.³⁰ The threats to competition from vertical and conglomerate mergers are less obvious, and can in principle be viewed as unilateral actions with the potential to harm rivals. These types of merger concern markets without horizontal overlaps, and the anti-competitive effect is often caused by exclusionary practices: by denying access to essential facilities, a vertically integrated firm may, for example, leverage its market power into the downstream market.

Because some merging parties deliver a full range of services, it may be necessary to assess horizontal, vertical and/or conglomerate effects in a single case. The *Deutsche Bahn/Transfesa* case is an example of a case where the European Commission examined potential horizontal, as well as vertical, effects. In addition, in the *Freightliner/Deutsche Post* case, the two merging parties, Freightliner Limited and Deutsche Post, were both active in the provision of inter-modal inland terminal handling services to third parties. Nevertheless, the focus of the OFT's competitive assessment was whether the merger had the potential to lead to vertical foreclosure because the acquirer was also active in the market for IMC haulage.

Assessments of the competitive effects of mergers in the rail freight market also draw on the principles set out in Articles 81 and 82. For example, for possible competition concerns, such as foreclosure of access to essential facilities, the normal competition rules on abuse of dominance could be applied. Moreover, the analysis of vertical effects between merging parties is similar to the assessment of vertical restraints between undertakings and concerted practices under Article 81.

4. HORIZONTAL MERGERS

The most important threat to competition from horizontal mergers between existing firms in a market is that, by reducing the number of competitors in the market, the merger may result in giving the merged party market power. Competition problems may also be created if the merger is with a firm currently not operating in that market, as it eliminates a potential entrant into the market.

Competition authorities must take into account any significant impediment likely to be caused by a concentration. A competitive assessment of horizontal mergers would involve several analytical steps. First, competition authorities must examine market shares and concentration levels. These horizontal effects are discussed below, together with other reasons why a merger may lead to a lessening of effective competition—for example, by eliminating one of the merging parties as a potential entrant. Section 4.2 then discusses whether the merging parties' ability to abuse a dominant position may be constrained by other factors, such as buyer power or potential competition, while section 4.3 reviews potential remedies.

4.1. Horizontal effects

4.1.1. *Horizontal overlap*

Market shares and concentration levels may provide useful information about the market structure and the competitive importance of the two merging parties.

Even though market shares are not, by themselves, evidence of market power, they may provide some insight into the relative strengths of companies and changes to those positions over time. The post-merger market share of the merged parties is based on the assumption that they are equivalent to the sum of their pre-merger market shares. As stipulated in the horizontal merger guidelines, a merger resulting in a post-merger market share of 50% or more may be considered evidence of a dominant market position according to case law. Anything less than 25% is usually taken as an indication that the merger would not lead to a significant impediment of competition, and hence is likely to receive approval, although such mergers may still raise competitive concerns due to a number of other factors.³¹

Overall concentration in a market may also provide an indication of the competitive strength of the two merging parties. The Herfindahl–Hirschmann Index (HHI) is a commonly used measure of concentration. It calculates the sum of the squares of individual market shares of all firms in a market. The absolute level of the HHI indicates whether the market is competitive, while a change in HHI provides a good proxy of the change in concentration due to the merger. HHI levels are a useful initial indicator of the absence of competition, but are not sufficient to draw conclusions on the absence of competition concerns.³²

The combined market share following a merger in the rail freight industry focuses on the relevant market and the instances in which market shares would be particularly high post-merger. For land-based freight-forwarding services, for example, this approach would establish the combined market share of the two merging parties and the incremental increase in their market shares on particular routes. Market shares are usually expressed in terms of total sales.

Many mergers between rail freight companies were not investigated further because the combined share in the market in question was considered to be too low. For example, in the *Deutsche Bahn/Bax Global* case, the European Commission concluded that the competitive effect of the merger in the market for contract logistics did not need to be considered in detail because the merging parties' combined market share did not exceed 10% in any of the eight countries in which both parties operated.³³

Other examples include the *Deutsche Bahn/Stinnes* case, where the merging parties argued that there would be no anti-competitive concerns because the combined market share was below 5% in Germany, and below 10% in an internal market for freight and transport services. The competitive assessment of the European Commission identified no competitive concerns, even if the relevant product markets were more narrowly defined.³⁴

4.1.2. *The elimination of a potential competitor*

A horizontal merger may also limit competition in a relevant market by removing one of the merging parties as a potential entrant into that relevant market. Such a situation could occur in the absence of any horizontal overlap. An assessment of the elimination of one of the merging parties as a potential entrant is particularly relevant if the two merging parties operate in different markets, but are significant in size.

