

FREIGHT RATE BENCHMARKING FOR THE EUROPEAN CHEMICAL INDUSTRY

Fraunhofer SCS

Market Price Transparency

- Compare to market prices
- Measure procurement
- Negotiate effectively
- Reduce transport costs

Anonymized comparisons of freight costs for improved procurement

Do you ask yourself

- How do freight prices develop in the market?
- What is the level of our freight rates compared to the market?
- On which transport routes should we focus for future tenderings?

The Fraunhofer-Benchmark can provide you the right answers.

If you would like to know how freight prices develop in the market and how good you are tendering, then you should join the **Fraunhofer-Freight Rate Benchmarking Group for the Chemical Industry**. The group provides chemicals manufacturers and feedstock suppliers with anonymized comparisons, helping to strengthen their negotiating position and improve their procurement strategies.

Comparing road freight costs across Europe

The freight rate comparison is based on rates paid by the chemical industry for road transportation across various distances in Europe. It includes prices on the general cargo market for full- and less-than-truck loads and for dry and liquid bulk shipments.

Detailed results and market overviews

Participating companies receive benchmark findings twice a year in form of a detailed report (country and region specific) plus a summary report (aggregated overview). The data is made available online via a web portal.

Comparisons with relevant members of the industry

The Freight Rate Benchmarking Group for the European chemical industry was established in 2005 and currently comprises over ten leading chemical companies.

Ten years experience, aided by the group's very stable membership, has shown that freight rate benchmarking offers an attractive cost-benefit ratio and is useful to enterprises of all sizes.

Reflection of freight agreements

»The benchmark holds a mirror up to us and shows us where we, as BASF, stand with our freight agreements compared to the rest of the chemical industry. This mirror shows us not only an up-to-date image; it even has a memory: the benchmark shows us across a longer period how our freight is developing compared to the overall market.«



*Stefan Bartens,
Vice President Logistics Procurement Europe, BASF
Member of the Fraunhofer-Freight Rate
Benchmarking Group for 10 years*



Your Benefits

- *Transparency of market prices*
- *Comparison of own performance*
- *Continuous controlling of prices & tenders*
- *Steady members of leading chemical companies*
- *Strategical negotiation position*
- *Basis for internal reportings*



Valide Data Basis

- *6 transport segments*
- *More than 5.000 tours, 200 country-to-country and 3.000 region-to-region combinations*
- *Scientific approach*
- *Long term expertise, running since 2005*

Company-specific results for six transport segments in Europe

Market price analysis for six transport segments

Twice a year participating companies choose representative tours for the benchmark and provide data of transport costs and volumes for the following six business segments

 **FTL Full Truck Load**

 **LTL Less Than Truck Load (7.5 to / 2.0 to / 0.5 to)**

 **Bulk Tank & Silo**

For the market price analysis of each business segment relevant cost drivers such as handling of hazardous goods are taken into account. To counterbalance different tour lengths freight costs are adjusted by a distance neutralization.

Company-specific results

After verification and evaluation of the benchmarking data, each company receives company-specific results showing their freight rates compared to the computed market prices. For their internal evaluation different levels of aggregation can be chosen:

- **ex-country**
- **country-to-country** (around 200 combinations)
- **region-to-region** (more than 3.000 combinations)

All results are available online by a company-specific access to the benchmarking dash board.

Annual meeting

Once a year all members meet in Frankfurt for the annual meeting in order to evaluate selected findings.

- Validation of current benchmarking results
- Networking in a peer group
- Decisions on methodological improvements

Scientific expertise

Running since 2005 the Fraunhofer-Freight Rate Benchmarking Group for the Chemicals Industry holds over 10 years of experience and accommodates the special challenges of the transport logistics for the chemical industry. Hosted by the Benchmarking Center Nürnberg BMC of Fraunhofer SCS the applied methods are sound and follow latest scientific findings.

Data confidentiality and compliance

Fraunhofer, as a non-profit research organization, guarantees neutrality and confidentiality in handling sensitive benchmarking data. All third party company data is only presented as market data, anonymized and aggregated. Methods, proceedings and developments are documented and transparent. To ensure compliance with anti-trust and competition law, the freight benchmarking is supervised by a specialized lawyer.

