Track Access Charges in Germany and Regulatory Challenges

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Workshop at Masaryk University Brno, 26 September 2025

In Brief – The German Rail market

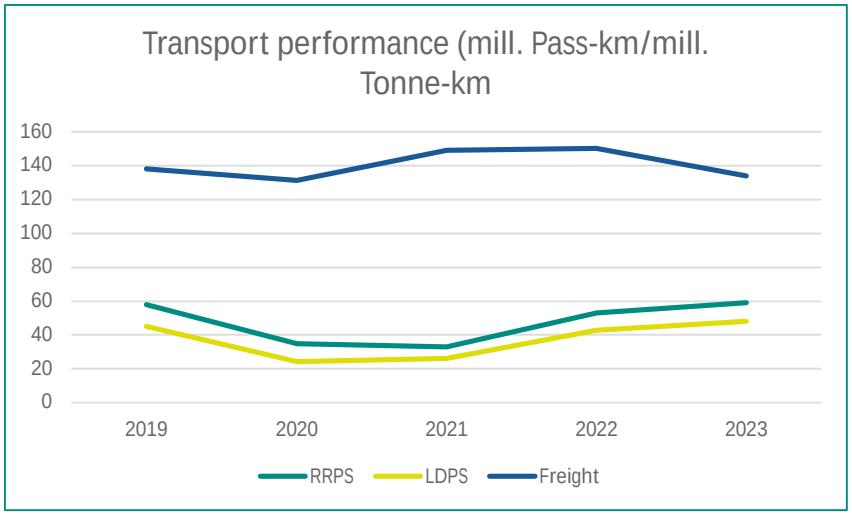
- 501 rail companies with license, 359 are active (Source: EBA/BNetzA, 2024)
- Open access to all rail networks, track access charges, full cost recovery principle
- DB InfraGo: 33.500 km, state-owned, vertically integrated, + 6400 km other companies
- Regional rail services (RRPS) franchised, TACs passed through within PSO contracts to PTAs

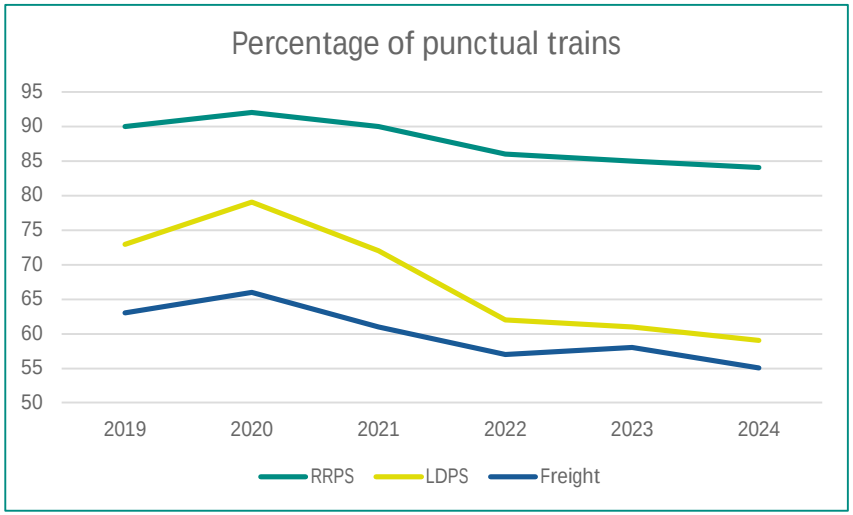
	Regional rail passenger transport (RRPS)	Long-distance passenger services (LDPS)	Freight
Number of companies	124	31	250
Billion Pass-km/tonne-km	59	48	134
Share of competitors (%)	36	5	56

All figures for 2023, source: BNetzA (2024).

In Brief – The German Rail market cont.

