

Eurotunnel: a charging framework pioneer in concession tolls which also respects the European directives concerning the recovery of long-term costs for railway infrastructure

Charges for rail infrastructure are regulated by European law and the principles are set out in Directive 2012/34/EU with which Member States must comply by 16 June 2015 at the latest. Article 32.3 of this directive provides that rail infrastructure managers may levy charges **“on the basis of long-term costs”**. This principle has also been confirmed by the Intergovernmental Commission, the binational Regulator of the Fixed Link, in its decision No. 2013-001 of 25 October 2013. Below, Eurotunnel shows a method that validates that its tolls for passenger traffic ensure a reasonable return on investment.

1 / Eurotunnel’s charging framework for the use of its rail infrastructure has been established using a model based on the recovery of long-term costs

Railway tolls for the Fixed Link were set in 1987 based on the “Levelized Cost of Investment” (LCOI) method, using a constant real unit cost per traffic unit which allows for the recovery of the capital expenditure incurred, with a breakdown by type of traffic. This type of charging framework makes possible the recovery of the investment attributable to the activity of railway infrastructure manager over the duration of the concession, to the extent that initial forecasts in terms of capital expenditure and traffic volumes are met.

LCOI charging frameworks are commonly used in BOT financing schemes (Build-Operate-Transfer) for concessions, since the risks of the licensors are transferred to the concessionaires in compliance with the EU Directive¹ on concessions approved in 2014. The charging framework for the Fixed Link established in 1987 was exemplary in that respect and is still relevant today.

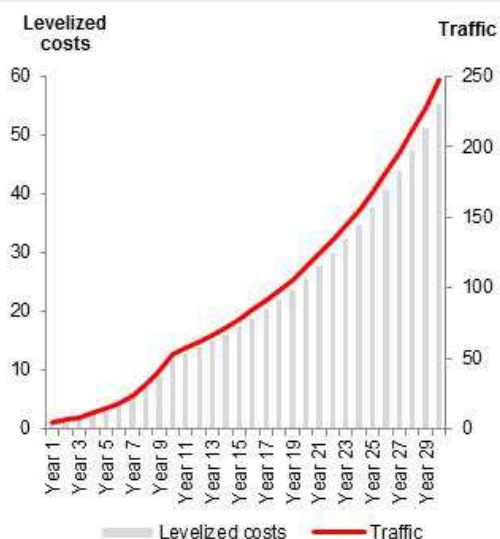
The charging principle is to set a unit price so that the discounted net cash flows generated over the life-time of the concession allow the investor to obtain for his investment the internal rate of return (IRR) as envisaged initially. The same principle applies when one looks not from an investor’s perspective, but at the project level (thus without any predefined equity or debt financing structure) using a Weighted Average Cost of Capital (WACC) discount rate.

This mechanism also allows the smoothing out of the level of unit charges between the start of operations (when traffic is low) and the end of the concession (when traffic levels are higher). In this way, users are not made to pay for the initial overcapacity of the infrastructure which would have been the case had the charging framework been based on a straight-line amortisation of the investment over the life-time of the concession.

¹ Directive 2014/23/EU of the European Parliament and of the Council on the award of concession contracts: “the main feature of a concession [...] always implies the transfer to the concessionaire of an operating risk of economic nature involving the possibility that it will not recoup the investments made and the costs incurred in operating the works or services awarded under normal operating conditions even if a part of the risk remains with the contracting authority or contracting entity.”

In the case of Eurotunnel, the original pricing mechanism (as detailed in the Railway Usage Contract or RUC) is composed of a maximum toll per passenger indexed to the annual RPI less 1.1%, plus a global fixed amount which decreases as traffic increases on a per-unit basis. Eurotunnel respects the initial charging principles of 1987, and in 2012 invoiced an average of €21.4² per passenger for the recovery of IRC³.

Levelized cost approach in the context of a conceded infrastructure



The smoothed economic unit cost is used to determine the threshold of annual income such that the discounted (using the project WACC) sum of net cash flows equals the cost of the initial investment. It is fixed based on the projects initial cost and traffic forecasts:

$$\sum_t Net\ cash\ flows_t \times \frac{1}{(1+WACC)^t} = \sum_t CAPEX \times \frac{1}{(1+WACC)^t}$$

The model developed by Eurotunnel takes into account both capital investment and debt structure, including their changes since the start of the project (conversion into equity, new schedule and debt service costs). The discount rate used in the model is the Investor IRR.

