

TSO regulation;
Transmission tariffs; efficiency
targets

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Gas transport in the Netherlands

Facts (2005):

Overall

- Network 134.000 km
- Consumption 47 BCM
- Production 71 BCM
- Regulated B€ 2,1

Transmission

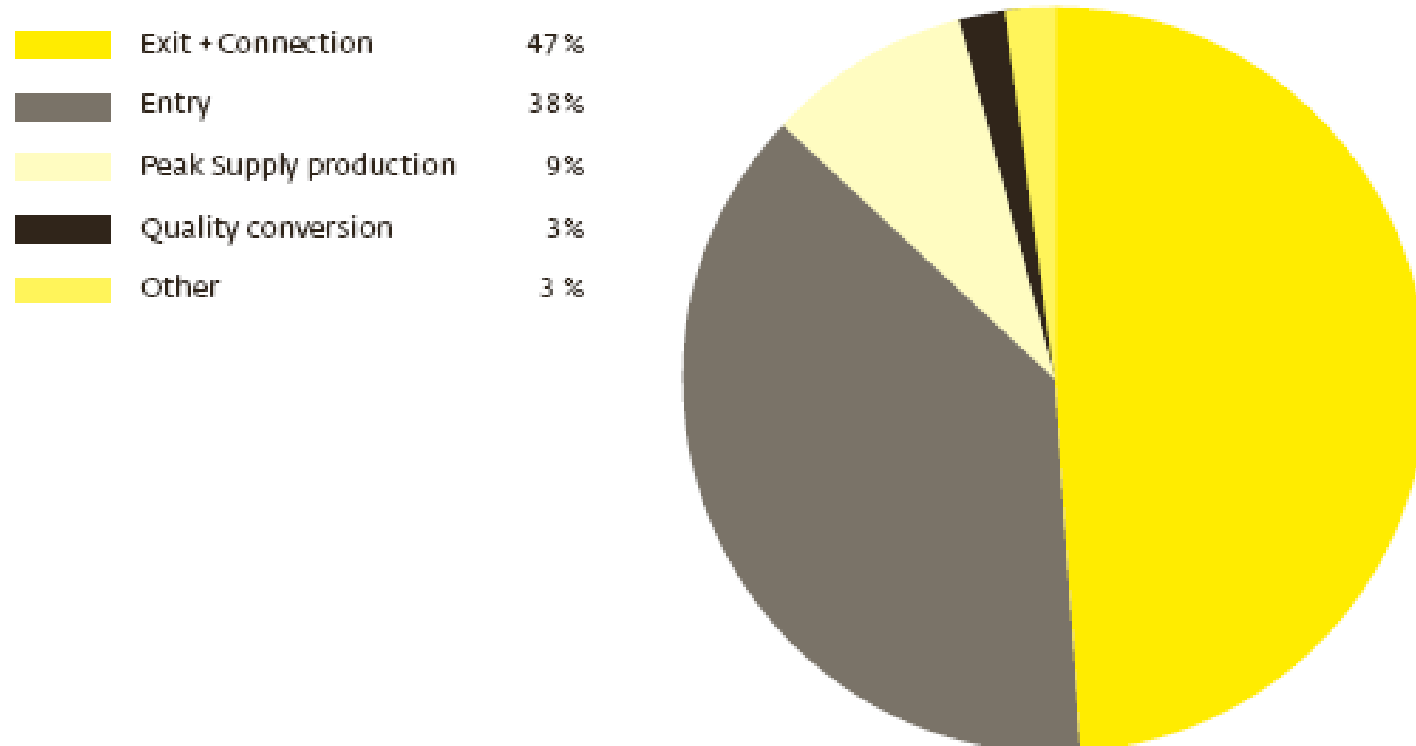
- Volume 85 BCM/yr
- 1100 Exit points, 50 entry points
- Entry:
 - 60% small fields,
 - 30% Groningen,
 - 10% import
- Exit
 - 55% export
 - 45% home market