The *Deutsche Bahn/EWS* case is an example of a case where the European Commission investigated whether the removal of the either party as a potential entrant might have led to a significant lessening of competition in some markets (see Box 4.1). The Commission investigated whether there were any competition concerns due to the elimination of EWS as a competitor on the major routes from the north-western European ports to northern Italy. As an incumbent, DB had a significant high market share of the corridor in question. However, the proposed transaction was not considered to lead to a significant lessening of competition on those routes because there were alternative competitors on the routes and because EWS did not provide any rail freight services on the north–south corridor. Moreover, the European Commission examined whether the merger would lead to the elimination of potential competition in domestic and cross-border rail freight transport within the UK and Germany; and to the elimination of potential competition in the UK.³⁵

Box 4.1. *Deutsche Bahn/EWS* competitive assessment

Despite the lack of horizontal overlap between DB and EWS, the European Commission nevertheless investigated whether the merger was likely to give rise to competition concerns by examining whether there would be:

- a potential lessening of competition in domestic and cross-border rail freight markets in France. The Commission was concerned that the proposed transaction would strengthen the dominant position of SNCF in the provision of rail freight services in France by removing EWS as a competitive force in France. There were concerns that EWS might compete less aggressively with SNCF in France because DB had a close business relationship with SNCF;
- elimination of potential competition in domestic and cross-border rail freight transport within the UK and Germany. Entry barriers were considered to be high in the UK for single-wagon services (both domestic and cross-border) due to the extensive costs of setting up a comprehensive distribution network. It was thus considered to be unlikely that DB would enter the market. In Germany, the elimination of EWS as a potential entrant did not raise any concerns about anti-competitive effects as there were already a large number of operators.
- elimination of potential competition and possible foreclosure of single-wagon services in the UK relating to cross-border rail freight transport on the route between Germany and the UK. Due to technical and economic constraints, DB and EWS were not considered to be likely entrants in the provision of single-wagon and block train services;
- elimination of potential competition on the north-south corridors—the proposed transaction was furthermore unlikely to result in a lessening of competition on any north–south routes because EWS did not operate on any of these;
- possible foreclosure of single-wagon services in the UK—the merger was not considered to result in possible foreclosure of single-wagon services in the UK relating to cross-border traffic on certain routes from countries (other than Germany) where DB is active to the UK.

The merging parties subsequently submitted a number of commitments, which removed the concerns raised by the Commission.

Source: Commission of the European Communities (2007), Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS), November 6th.

4.1.3. Offsetting factors

In line with the principles set out in the European Commission's horizontal merger guidelines, the competition assessment of horizontal mergers needs to go beyond the definition of the relevant market and an estimate of the relevant market shares. It should also allow for factors that may prevent the merging parties from acting anti-competitively, such as countervailing buyer power, efficiencies created by the merger and the failing-firm defence.³⁶ Decisions on mergers between rail freight have addressed, for example, whether countervailing buyer power or potential market entry by third parties could offset the market participants' ability to abuse their market power.

4.1.4. Countervailing buyer power

Countervailing buyer power is a factor that is often examined in the context of mergers between rail freight companies. If the buyers have purchasing power in relation to their purchases of rail freight services from the merging parties, they may be able to constrain the freedom of the merging parties to set prices. For a firm with large market shares, it is more difficult to raise prices or reduce the quality of services when buyers have a strong bargaining position. Buyer power may therefore offset any additional market power arising due to mergers.

In the rail freight market, buyer power is particularly relevant because rail freight products are often purchased by a small group of buyers who are well informed and highly concentrated. In the *Deutsche Bahn/Transfesa* case, the Commission concluded, for example, that car manufacturers have some bargaining power over their finished vehicle collection providers.³⁷ They could easily switch to road and/or move capacity to other providers in the case of a price increase. The fact that the EEA market for finished vehicle collection by rail was characterised by a limited number of customers with very specific needs and know-how in logistics motivated the European Commission's decision to conclude that the merger would not lead to a significant lessening of competition.

4.1.5. Barriers to entry

Potential market entry may also constrain the behaviour of the merging parties. For entry to be considered a sufficient competitive constraint on the merging parties, it must be shown that entry is likely to occur if prices move above competitive levels. This depends substantially on the associated sunk costs of market entry. Entry may be constrained by barriers such as technical advantages or the experience and reputation of a firm. Moreover, entry would be more likely to occur in a market that is expected to grow.³⁸

The EC Liberalisation Directive led to new market entry in many national markets for rail freight services. Despite ongoing market liberalisation, there are still high barriers to entry in these markets. Incumbents tend to have high market shares and a competitive advantage over new market entrants due to their existing infrastructure network and reputation. New market players often need to undertake large, sunk investments in infrastructure before entering the market. This is a possible reason why new entrants often start operating in a restricted geographic area, serving a few, large customers.

Long-term access contracts between a freight operator and an infrastructure manager are one example of barriers to entry in the rail freight industry. The time-consuming and costly process of attaining such contracts makes further market entry less likely. The European Commission considered that barriers to entry are also relatively high because new entrants would need to invest in rolling stock, training of staff, marshalling and other facilities to compete in the block train market.³⁹

4.2. Remedies

In some cases, mergers may be allowed to proceed, but be made subject to certain remedies to mitigate potential harm arising from the proposed merger. Merging parties often offer remedies to offset the potential problems identified by the competition authorities.