2 / Passenger tolls charged by Eurotunnel do not exceed the long-term costs

It is important to note that the 1987 charging principles have never been adjusted to reflect the actual costs of construction in 1994 which exceeded the initial forecasts, the actual traffic levels which were also far below those originally envisaged, the renegotiation of the financing, or the extension of the concession until 2086.

For the sake of transparency, Eurotunnel has recalculated a real constant unit cost per unit of traffic expected on the basis of verifiable actual data and updated traffic forecasts. The model incorporates the actual investment costs, changes in the financial structure since the beginning of the concession (thus incorporating the effects of the renegotiation of 2007), the actual traffic between 1994 and 2012 as well as the latest projections of traffic and debt service costs.

This real unit cost per traffic unit, A, is determined by the formula below with d (t), D (t), E (t), Tax (t) and C (t) respectively equal to the financial costs of year t, with loan repayments in

² The tolls for the Fixed Link are expressed in both Euros and Pounds Sterling, and inflation is applied on a monthly basis. We have expressed here the values in Euros using a conversion rate of 1.2 Euro per pound and the average per passenger revenue on a yearly basis.

³ IRC (Investment Recovery Charge) is the share of tolls attributable to the recovery of the initial construction costs. Long-term costs include both IRC and OMRC (Operation Maintenance and Renewal Costs) necessary for the operation and maintenance of the infrastructure. The RUC defines the portion of these OMR costs attributable to the sole railway infrastructure which are then included in the toll each year at cost. Revenue derived from OMRC and OMR costs thus neutralise exactly each year and consequently have no impact in terms of assessment of the recovery of long-term costs.

year t, capital increases in year t and taxes in year t, while Traf(t) corresponds to the actual historical traffic until 2012 and the forecasts for the remaining life-time of the concession:

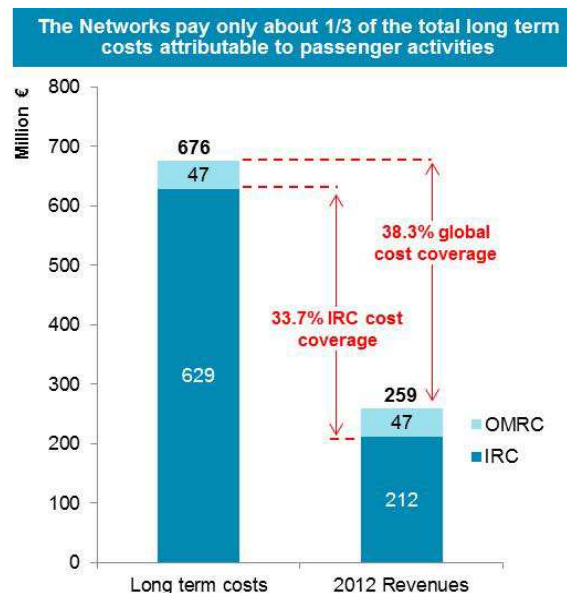
$$A = \frac{\sum_t (d_t + D_t + E_t + C_t + Tax_t) \times \left(\frac{1}{1+IRR}\right)^t}{\sum_t Traf_t \times \left[\frac{(100+i-1,1)}{100}\right]^t \left(\frac{1}{1+IRR}\right)^t}$$

Taking in to account this recalculation, the model shows that the smoothed economic unit amount necessary to recover the investment costs over the life-time of the concession amounts to €63.5 per passenger expressed in 2012 Euros.

This amount of €63.5 for 2012 corresponds to the threshold beyond which (had it been achieved every year since 1994 and would continue to do so every year until the expiry of the concession) the initial investor⁴ will get over the term of the concession, the expected return on the capital invested.

Obviously the actual unit amount for 2012 is much lower than the calculated theoretical threshold (€21.4 compared to €63.5) being only 34% of the passenger toll. Similar numerical applications show that this has also been the case every year since 1994.

In conclusion, the charging framework based on the recovery of long-term costs calculated in 1987 is in full compliance with European law and its implementation into binational regulation. Passenger tolls are not only based on the recovery of long-term costs, but they also fully respect the charging principles set out in the RUC. Moreover, calculations also show that the current effective unit price represents less than 34% of the calculated threshold necessary to ensure a fair remuneration of the risk taken by an initial notional investor.



⁴ We consider here a theoretical initial investor from the regulation's standpoint. This investor is not to be confused with a stock market investor who can buy or sell GET shares on an everyday basis with a return based solely on his investment strategy.