Almost half of revenues of Gas TSO is linked to exit and connection

Distribution of revenues GTS, 2006 [%]

100% = EUR 1.2 billion



Key tasks of TSO regulator

Access

Non-discrimination for access of

- producers
- suppliers
- consumers

Tariffstructure

Tariffs based on cost causation

Investments

Investments timely to

- Facilitate market growth
- Maintain high quality
- Enable investment in production
- Enable international flows

Networkcosts

Value for money

No monopoly profit

No cross subsidies with liberalized markets

In the Netherlands, GTS gets an x-factor for all its regulated activities

$$\text{Tarriff}_t = \text{Tarrif}_{t-1} \times (1 - x)$$

Revenu regulation so insensitive to volume growth
(apart from EUR 2,5 million incentive)

X-factor for Gastranport Services for tasks:

- Operation of gas transmission network
- Connections to gas transport network
- Balancing
- Quality conversion
- (Netherlands knows two gas qualities)
- Transport security (bankruptcies)
- Providing information

Focus on 'cost orientation'

Major disputes between regulator and GTS on way of regulation

Tariffs based on benchmarks?

Does GTS face pipeline to pipeline competition?

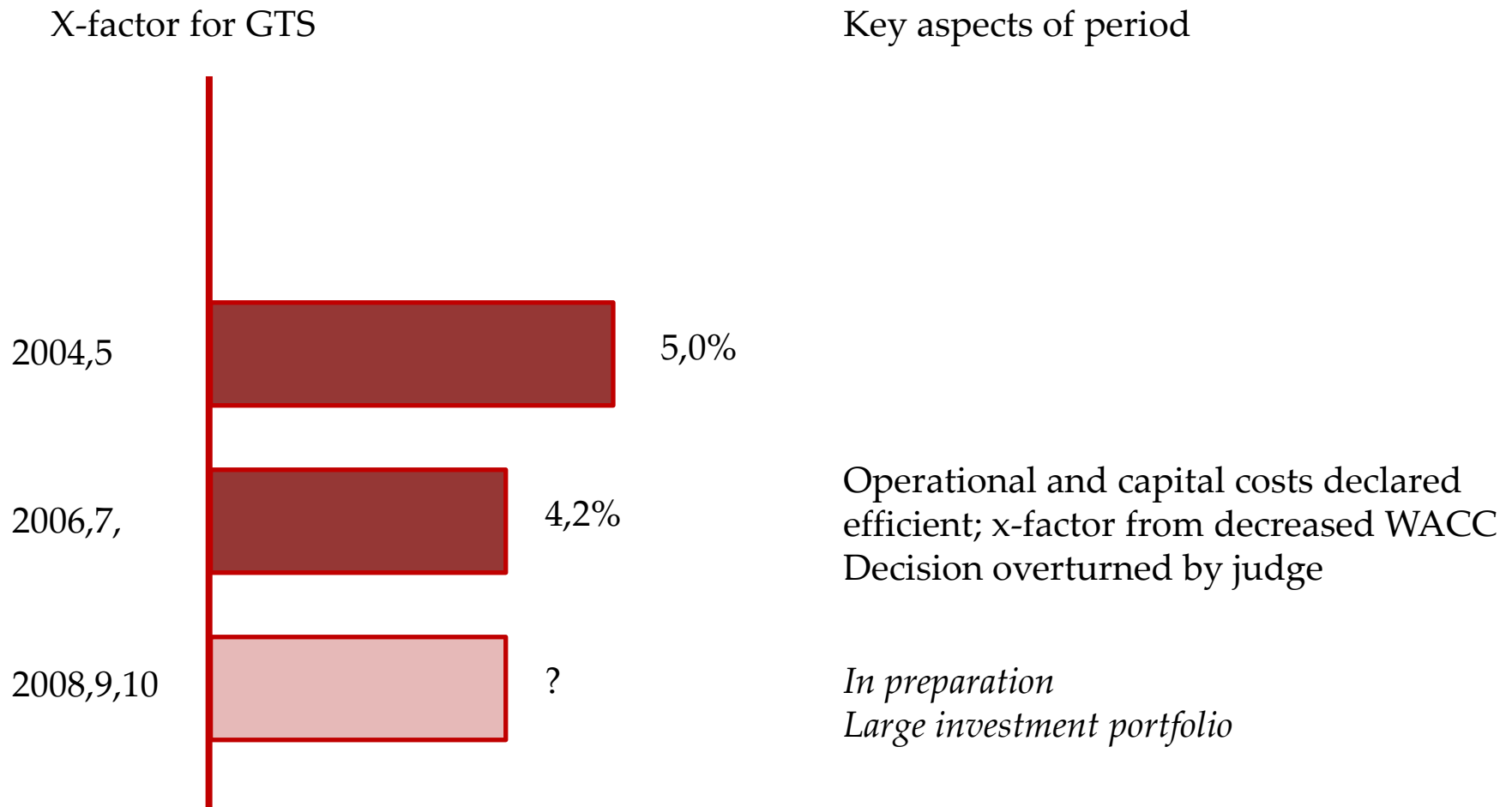
- Destination market
- Origin market
- Transit markets
- Contestibility of large new projects