Further guidance on the appropriateness of remedies is provided in the European Commission's 2008 Notice on remedies. The principles which apply to the acceptance of remedies are similar in the case of horizontal and non-horizontal mergers. The question of whether a remedy is appropriate to eliminate the competition problems identified has to be evaluated on a case-by-case basis.⁴⁰

Remedies broadly fall into two categories:

- behavioural—the purpose of behavioural remedies is to resolve problems relating to the future behaviour of the merging parties. For example, the merged party may be required not to raise prices, reduce product ranges or remove brands. According to the Commission, behavioural remedies are only acceptable, in very specific circumstances;
- structural—these remedies may relate to divestitures or the granting of access to key infrastructure. Divestiture remedies are considered by the Commission to be the best means of resolving competition problems arising from horizontal overlaps. They may also remedy problems arising from vertical or conglomerate concerns.⁴¹

Many mergers between rail freight companies have been approved by competition authorities without the imposition of further remedies. The merger between DB and EWS is an exception. DB offered to fulfil the expansion plan in France relating to investments in locomotives and the hiring and training of personnel to address the European Commission's concerns that the merger might eliminate EWS as a potential entrant in France. DB also offered to remedy any potential concerns in relation to the UK–Germany route and the possible foreclosure of cross-border rail into the UK. Following the European Commission's initial assessment, the DB proposed to commit:

- to fulfil the objectives of the Locomotive Plan of Euro Cargo Rail, EWS's subsidiary in France, aiming to maintain competitive constraints in the French market;
- to use a certain percentage of locomotives and personnel, subject to a mix of cross-border and domestic operations in France;
- to provide access during the Business Plan Periods to any interested third party (except SNCF) to its driving schools, maintenance facilities and services in France.

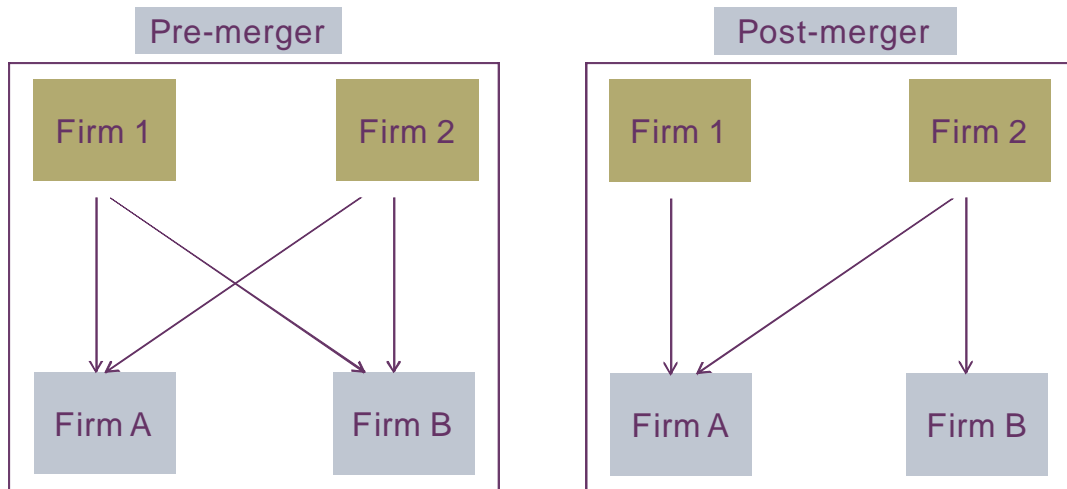
Following a review of the proposed remedies, the Commission concluded that these remedies were sufficient to remove the competition problems identified.⁴²

5. VERTICAL MERGERS

Vertical mergers describe a situation where firms operating at different levels in the supply chain merge. In the rail freight industry, for example, this could be a merger between a freight-forwarding company and a supplier of maintenance services.

Figure 5.1 shows the vertical effects in a generic, stylised way, and forms a helpful guide for identifying any potential adverse effects on competition. Imagine the acquisition of Firm 1 by Firm A. After the acquisition, Firm 1 may be incentivised to provide its services on worse terms to Firm A's rivals. By charging higher prices to Firm B for Firm 1's inputs, Firm A may be able to gain a competitive advantage. Nevertheless, Firm B may be able to switch to the input supplied by Firm 2 in the case of a price increase in firm 1's input. Firm A will therefore obtain a competitive advantage only if Firm B cannot switch to Firm 2, or doing so is more costly for Firm 2.

Figure 5.1. **Competition problems with vertical mergers**



Source: Oxera.

Firms 1 and 2 could be seen as rail infrastructure managers and Firms A and B rail freight operators, as shown in Figure 2.1. Without having access to the essential facilities of the infrastructure manager, such as depots or stabling points, rail freight companies may, for example, not be able to provide cross-border rail freight services.

The approach taken by competition authorities in assessing market power in the case of vertical mergers between rail freight companies is examined next. The main vertical effects are then outlined in section 5.2, followed by a review of factors that may limit the merged parties' ability to act anti-

competitively (see section 5.3). The section ends by looking at remedies imposed by competition authorities to offset the adverse effects of vertical mergers.

5.1. Market power

In general, it can be said that the greater the market power at one level of the supply chain, the more attention should be devoted to vertical issues. The threat of switching to alternative firms would limit the ability of a vertically merged firm to increase prices or reduce the level of service quality. In the absence of competing upstream competitors, vertical effects might lead to foreclosure of all downstream rivals and monopoly prices.⁴³

Nevertheless, an upstream monopolist may not want to set higher prices for its downstream competitors due to the double-marginalisation problem, as discussed in section 5.3.3. The monopolist could extract all its revenue at the upstream level without leveraging its market power into the downstream level. Market power at one level of the supply chain is thus a necessary, but not a sufficient, condition for the existence of vertical effects.

In considering the vertical effects of a merger, it is therefore important to ascertain the degree of concentration at all levels of the supply chain. If none of the merging parties had significant market power, the merger would be unlikely to lead to a significant lessening of competition.