- Problems to regain passenger and goods volumes back after the pandemic
- Continued and even worsend problems in punctuality





The structure of the German track access charging scheme

- Full cost recovery constraint → 2nd best welfare optimal scheme with Ramsey-based mark-ups
- Biased through capped TACs for RRPS (must increase at the growth rate of regionalisation funds)

Direct costs of train operation + **Mark-ups for cost recovery (per segment)** + **Reductions and Surcharges**

Includes cost of:
- operation
- Timetabling
- Maintenance
- Wear & tear

Mark-ups required to…
- enable „best possible“ competitiveness of segments
- be based on demand price elasticities
- be differentiated at least by RRPS, LDPS, Freight
- not exclude any segment fom track use
- guarantee growth of TACs for RRPS at same rate as regionalisation funds

- Environmental charges (for noise until 2020)
- Capacity constraints
- Flexibility of departure/arrival time
- Priority in time-tabling

Track access charges – Freight transport

	Direct cost (€/Train-km)	Charge 2025 (€/Train-km)	Reductions and Surcharges for: Flexibility		Priority	
			Time	Route	Fast[2)]	Express[3)]
Standard	1.511	3.73	-0.02	-0.02	+0.60	+2.20
Heavy trains (>3000 t)	2.846	5.36	-0.20	-0.20	-	-
Regional freight train[1)]	0.871	2.12	-0.20	-0.20	+0.60	+2.20
Dangerous goods	1.511	4.66	-0.20	-0.20	+0.60	+2.20
Locomotive only	0.795	2.12	-	-	-	-

1) < 75 km track length, < 370 length of trains. 2) Priority over all freight trains (except those with status “fast” and “Express”. 3) Priority over all trains except passenger trains with status “Express”.

Track access charges – long-distance passenger transport

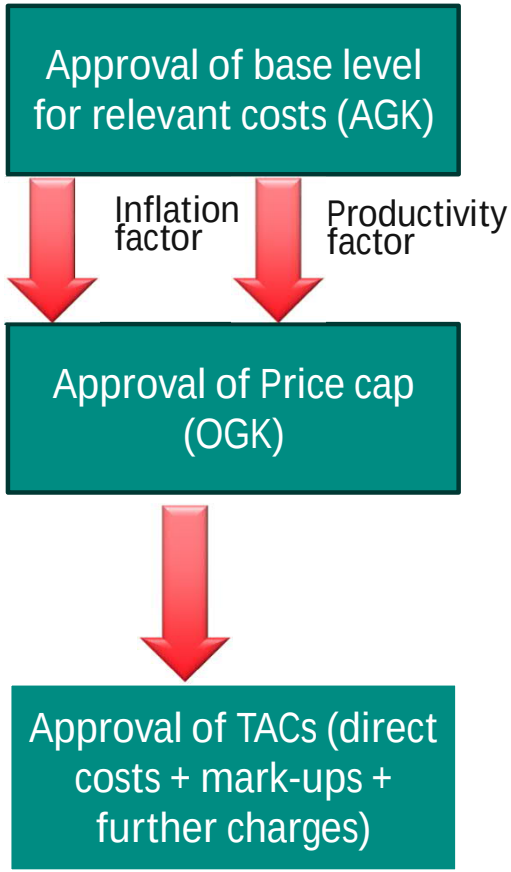
	Direct cost (€/Train-km)	Charge 2025 (€/Train-km)	Surcharge „Express“
Metro, day time[1] />160 km/h[4]	1.097	17.07	+2.20
Metro, day time[1] /<100 km/h[4]	1.097	7.18	+2.20
Basic[2]	1.097	6.32	+2.20
Night[3]	1.097	3.28	+2.20
Charter/Nostalgic trains	0.800	3.38	-
Point-to-Point[5]	1.097	4.73	-
Locomotive	0.795	3.28	+2.20

1) 06:00 – 20.00.- 2) 20.00 – 23:00. 3) 23:00 – 06:00. 4) Linear tariff between 100 km/h and 160 km/h. 5) No trains time-tabled for continuing travel, only 4 trains per day/direction, max 130 km/h speed, flexibility in time-tabling (± 30 min).