There is no feasible competition for quality conversion

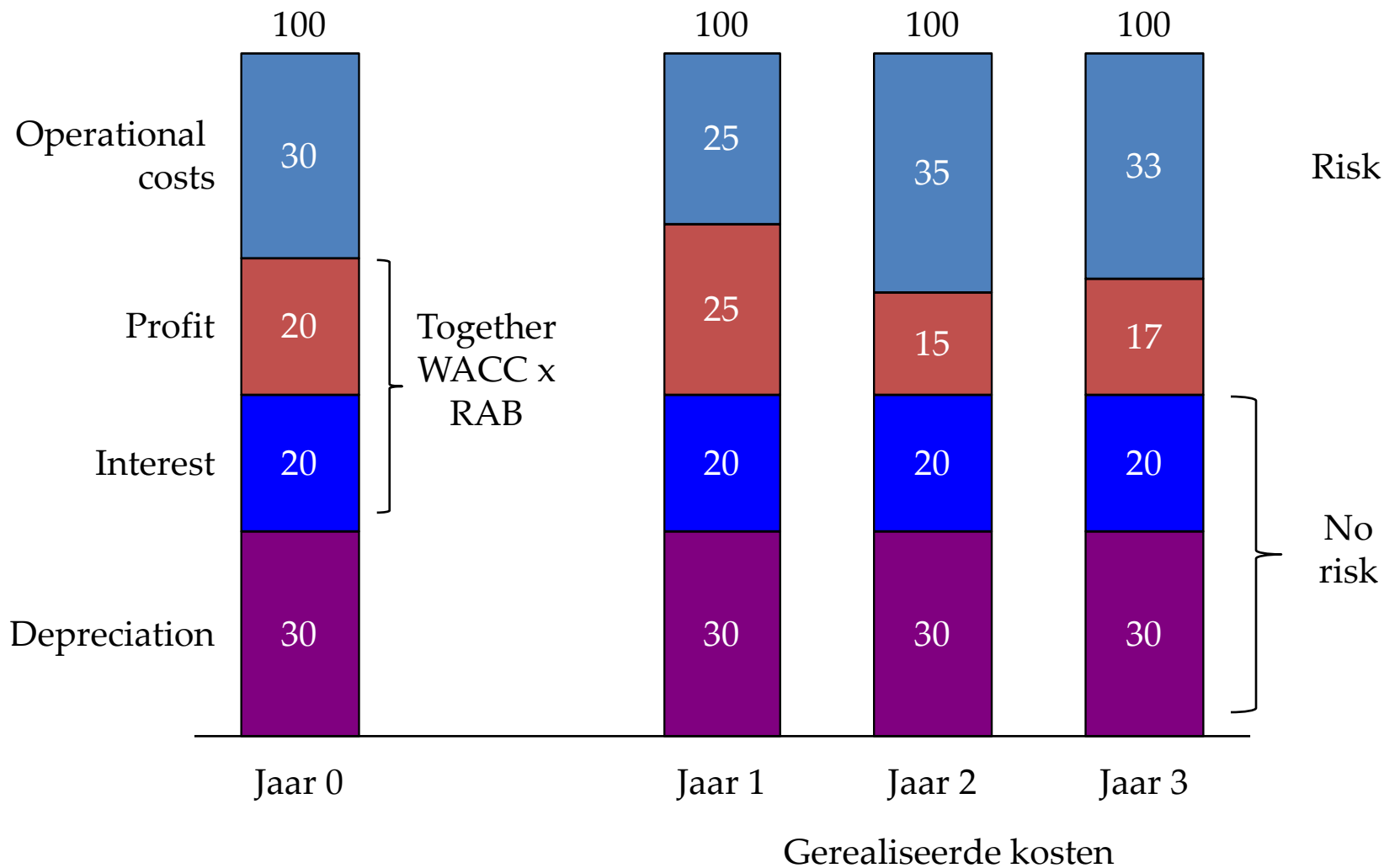
Table 2: Summary of price and availability of QC services