Market shares are considered to be an indicator of a firm's ability to act independently of its competitors. However, by themselves, they may not be evidence of market power. Other factors, such as barriers to entry and exit, may also be taken into consideration when deciding whether one of the merging companies has market power. For example, the decision of the UK Competition Commission (CC) on the proposed transaction of Marcroft by Railway Investments established, for example, that Marcroft had a degree of market power in the market for wagon maintenance services before the merger (see Box 5.1).

Box 5.1. *Railway Investments/Marcroft Holdings Limited* competitive assessment

The CC examined vertical issues in relation to the merger between Railway Investments, a wholly owned subsidiary of EWS and Marcroft, a supplier of rail freight wagon maintenance in the UK. EWS is the largest provider of freight haulage services in the UK and through the Channel Tunnel. Marcroft's main customers were leasing and haulage companies and companies that transport goods for their own use. The CC examined whether the merger would have any adverse effects on the wagon maintenance market and on the haulage market.

Marcroft was found to have a substantial degree of market power. As national coverage was required to compete effectively in this market, Marcroft only faced one significant competitor. The CC therefore determined that the merged entity would be able to lower service quality or raise prices charged to EWS's main competitors.

In considering the vertical effects of the merger on the haulage market, the CC concluded that the merging firms would have incentives to reduce Marcroft's service quality. In this case, service quality primarily relates to the time taken to maintain a wagon and to respond to a maintenance need from a lowering of service quality. This had the potential to increase the costs of EWS's competitors, as they face financial penalties for missing delivery deadlines. There was also the risk that they might

lose customers if performance standards were not met. According to the CC, the merger would also create incentives to raise prices for wagon maintenance. Such a price increase might also reduce the competitiveness of EWS's competitors in the haulage market.

Furthermore, the CC examined whether potential entry or countervailing buyer power would offset the finding that the merger would lead to a significant lessening of competition. It concluded that new market entry in the wagon maintenance market would be unlikely due to fixed sunk investments. Moreover, EWS's competitors had insufficient buyer power to constrain Marcroft's ability to set high prices or reduce service quality.

The CC concluded that divestment of part of Marcroft outstations business was necessary to remedy the lessening of competition, and subsequently, approved the merger.

Source: Competition Commission (2006), 'Completed acquisition of Railway Investments Limited of Marcroft Holdings Limited', September 12th.

Freightliner's acquisition of two inter-modal rail ports from Deutsche Post is an example of a case where the competition authority was not concerned that the merger would materially change the merging parties' ability to engage in foreclosure strategies because the parties in question had no significant degree of market power in the relevant markets (see Box 5.2).

Box 5.2. *Freightliner Limited/Deutsche Post* competitive assessment

The focus of the competitive assessment in the *Freightliner/Deutsche Post* case was whether the merging parties could foreclose access to terminal handling services by, for example, raising the costs of, or refusing to supply, rail competitors. Another concern was whether the merger would lead to foreclosure of certain maintenance services which are necessary for rail freight haulage.

However, because Freightliner had no market power at the terminal and IMC haulage level, the OFT deemed that the merger would be unlikely to change the merging parties' ability or incentives to engage in foreclosure strategies against rail-only companies. Raising the costs of competing rail companies would furthermore benefit Freightliner's road competitors, which were considered to be in the same relevant market.

The OFT therefore concluded that the merger should be approved, implying that it would not be referred to the UK Competition Commission.⁴⁴

Source: Office of Fair Trading (2007), 'Anticipated acquisition by Freightliner Limited of two inter-modal inland rail ports located at Doncaster and Daventry from Deutsche Post AG'.

5.2. Vertical effects

Another issue raised in competitive assessments is to what extent the merged parties have the incentive and ability to foreclose third parties from entering the market. A vertically integrated firm may, for example, raise its rivals' costs by supplying the inputs at higher prices to its competitors than to its own downstream units. The following vertical effects are particularly relevant to mergers between rail freight companies:

- customer foreclosure—upstream suppliers are denied access to selling to downstream divisions of an integrated firm. This could prevent suppliers from having a sufficiently large customer base, which may be necessary to cover their fixed costs.⁴⁵ As a consequence, more firms may decide to exit or not enter the market;⁴⁶
- input foreclosure—the upstream part of an integrated company either excludes companies from purchasing their input, or raises the costs of doing so. An integrated firm may also raise the costs of its downstream rivals by lowering the level of service quality supplied by the upstream company. Denying access to essential facilities is a particular form of input foreclosure.

5.2.1. *Customer foreclosure*

Customer foreclosure is particularly relevant in cross-border rail-based freight forwarding. There are several examples where competition authorities investigated where a merger would impede third parties' abilities from providing cross-border rail freight services.

Because EWS is the only provider of single wagon services in the UK, the European Commission considered several theories of harm, such as whether the company would have incentives to stop cooperating with other rail operators wishing to provide cross-border services, after the acquisition by DB. EWS accounts for virtually the whole railway network for single-wagon services in the UK. The Commission examined whether competitive concerns would arise for cross-border markets where third parties compete with DB. Following a review of competition in those markets, the Commission concluded that there were no competition concerns.⁴⁷

The European Commission also examined whether the merger between DB and Transfesa would lead to foreclosure of other rail companies from cross-border rail-based freight forwarding. However, the merger did not raise any competitive concerns because the merging parties had no market power in the domestic market for freight forwarding.⁴⁸

5.2.2. *Input foreclosure*

Several decisions have addressed input foreclosure as a potential threat to competition.