Track access charges – regional rail passenger transport

Federal State	Direct cost (€/Train-km)	Charge 2025 (€/Train-km)	Federal State	Direct cost (€/Train-km)	Charge 2025 (€/Train-km)
BW	0,800	6,143	NI	0,800	6,160
BY	0,800	5,952	NRW	0,800	5,972
BE	0,800	6,866	RP	0,800	6,125
BB	0,800	6,613	SL	0,800	6,268
HB	0,800	6,610	SN	0,800	6,324
HH	0,800	6,078	ST	0,800	6,159
HE	0,800	5,920	SH	0,800	6,245
MV	0,800	6,539	TH	0,800	6,232

The price-cap regulation for track access charges in Germany



Basis: Total costs and track-km, averaged over up to 5 past business years

Approved for 2025/26: 6.29 bill. €

Approved for 2025/26: 7.84 bill. € (preliminary)

court decision pending!!

Approved if calculated revenues $\leq Price\ cap$ (OGK)

court decision pending!!

Regulatory procedure for approval of track access charges for 2026

		Million €
A	Base level of cost (AGK)	6 290
B	Out of these: within LuFV	2 034
C=A-B	Cost base for incentive regulation	4 256
D	Cost change due to inflation factor PI_t and productivity factor PF_t	390
E=B+C+D	Maximum cost (price cap)	6 680
	Adjustments due to:	
F	Platform costs	410
G	Increase of equity	292
H	Maximum cost (price cap) final (OGK)	7 382
	After preliminary court decision:	7 841

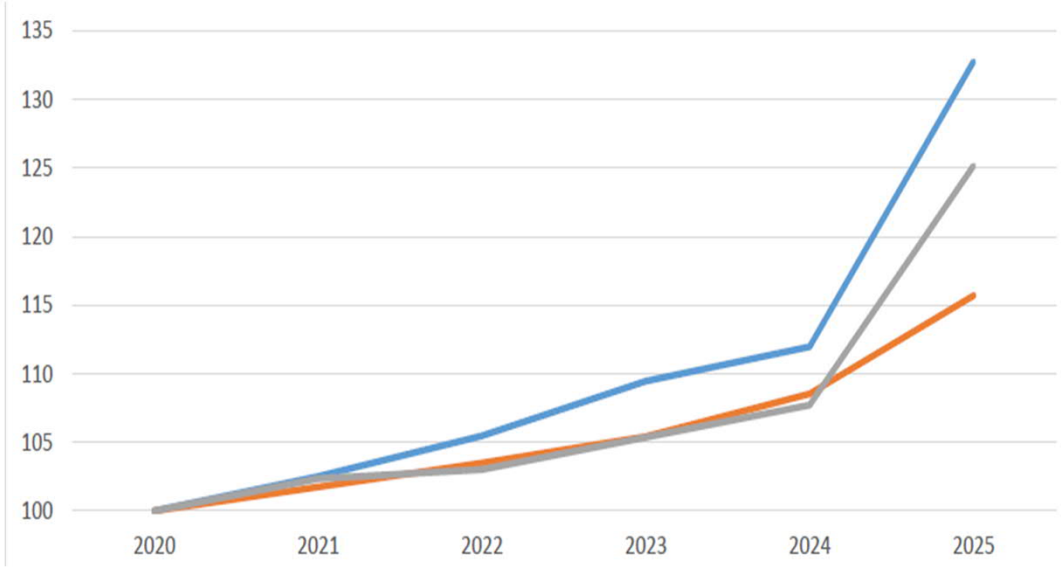
	PI	PF
2024	0.74	1.04
2025	2.97	0.89
2026	7.89	0.63

PI: Producer price index (industry)
PF: Labour prodcuctivity index
Both as 5 year‘s average

Original decision of BNetzA, based on 2.2% Return of equity

Preliminary court decision:
3.7% (CAPM)

Escalation of track access charges since 2020



Indexed 2020=100. Source: Commission of Monopolies (2025), p. 35.