QC provider	GRT Gaz	GTS	RWE	Fluxys
€ to convert 1 MW/year at a 50% load factor	2,141	791	6,320	10,360
Capacity available?	Yes	n/a	less than 1%	No

Every period for which an x-factor had to be set, proved to be specific



Setting the TSO's revenues



Elements of setting the TSO revenues

Element of calculation

RAB x

WACC

+

Depreciation

+

Operational costs

Key discussion items

Starting point proved tough due to lack of data

- Part of RAB declared efficient
- Part of RAB benchmarked

Based on CAPModel

- High (6,4% TSO) or
- Low (3,6% users) or
- In between (5,4% regulator)

Set depreciation times in RAR

Comparability of TSO's

Elements of setting the TSO revenues

Element of calculation

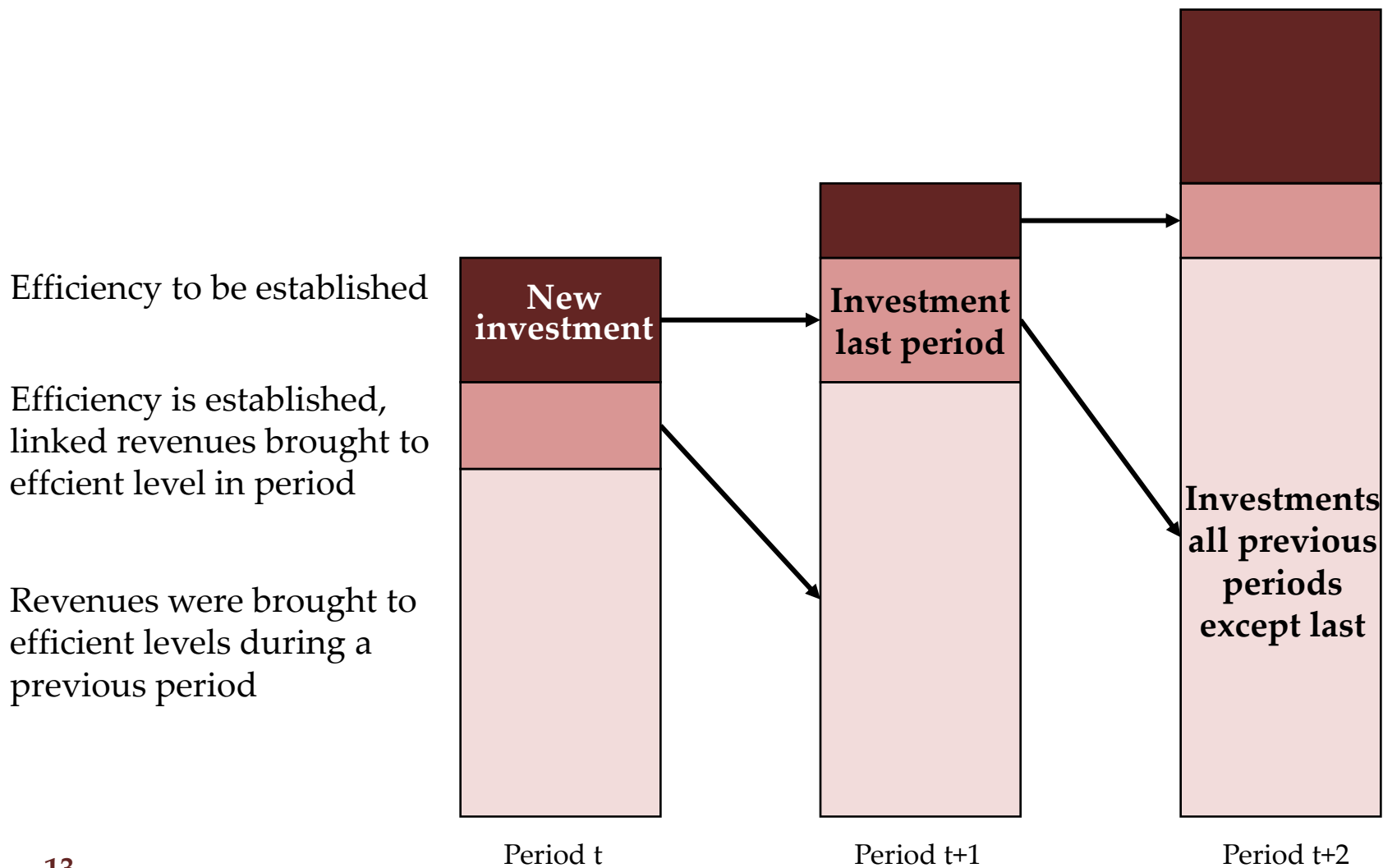
RAB x

Key discussion items

Starting point proved tough due to lack of data

- Part of RAB declared efficient
- Part of RAB benchmarked
- TSO was formed in 2004, and could not be held accountable for assets it inherited; so all assets before 1-1-2004 were declared efficient.
- X-factor will be set for investments after 2004 (?)
- Key discussion: How to incorporate investments

All assets of a TSO go through a regulatory cycle of three steps to avoid repetitive reduction of asset base