In considering the vertical effect in the *Deutsche Bahn/Transfesa* merger, the European Commission examined, for example, whether the merger would lead to input foreclosure from DB's traction services to third parties (see Box 5.3). It concluded that competitive pressure stemming from other modes of transport, such as the port and shipping network, would be likely to constrain DB from foreclosing its competitors.⁴⁹

In the *Railway Investments/Marcroft* case, the CC concluded that the merging entities would have incentives to lower the quality of Marcroft's maintenance services. This, in turn, would increase the costs of its downstream competitors. The merger was also found to create incentives for raising Marcroft's prices for the supply of wagon maintenance. This would enable EWS to gain a competitive advantage at the downstream level.⁵⁰

Another important issue in the context of vertical mergers is whether the merging parties would deny access to essential facilities. Important European case law in the rail sector in which essential facilities were addressed, are the two timetable cases involving DB (see Box. 5.4). Guidance from EU case law suggests that an input will be deemed an essential facility when it fulfils three conditions:

- refusal to allow access to the service or facility would lead to an elimination of all competition at the downstream level;
- the service or facility is indispensable to the operation of an equally efficient operator;⁵¹
- there is no objective justification for the refusal to supply the service or facility.

In the rail freight sector, the conditions for an essential facility or service seem more likely to apply to core infrastructure, such as axle-changing stations (see *Deutsche Bahn/Transfesa* case, Box 5.5).⁵²

Box 5.4. *Deutsche Bahn* timetable cases

In February 2003 the German competition authority, Bundeskartellamt, initiated investigation proceedings against DB in relation to its refusal to include timetable information and fares on two long-distance routes (Gera–Berlin–Rostock and Zittau–Berlin–Stralsund) in its information and timetable systems. Connex was the first competitor to enter this market for long-distance passenger traffic, albeit on a limited scale.

Since Connex had also brought proceedings against DB before the civil law courts, the case was ultimately resolved by a decision of the court of appeal of the Land of Berlin, the Kammergericht, on June 26th 2003. The Kammergericht concluded that DB was not allowed to discriminate against competitors by refusing to include their services in the timetables.

In a second timetable case, on April 27th 2004, the regional court of Berlin, the Landgericht Berlin, confirmed DB's obligation to include the train services of competitors in its timetables. According to the court, the inclusion of competitors in the DB timetable was an essential service that could not adequately be substituted by alternatives available to DB's competitors.

Source: KG 2 U 20/02 Kart.

A competitive assessment would establish whether the merger would change the merging parties' incentives and ability to refuse access to those essential facilities. The European Commission examined, for example, whether DB would refuse access to axle-changing stations, which could be deemed essential facilities for rail transport and rail-based freight forwarding between countries, after the acquisition of Transfesa. It concluded that there would be no concerns because Transfesa was not in full control of the stations due to its contractual agreement with SNCF.

Box 5.5. *Deutsche Bahn/Transfesa* competitive assessment with regard to foreclosure

The European Commission analysed the extent to which the proposed transaction between DB and Transfesa could foreclose other rail-based forwarding service providers from having access to the customer base of DB and Transfesa.

The issue of customer foreclosure was particularly relevant in relation to cross-border rail-based freight forwarding. The vertical effect would stem from the vertical link between traction and freight forwarding. Owing to the lack of market power downstream, the merger did not, however, raise any competitive concerns. The two merging parties had only a small market share in the UK. Furthermore, DB was already vertically integrated in the German and Dutch markets. Moreover, Transfesa already purchased rail traction/transport services from DB. The merger would therefore not lead to a significant increase in the latter's market power.

Another focal point of the Commission's assessment was whether the merger would lead to input foreclosure of DB traction services to third parties. Traction is an important input for Transfesa's rail-based forwarding services. Because DB is already a vertically integrated market player in Germany and the Netherlands, the merger was, nevertheless, not considered to change DB's incentives in the relevant Member States, according to the Commission. Competitive pressure stemming from other modes of transport, such as the port and shipping network, were likely to constrain DB from foreclosing its competitors. Moreover, DB may have limited incentives to foreclose competitors in the UK because the same firms are their customers in other parts of the EEA.

Another issue raised during the market investigation was that DB would be in control of two axle-changing stations at the borders between France and Spain. Such stations may be regarded as essential facilities if transshipment were not regarded as a full substitute for axle-changing stations. Transfesa's axle-changing stations are, however, located on land owned by SNCF. The contractual agreements require Transfesa to grant access to third parties at prices set by SNCF on non-discriminatory terms. Owing to this contractual situation and SNCF's countervailing influence, the Commission concluded that there would be no competitive concerns in relation to axle-changing services.

Source: Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.

5.3. Offsetting factors

Once it has been deemed that a merger could lead to a significant lessening of competition, competition authorities may examine whether there are any factors that may constrain the merging parties from abusing their dominant position. Another factor outlined by the European Commission's non-horizontal merger guidelines is that vertical mergers could provide substantial scope for efficiency gains.⁵³

5.3.1. Countervailing buyer power

As in the competitive assessment of horizontal mergers, countervailing buyer power may be an important factor when assessing vertical mergers between rail freight companies. The assessment of such power would establish whether competitors at the downstream market have sufficient bargaining power to constrain the ability of the merging party operating at the upstream level to increase prices, deny access or reduce service quality.