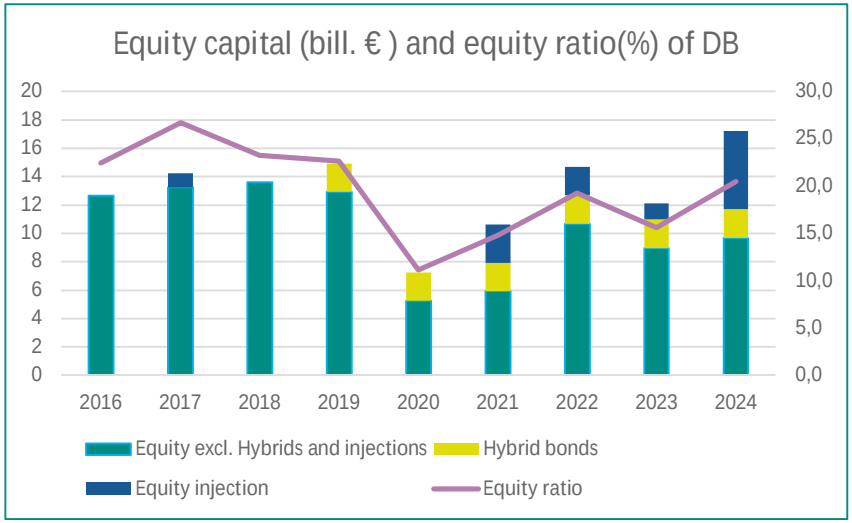
Blue: LDPS, Segment Basic. Orange: RRPS (NRW). Grey: Freight, standard segment.

Reasons:

1) Increase of DB‘s equity capital by Federal government
2) Cap for access charges in regional rail passenger services
3) Insufficient incentives from regulation to increase efficiency

Reason 1) The equity injections and their consequence

Decline of DB‘s own capital → various equity injections (2017, 2021- ??)



Major problem:

- Former construction cost subsidies replaced by Equity injections
- Advantage: debt limit circumvented
- But: in contrast to the former, equity injections increase the cost base for TACs through
  a) Depreciation
  b) Rate of return on equity

Determination of the rate of return on equity by BNetzA I

EReg G: requests a market-usual rate of return on equity

BNetzA: uses Capital Asset Pricing Model (CAPM)

Expected rate of return = (R_f) + β $(R_m - R_f)$

R_f : risk-free interest rate
β : Systematic risk
R_m : market-risk premium

Parameter estimates (Frontier and IGES, 2022, 2025 on behalf of BNetzA):

- Beta derived from 4 comparator goups (rail freight companies, ports, utitlities, electricity networks) →between 0.23 and 0.8
- Interest rate for borrowed capital from S&P iBoxx™ with 7-10 years and 10+ loan terms → 1.4% -2.2% (government-owned rail), 1.6% - 2.8% (non-government owned)

Determination of the rate of return on equity by BNetzA II

- Final court decision on rate of return for equity pending
- Preliminary decision in favour of DB, approved rate of 2.2% (instead of 3.7% from CAPM) wrong in law → delta of 459 Mill. €

	Regulatory calculation	values
A	Levered β	0.48*
B	Income tax rate	29.93%
C	market-risk premium	3.9%
D	risk-free interest rate	0.75%
E=(D+A)/(A-B)	CAPM return on equity	3.7%
~~Requested return on equity by Fed. Govt.~~		~~2.2%~~
* Based on 34.4% borrowed capital.		

Reason 2) The TAC price cap for regional rail passenger services

According to ERegG:

- market segments are the 16 federal states
- e.g. “artificial” markets, service level determined by Länder and PTAs
- Operators financed through state subsidies, TACs passed through within PSO contracts to PTAs
- TACS for RRPS must increase with the growth rate of regionalisation funds

The consequence: Increase of TACs as applied for by DB (on average +16%):

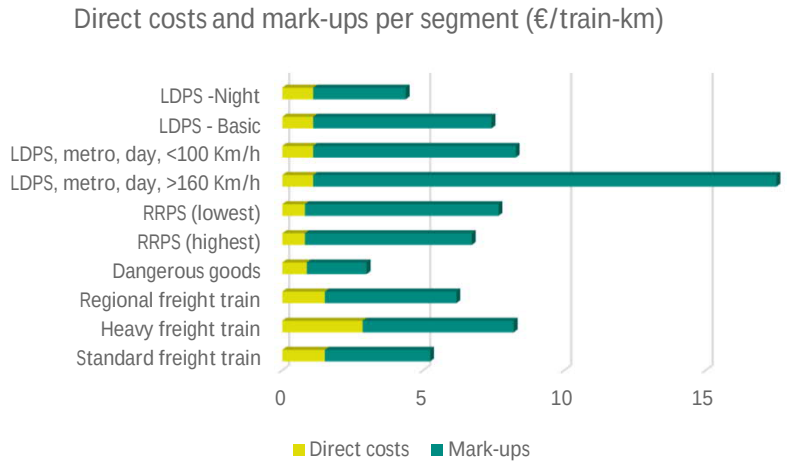
	RRPS	LDPS	Freight
Without price cap for RRPS	+23%	+2%	+8%
With price cap for RRPS	+3%	+39%	+35%