Summarized overview for a quick insight, detailed results for an in-depth analysis

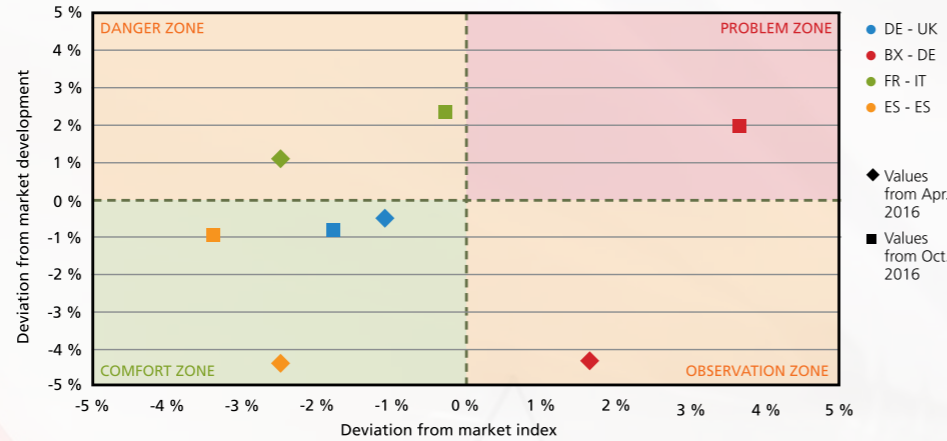


Fig. 1: Portfolio of company-specific tours for a transport segment, current and last term's standing

Summary report

For every business segment the summary report gives an overview of the benchmarking results. All tours of the freight rate comparison are aggregated to ex-country and all-europe views. Their weighted means are defined by the tours' importance for the company, through their specified transport volumes.

Portfolio presentation

The portfolio presentation gives a quick overview about all country-to-country aggregations. It shows their deviation from the current market price (horizontal axis) and from the market development (vertical axis).

Detailed report

The detailed report presents for every business segment the benchmarking results on country-to-country and on region-to-region level. Some of its main topics are:

- **Index development:** shows the course of the company's rate development compared to the market price development
- **Freight rate position index:** depicts the standing of the company's absolute rates compared to the absolute market price
- **Transport volume:** indicates the company's transport volume in relation to the total transport volume of the market
- **Participants ranking:** states the number of compared companies and their ranking according to their price index development

See left hand side: Fig. 1: portfolio presentation of company-specific tours
Analysis

- Tours in the right half of the diagram are more expensive than their corresponding market prices. This indicates for which tours (here: BX-DE) tendering negotiations can reduce transport costs.
- Tours in the upper half of the diagram are developing worse than their corresponding market prices. Thus, the potentials of market price reductions may not have been realized for FR-IT.
- The progress of the company's procurement is shown by additionally depicting its last term results.

See left hand side: Fig. 2: country-specific index development from 2009 to 2016 for FTL tours from Germany to United Kingdom
Analysis

- Without the benchmark, the service providers passed on the price increase (2010-2012), but concealed its reduction (2013). Joining the benchmark in 2014, the shipper used the market price information for a fact-based negotiation, catching up the price decline.
- Although prices rose in 2015, the benchmark shows that the company actually procured well, as the company index increased less than the market index.

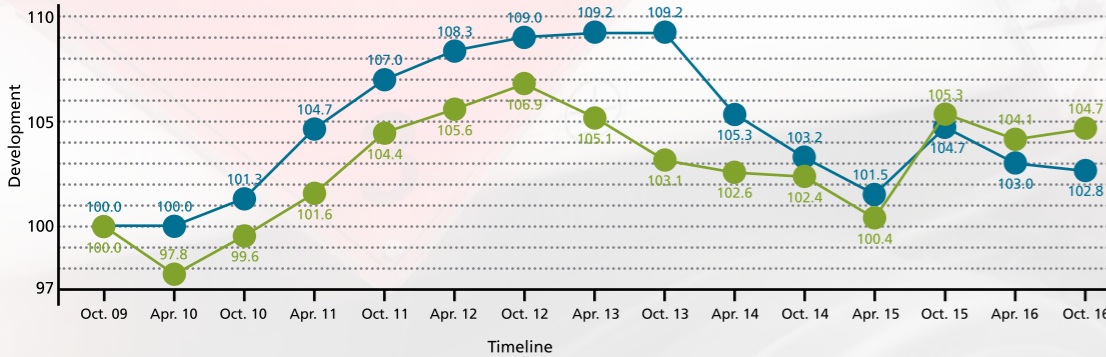


Fig. 2: Country-specific index development from 2009 to 2016 for FTL tours from Germany to United Kingdom

● Market index ● Company index

BENCHMARKING CENTER NUREMBERG BMC

- Cross-company and cross-sectoral comparison of company processes and functions
- Science-based and efficient method for quick and valid discoveries
- Neutral procedure that is compliant with anti-trust laws
- Thematic and sector specific benchmarking solutions

Any Questions?

Please Feel Free to Contact Us!

**Fraunhofer-Center for Applied Research
on Supply Chain Services SCS**

Nordostpark 93
90411 Nuremberg, Germany

Telefon +49 911-58061-9530
freightrate-benchmarking@scs.fraunhofer.de

<http://s.fhg.de/freightbenchmark>



Uwe Veres-Homm
*Business Field
Coordinator*



Florian Mägerlein
Project Lead



Christina Waibel
Product Management