As set out in Box 5.6, the CC examined whether the presence of countervailing buyer power would change its finding that the merger between EWS and Marcroft would be likely to lead to a significant lessening of competition. It concluded that there would be significant risk for EWS's competitors in moving their maintenance arrangements because smaller suppliers of maintenance services may not be able to provide sufficient coverage. This would limit the negotiating power of EWS's competitors compared with Marcroft.⁵⁴ The CC thus concluded that countervailing buyer power was not sufficiently strong to constrain Marcroft's ability to raise prices to EWS's competitors.

5.3.2. Potential competition

Potential competition may also constrain a merged firm from abusing its market power. Rail freight markets are often characterised by significant barriers to entry, which is why potential market

entry is seldom considered to be able to offset the merging parties' ability to abuse its dominant position.

In the *Railway Investment/Marcroft* case, the CC concluded that market entry into the wagon maintenance market is unattractive due to some significant barriers to entry and expansion. Market entry of a scale sufficient to offset the significant lessening of competition arising from the merger was considered to be unlikely by the CC.⁵⁵

5.3.3. *Efficiency benefits*

The most common benefit of vertical integration is that companies may create a more cost-efficient organisation. For example, such benefits may arise from technological economies, (the integration of technological processes, such as the integration of iron- and steelmaking). Another benefit could be the lowering of transaction costs, the main source of which are the costs involved in bringing buyers and sellers together.⁵⁶

By aligning the incentives of firms operating at different levels of the supply chain, vertical mergers may also reduce the double-marginalisation problem, which describes a situation where every firm in the supply chain wants to maximise its profits. When the supplier or retailer has a certain degree of market power, it would set its prices above marginal costs. Without vertical integration, the price of the input would therefore be marked up twice: by both the upstream and downstream firms. Vertical integration allows a firm to control for the problem by internalising the profits made at other levels of the supply chain. When two firms are managed by the same company, the end-user price may be lower, as this price would be chosen so as to maximise profits for the whole entity.

A merged party may furthermore choose a level of output that is inefficient for the vertical structure as a whole. A vertically integrated firm could oblige an upstream firm to increase sales to the level that is optimal for the integrated structure. The elimination of these problems may therefore bring some efficiency benefits.⁵⁷

In considering the competitive effects of vertical mergers between rail freight companies, competition authorities have not addressed potential efficiency gains in great detail, although it is not clear why this might be the case.

5.4. Remedies

As with horizontal mergers, remedies are intended to address the adverse effects identified during the competitive assessment.

In the *Railway Investments/Marcroft* case, for example, the CC investigated whether the proposed remedies would be sufficient in limiting the anti-competitive effects of the merger. It considered the behavioural remedies proposed by EWS and different divestiture remedies. EWS's suggested behavioural remedy—to appoint an independent non-executive member to the EWS board or to create a supervisory board—was deemed insufficient to remedy the CC's finding that there would be a significant lessening of competition. Furthermore, the CC decided that EWS should be required to divest the disposal of the whole part of Marcroft's outstation businesses. The purpose of this divestiture package was to remedy the adverse effects identified in the decision by enabling the divested entity to act as a competitor in the wagon maintenance market.⁵⁸

6. CONGLOMERATE MERGERS

A merger may be of a conglomerate nature when the involved firms are not operating in the same market and are not in a buyer–seller relationship. Such mergers are neither horizontal nor vertical. The Federal Trade Commission (FTC) placed such mergers into three categories:

- a product extension merger—between firms that are not competing in the same market but use the same marketing channels (eg, the acquisition of Pizza Hut by PepsiCo).
- a market extension merger—between firms offering the same product, but in a separate geographic market. The merger between Walmart and Woolco Canada is a good example in this context.
- A pure conglomerate merger—such a merger describes a situation where two firms have no obvious relationship.⁵⁹

Even though conglomerate mergers rarely lead to competition concerns, there are examples where mergers have not been approved on the grounds of their effects. General Electric’s acquisition of Honeywell is one such case (see Box 6.1). There are not many conglomerate mergers in the rail freight industry, although conceivably the recent takeover by DB of EWS might be viewed as a ‘market extension’ merger. Nevertheless, such mergers could raise significant anti-competitive concerns in the rail freight industry, which is why they would justify further consideration.

Box 6.1. *General Electric/Honeywell competitive assessment*

The General Electric/Honeywell merger is probably one the most prominent examples of a merger where conglomerate aspects have been analysed. Honeywell is only active in the markets for avionics. General Electric, on the other hand, is an important purchaser of aeroplanes through its leasing company, GECAS.

According to the European Commission, there was a risk that GE could use its market power to extend its dominance to product markets in which Honeywell operates. The Commission justified its finding on the basis of three arguments:

- GE Capital could use its financial strength to provide buyers, airlines and airframe manufacturers with favourable terms. Its competitors would not be able to match those terms.
- The merged entity could use its buyer power to persuade airframe manufacturers to buy Honeywell’s products.
- The merged entity could have incentives to offer pure or mixed bundles, consisting of packaged offers.

Source: Commission of the European Communities (2001), ‘Commission Decision of 03/07/2001 Declaring Concentration to be Incompatible with the Common Market: Case No COMP/M.2220 - General Electric/Honeywell’.

6.1. Market power

Finding market power in one or more markets is a necessary condition to argue that a merger between non-competing firms would lead to a significant lessening of competition. As in the case of vertical mergers, such a finding would be based on an assessment of the merging parties' market shares and barriers to entry.