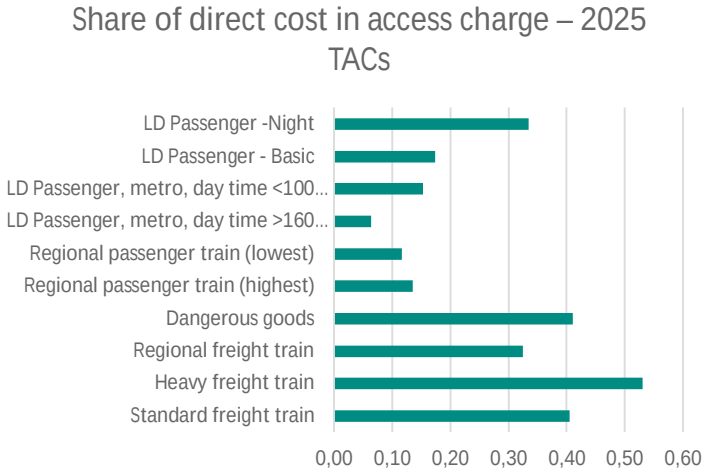
The dilemma:

1) With price cap: Ramsey-Boiteux welfare optimum destroyed
2) Without price cap: TACs increase faster than regionalisation funds

Decision of European Court pending (violence of 2012/34/EC)

Relation between direct costs and mark-ups in German track access charges





Remarks:

- Ratio MC/AC highest for freight (Heavy freight>50%) and LDPS (night) due to lower mark-ups
- Econometric work for DB suggests lower shares, in line with international evidence
- Application of econometric estimates would require an increase of mark-ups if cost recovery required

Reason 3) Exclusion of cost from incentive regulation

		mill. €
A	Base level of cost (AGK)	6 290
B	Out of these: within LuFV	2 034
C=A-B	Cost base for incentive regulation	4 256
D	Inflation and productivity factor	390
E=B+C+D	Maximum cost (price cap)	6 680
	Adjustments due to:	
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ERegG:

- Fed. Govt. and IM can close a „qualified regulatory agreement“ (Art. 30(3) Directive 2012/34/EC)
- LuFV I-III are classified as such agreements
- Funds under these agreements are part of AGK and OGK, but not under incentive regulation
- Argued that LuFV obliges efficient use of funds, contains quality indicators

In 2026: one third of OGK!

Problems: 2 separate regulation schemes,
LuFV too vague w.r.t. efficiency and quality increase!

TAC subsidies from Federal Government

- Introduced in 2018 for freight and in 2023 for LDPS (valid until November 2025)
- For LDPS: 87.5 mill. € in 2023 with 85.4 mill. € for DB)
- For freight in 2025: 275 mill. € available

Freight	Charge 2025 (€/Train-km)	State subsidy 2025 (€/Train-km)
Standard	3.73	1.58
Heavy trains (>3000 t)	5.36	2.27
Regional freight train[1)]	2.12	0.90
Dangerous goods	4.66	1.97
Locomotive only	2.12	0.90

1) < 75 km track length.

Conclusions – How to stop increase of TACs?

- No further injections of equity, return to construction subsidies
- Temporary reduction of return on equity (by law) + general decision on level
- More incentives/regulatory pressure to increase efficiency:
    a) Include LuFV funds into incentive regulation
    b) Introduce a sector-specific productivity factor
- More quality incentives (new scheme for delay penalties)
- TAC subsidisation for train operators at least temporarily to be continued
- Simplify the currently complicated scheme as well as the financial flows