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KfW IPEX-Bank's Director Origination & Structuring, Mobility & Transport Frank Hermandung on the technological developments within the European rail freight sector and its modal share.



Frank Hermandung Director Origination & Structuring, Mobility & Transport – KfW IPEX-Bank

Q: Mr Hermandung, what is KfW IPEX-Bank's interest in European rail freight transport?

Frank Hermandung: Financing for environmentally friendly passenger and freight transport in Europe, but also around the world, is a core focus of KfW IPEX-Bank, which is responsible for commercial transport and infrastructure financing within KfW Group. We have been committed to the sector with a large team and portfolio for decades, financing both start-ups as well as established market operators. Railway lines, railcars, locomotives and signalling technology: our domain includes everything that requires financing in the wheel-rail system.

Q: What are the latest trends you've seen? Have railways entered the 21st century?

FH: Railways in Europe have a long history; many technical elements date back to the last two centuries. It has only been in recent years that freight cars, for example, have stopped using sheer force and extreme power to brake by pressing a steel block on to the freight car wheel tread – a technique from the 19th century. To date, however, the only change made with tremendous effort by European railcar lessors and operators has been in the material used: the cast-iron block brake is now made of a more suitable material. It is interesting to note that it was not efficiency that led to this development but the need to limit noise emissions.

By its very nature, however, the rail system is slow moving; changes do not take effect on a small scale, as is the case with lorries, but require enormous investments in a huge integrated system with much more closely linked infrastructure and rolling stock. At the same time, the safety and regulatory requirements are much higher than for road transport. In addition, railways, in their capacity as public infrastructure, provide public services and are thus sometimes subject to requirements other than purely economic ones.







*2020: Partially estimaed

After suffering continuous losses, rail initially managed to slightly increase its market share among modes of transport in Europe over the past decade, but then declined again in 2019 due to setbacks in two major markets. It is now at roughly the same level as in 2010 compared to road transport. It must be kept in mind that, during this period, the volume of transport grew by around 0.8% p.a. overall.

Despite mixed performance in the early 2000s, we are currently seeing more technical changes at much shorter intervals than ever before: electronic signal boxes, automated train control systems, longer and heavier trains and modular railcars with greater flexibility have been introduced or will be soon. Drivers and influencers of innovation such as DAC (digital automatic coupling of freight cars) and digitalised operational processes are in the works. The railways have much higher potential for technical and workflow efficiency than other modes of transport and are slowly, but with growing momentum,

in the process of leveraging this potential.

Q: What are the key drivers for the growing momentum in the sector?

FH: First, there is the trend towards more private entrepreneurship. More and more railway services are no longer operated by government-owned railways, and competition is stimulating business.

Added to this are the availability of modern technologies, a very sustainable long-term trend towards leasing rail vehicles with higher capacity utilisation and government subsidies that support the installation of modern train control technology, for example. The increased use of containers in intermodal transport, which has more than compensated for the loss of bulk cargo transport, has been and will continue to be one main driver of growth in transport capacity in this decade. With further dynamic development, the intermodal transport segment will likely grow about 1.7 times as fast as the gross domestic product, and thus account for most of the transport volume, which will

increase by an average of 2.5% p.a. over the long term.

Finally, but certainly not least important, there has been a tremendous increase in political will to develop rail into a competitive alternative to road; rail transport would not just coexist peacefully with road transport and contribute proportionally to general transport increases, it would also take significant market share away from road transport. Political declarations of this kind have already been made in the past, but the pressure of the climate policy discussion and the specific CO2 targets for the transport sector, combined with the considerable financial resources that are now being made available for this purpose, are new in this form. The political environment is creating a positive overall pro-rail climate.

Still, the targets are extremely ambitious. Target modal split rates of 30% across the EU and 25% in Germany have been announced by the respective political leaders to be achieved by 2030. Even getting to a 20% share in Germany as the biggest European market would

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Rail freight development in Continental Europe by operator type (indexation: 100=2010)





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Development of <u>rail freight</u> transport performance in Continental Europe¹ [bn tkm]

Drivers of <u>rail freight transport</u> performance growth in Continental Europe¹ [bn tkm]



Development of <u>intermodal rail freight</u> transport performance in Continental Europe¹ [bn tkm]



already require that considerable strides be made and DAC be introduced. Many investments will only take effect after a time lag and on a large scale. Short-term financial assistance such as the temporary reduction in rail access charges would have a faster effect. A repeal of the energy tax for traction units would certainly also be helpful. Finally, the competitive position of railways could be improved first and foremost if the actual costs were equal to other modes of transport that have traditionally been favoured. It is very difficult to create a level playing field in years when the current situation has been the result of the past decades.

Q: What do you think the outlook is for modern rail freight in the coming years? What is possible, what needs to happen?

FH: Together with SCI – a strategic consultancy company focused on the international railway and logistics industry – we recently conducted a broad-based study to shed light on precisely this issue, which is essential for all

market operators but also for a rail financier like us.

The good news: the long-term outlook is probably better than ever before. The aspects discussed above contribute to a positive overall climate, which will allow rail to gain significant market share in an above average growing transport market. Longer passing tracks, more efficient traction and the introduction of DAC will make longer and heavier trains possible. The introduction of a European Rail Traffic Management System (ERTMS) and electronic interlocking will increase the efficiency of the infrastructure. In this context, the inherent efficiency potential of rail is considerable because it has been inadequately harnessed to date.

The bad news: politics, which has always played a decisive role in determining the fate of the railways, is difficult to assess. First, there needs to be a unified European will to make integrated projects like DAC financially and operationally possible. Governments must also decide at national level whether they want to grant rail freight transport at least equal status to passenger rail transport, which also needs to be expanded, and to lorries on the roads. And last but not least, the "green idea" and the resulting CO2 reduction targets must create clear incentives to advance rail.

There is good reason to believe that we are currently experiencing an enduring shift in the trend "towards rail". After decades of losses, the last decade saw a strengthening in the status of rail, while its image and importance have already improved enormously. Many important economic, environmental and political drivers indicate that this trend will continue and gain significant momentum by 2030. However, many significant impacts of the system improvements made up to that point will only fully come into effect after 2030.

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