6.2. Conglomerate effects

The most obvious way for conglomerate mergers to harm competition is to remove potential competition through agreements. Reciprocal dealing and predatory pricing are prominent examples of such agreements which could lead to a significant lessening of competition.

Reciprocal dealing refers to a practice where a firm buys from a supplier only when the supplier buys from that firm.

Predatory pricing would enable a firm to drive out rivals by pricing below marginal costs in a relevant market. A merged firm may have better financial resources to finance such a strategy in the short and medium run. This tactic is not confined to conglomerate mergers.

The elimination of the merging party as a potential competitor may also lead to adverse effects in the case of conglomerate mergers. The acquisition of a company may eliminate the possibility of that company entering the market itself.

A hypothetical example would be a locomotive leasing company buying a wagon manufacturer and offering those leasing its locomotives preferential deals in respect of purchasing wagons.

6.3. Offsetting factors

As in the case of vertical mergers, anti-competitive effects may be offset by countervailing buyer power in the rail freight market.

Because the internal operational structure of the firms may vary widely, it is difficult to draw general conclusions about potential efficiency gains.

In the hypothetical example referred to above, if rail freight operators possessed countervailing power then any anti-competitive effects of the merger might be lessened.

6.4. Remedies

In assessing the appropriateness of remedies, competition authorities would apply the same principles as those set out in section 4.3 and 5.4.

7. CONCLUSIONS AND AREAS FOR DEBATE

Drawing on evidence from actual decisions taken by competition authorities in relation to horizontal and vertical mergers involving rail freight companies, it is evident that competition authorities have been particularly concerned about whether mergers could lead to a strengthening or creation of market power by acquiring operators with infrastructure access agreements in countries that are otherwise difficult to enter. By eliminating one of the merging parties as a potential entrant, such mergers may lead to a significant impediment to potential competition. The acquisition of operators operating in other national markets may also lead to customer foreclosure because third parties may not be able to provide cross-border services without having access to the customer base of the main network provider in a country. However, recent decisions have not prevented recent mergers taking place.

Another issue raised in the context of mergers between rail freight companies is whether such mergers may lead to input foreclosure. Vertical integration of firms operating at different levels of the value chain may result in a lessening of competition by denying access to essential facilities or increasing the input prices for its competitors. Vertical mergers may also create efficiency gains by, for example, eliminating the double-marginalisation problem and reducing transaction costs. These issues have not been addressed at great length in recent decisions.

The competitive constraint of other transport modes, such as road or rail freight, may also play a more important role in the future, especially if rail is successful in regaining market share from road haulage for some commodities. For example, in the *Freightliner/Deutsche Post* case, the OFT concluded that road haulage should be part of the same relevant product market owing to a significantly high degree of demand-side substitutability.

Another important question is whether issues that may raise competitive concerns should be addressed by ex post competition law, by legislation or by regulatory policies. For example, should regulators proactively intervene to allow more access by competing operators to terminals and freight-only lines? Alternatively, should legislation be amended to be specific about which rail-related services are akin to essential facilities, or should the issue be left to ex post competition law?

Finally, how should capacity allocation procedures be amended to take account of their impact on competition? Currently, there is a sense in which capacity allocation decisions taken by regulators are an issue of compliance, and not necessarily about fulfilling European Commission objectives on rail freight liberalisation. Should regulators' duties be amended in this regard?

NOTES

1. PricewaterhouseCoopers et al. (2008), 'Preparatory Study for an Impact Assessment for a Rail Network Giving Priority to Freight', Final Report to DG TREN, November 11th.
2. <http://www.railfreightgroup.com/new/serv/>
3. Interchanges where containers can be transferred to different modes of transport.
4. House of Lords European Union Committee (2005), 'Liberalising Rail Freight Movement in the EU: Report with Evidence', 4th Report of Session 2004-05, March, p. 11.
5. Office of the Rail Regulator (2000), 'National Survey of Rail Freight Users: Summary of Results', August, p. 4.
6. House of Lords European Union Committee (2005), *op. cit.*, p. 10.
7. European Commission (2001), 'European transport policy for 2010: time to decide', White Paper, p. 26.
8. Directive 2001/12/EC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 91/440/EEC on the development of the Community's railways [2001] OJ L 075; Directive 2001/13/EC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 95/18/EC on the licensing of railway undertakings [2001] OJ L 075; Directive 2001/14/EC of the European Parliament and of the Council of 26 February 2001 on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification [2001] OJ L 075; Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification [2004] OJ L 164; Directive 2004/50/EC of the European Parliament and of the Council of 29 April 2004 amending Council Directive 96/48/EC on the interoperability of the trans-European high-speed rail system and Directive 2001/16/EC of the European Parliament and of the Council on the interoperability of the trans-European conventional rail system [2004] OJ L 164; Directive 2004/51/EC of the European Parliament and of the Council of 29 April 2004 amending Council Directive 91/440/EEC on the development of the Community's railways [2004] OJ L 164; Directive 2007/58/EC of the European Parliament and of the Council of 23 October 2007 amending Council Directive 91/440/EEC on the development of the Community's railways and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure; Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the railway system in the Community.
9. House of Lords European Union Committee (2005), *op. cit.*, pp. 12–13.
10. House of Lords European Union Committee (2005), *op. cit.*, p. 15.