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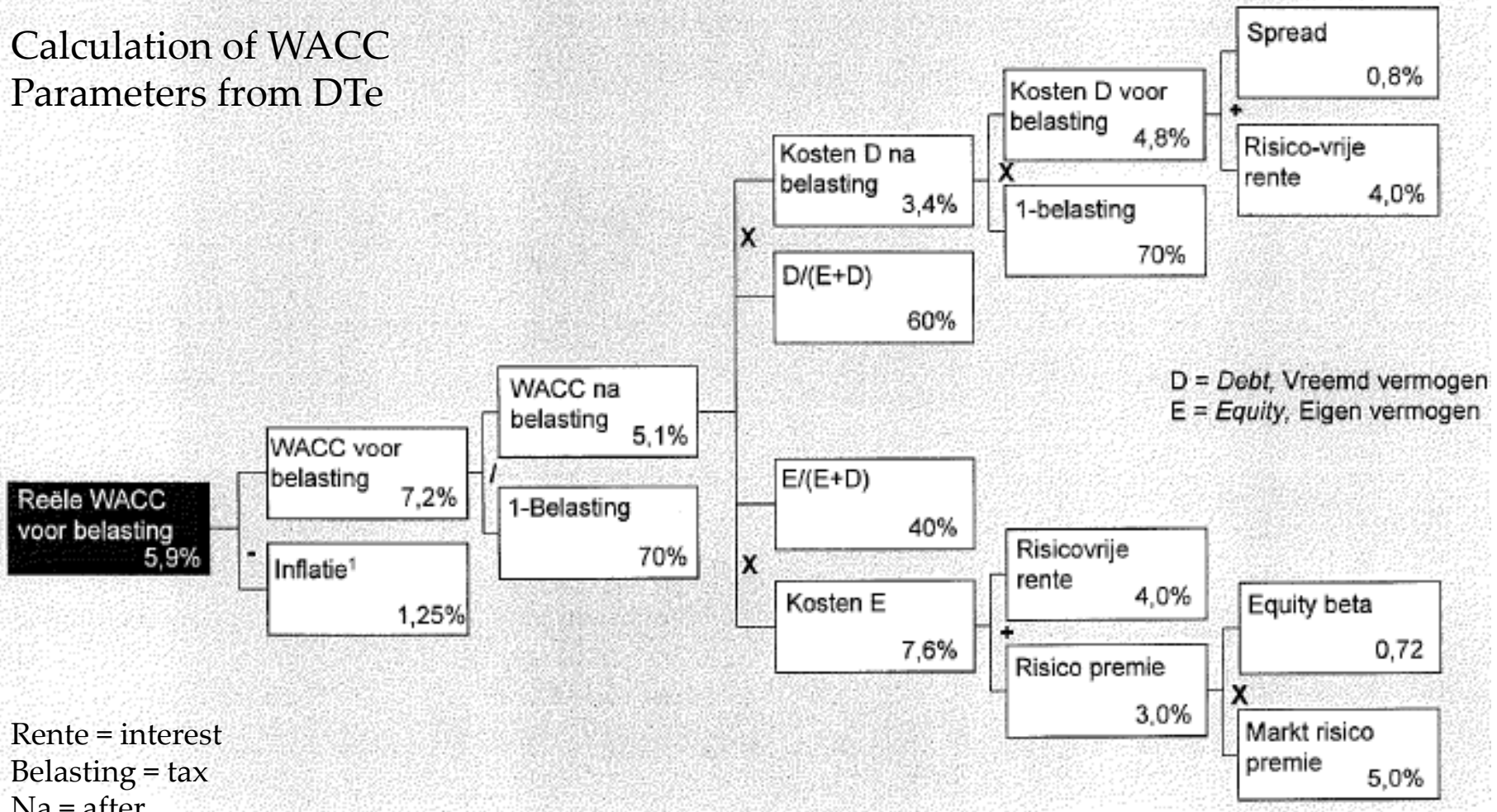
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Set depreciation times in RAR

Comparability of TSO's

The CAPM Model is used to set the WACC used to determine the revenues for capital costs

Calculation of WACC
Parameters from DTe



Rente = interest
Belasting = tax
Na = after
Voor = before

Elements of setting the TSO revenues

- RAR - Regulatory Accounting Rules - are part of crucial 'regulatory infrastructure' (Joskow, 2005)
- RAR include:
 - Allowed depreciation per asset class
 - Activation policies for investments
 - Rules for splitting of system and asset owner tasks