11. European Commission (2001), 'European transport policy for 2010: time to decide', White Paper 2001.
12. Commission of the European Communities (1997), 'Commission Notice on the definition of relevant market for the purposes of Community competition law', December 9th.
13. European Commission (1997), 'Commission Notice on the definition of the relevant market for the purposes of Community competition law', December 9th.
14. Ibid.
15. US Department of Justice and Federal Trade Commission (1997), 'Horizontal Merger Guidelines', April 8th.
16. Commission of the European Communities (2007), 'Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS)', November 6th.
17. The *Deutsche Bahn/Bax Global* case is an example of where the relevant product market has been segmented into domestic and international freight forwarding by air, land and sea. See Commission of the European Communities (2005), 'Case no. COMP/M.4045 – Deutsche Bahn/Bax Global', December 22nd.
18. In the *Deutsche Bahn/Transfesa* case, the European Commission defined the relevant market along these lines. See Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.
19. See, for example, the *Railway investments/Marcroft* case. Competition Commission (2006), 'Completed acquisition of Railway Investments limited of Marcroft Holdings Limited', September 12th.
20. Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.
21. FVL describes the transportation of special wagons and trucks.
22. See, for example, Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.
23. For example, the rationale given for choosing a national geographic market of rail freight services in the *Deutsche Bahn/EWS* case was that it is difficult to switch to international suppliers due to existing technical and procedural barriers, such as the lack of interoperability and national safety certificates, and the need for specially trained staff with language skills and licences. Source: Commission of the European Communities (2007), 'Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS)', November 6th.
24. Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.
25. Such markets are commonly referred to as origin and destination (O&D) markets as they consist of particular routes with similar origins and/or destinations.
26. Commission of the European Communities (2003), 'Case no. COMP/M.3150 – SNCF/Trenitalia/AFA', August 4th.
27. Commission of the European Communities (2006), 'Case no. COMP/M.4294 – Arcelor/SNCF/CFL Cargo', October 9th.

28. The Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentration between undertakings (the EC Merger Regulation).
29. Commission of the European Communities (2004), 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings', February 5th. Neven, D. and Albaek, S., 'Economics at DG Competition 2006-2007'.
30. Neven, D. and Albaek, S., 'Economics at DG Competition 2006-2007'.
31. Commission of the European Communities (2004), 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings', February 5th.
32. Ibid.
33. Commission of the European Communities (2005), 'Case no. COMP/M.4045 – Deutsche Bahn/Bax Global', December 22nd.
34. Commission of the European Communities (2002), 'Case no. COMP/M.2905 – Deutsche Bahn/Stinnes', September 17th.
35. Commission of the European Communities (2007), 'Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS)', November 6th.
36. Commission of the European Communities (2004), 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings', February 5th.
37. Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.
38. Commission of the European Communities (2004), 'Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings', February 5th.
39. Commission of the European Communities (2007), 'Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS)', November 6th.
40. Commission of the European Communities (2008), 'Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004', October 22nd.
41. Ibid.
42. Commission of the European Communities (2007), 'Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS)', November 6th.
43. Motta, M. (2004), *Competition Policy—Theory and Practice*, Cambridge: Cambridge University Press, p. 341.
44. A referral to the CC by the OFT means that the merger has not been approved by the OFT and requires further investigation by the CC.
45. This is likely to happen in a market where there are large economies of scale in the wholesale market.
46. Viscusi, W.K., Harrington, J.E. Jr. and Vernon, J.M. (2005), *Economics of Regulation and Antitrust*, Cambridge: MIT Press, p. 248.

47. Commission of the European Communities (2007), 'Case no COMP/M.4746 – Deutsche Bahn/English Welsh & Scottish Railway Holdings (EWS)', November 6th.
48. Commission of the European Communities (2008), 'Case no. COMP/M.4786 – Deutsche Bahn/Transfesa', March 18th.
49. Ibid.
50. Competition Commission (2006), 'Completed acquisition of Railway Investments limited of Marcroft Holdings Limited', September 12th.
51. For example, in the *Ladbroke* case, the European Court of Justice viewed televised sound and pictures of the horse races to be an 'additional', not an essential, feature to the existing service for those placing bets. See Case T-504/93 [1997] *Ladbroke SA v Commission*.
52. Oxera (2006), 'Essential or nice to have? A competition-based framework for "rail-related services"', *Agenda*, available at www.oxera.com.
53. Neven, D. and Albaek, S., 'Economics at DG Competition 2006-2007'.
54. Competition Commission (2006), 'Completed acquisition of Railway Investments limited of Marcroft Holdings Limited', September 12th.
55. Ibid.
56. Inducing people to behave in a manner necessary for trade involves costs (also known as 'coordination costs'). These may be the legal costs of signing agreements or monitoring other companies' behaviour. Viscusi, W.K., Harrington, J.E. Jr. and Vernon, J.M. (2005), *Economics of Regulation and Antitrust*, Cambridge: MIT Press, p. 241.
57. Motta, M. (2004), *Competition Policy—Theory and Practice*, Cambridge: Cambridge University Press, pp.307–8.
58. Competition Commission (2006), 'Completed acquisition of Railway Investments Limited of Marcroft Holdings Limited', September 12th.
59. Viscusi, W.K., Harrington, J.E. Jr. and Vernon, J.M. (2005), *Economics of Regulation and Antitrust*, Cambridge: MIT Press, p. 203.