Depreciation

Set depreciation times in RAR

Elements of setting the TSO revenues

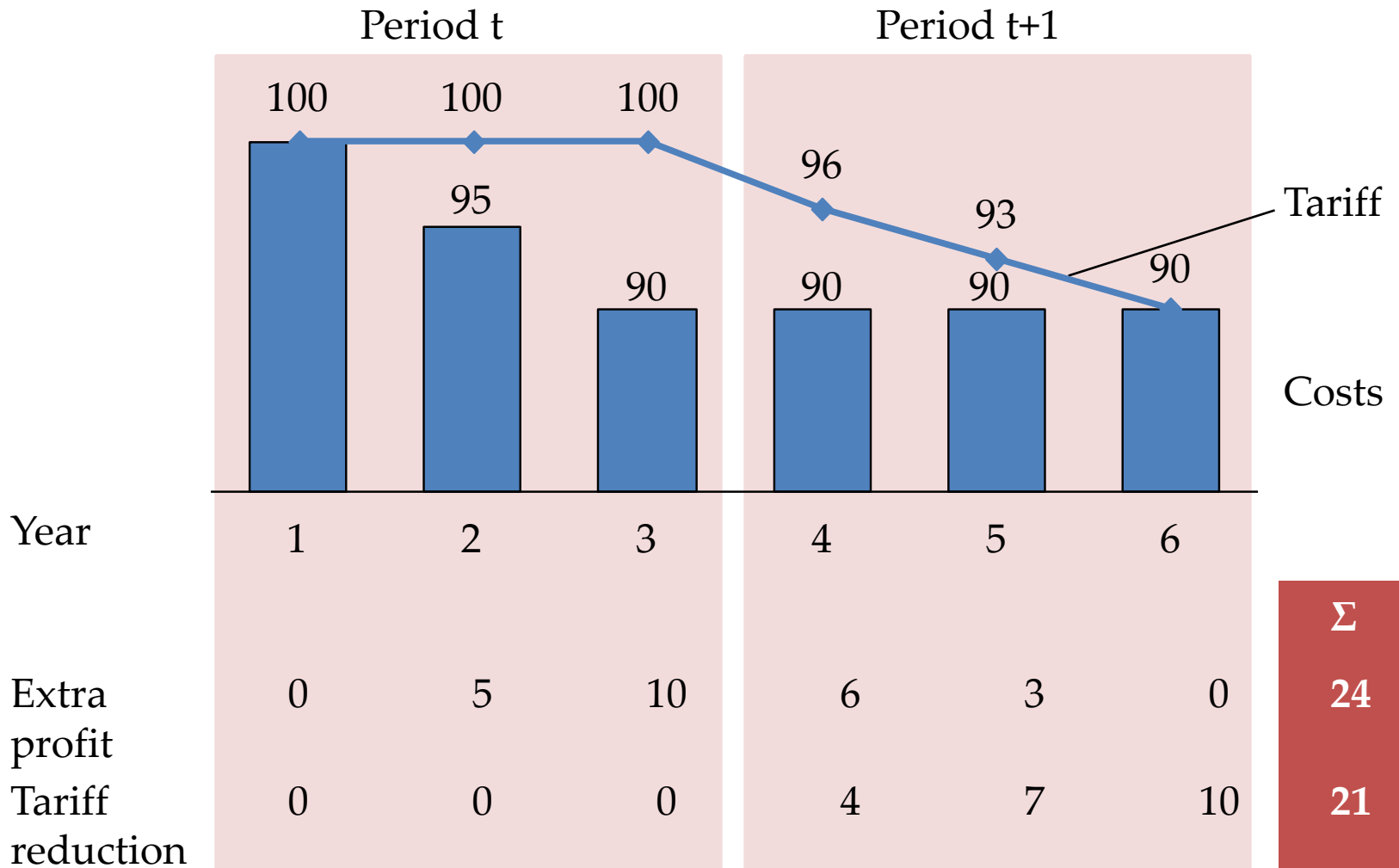
1. Asses efficiency
 - a. Use benchmark (but...how comparable are TSO's is a repeating discussion)
 - b. Use 'classic' cpi-x
2. Apply frontier shift for improvements in efficiency

Operational costs

Comparability of TSO's

'Classic' cpi-x regulation gives incentive for improvement of operational efficiency

Example (cpi set at 0%)



The end

- Thank you for your attention
- Feel free to ask questions; now or later

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