

Financing local public services: counterparts, financial framework and impact on user charges

International examples from the water sector

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Turin, 13 September 2010

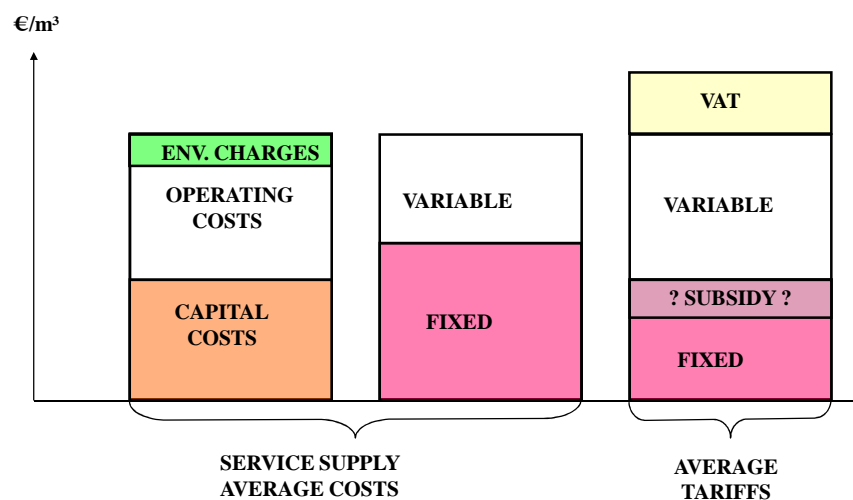
Agenda

- Why is financing important?
- What financing options exist?
- The financing experience in various countries
- The tariff dilemma
- Conclusions

Why is financing important?

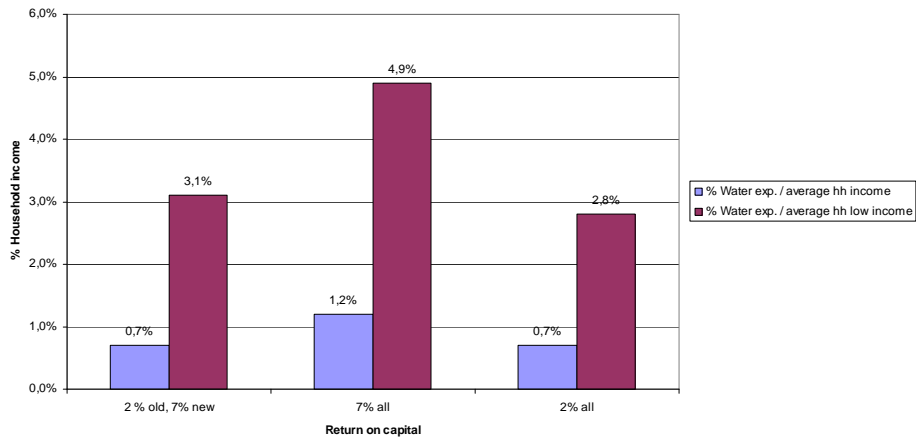
- **Implementation of EU Directives:** higher service standards; not only in new member states
- **Capital intensive** components of local public services
- **User/polluter pays** principle: need to adapt tariffs gradually

Cost recovery including capital costs



The impact on user charges

Effect of Return on capital on water tariffs (Lombardy region)

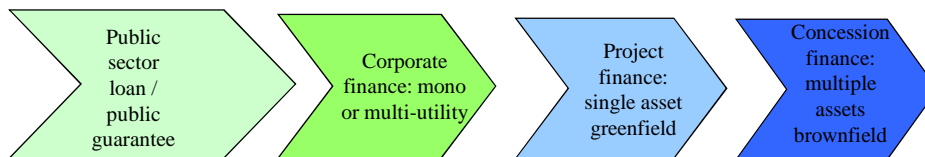


Source: Prof. Massarutto, « La legge Galli alla prova dei fatti »

Financing options

Counterparts

Local entity Public/private company SPV Concessionaire



Increase risks / pricing

Regulatory framework defines options

Regulatory uncertainty increases WACC

The regulatory framework: water sector

Regulation	Regulated monopoly « UK model »	Delegated operation « French model »	Local public enterprise « German model »
Ownership	Private	Public	Public
Operation	Private	Private/Mixed/ Public	Private law public companies
Private sector risks	Investment + Operations	Market (part) + Operations	Not applicable
Public sector risks	Regulator takes market risk	Investment risk (e.g. Agences de l'Eau)	Full cost recovery

Source: Prof. Massarutto, « La legge Galli alla prova dei fatti »

Corporate finance: UK water financing model

- **1945-73:** > 1000 local government water and sewerage suppliers
- **1973:** consolidation into 10 regional water authorities, with 29 small water only private firms remaining
- **1989:** privatization of 10 regional water authorities and consolidation process from 29 to 11 private water only companies
- **Private corporate lending:** Welsh Water 100% debt financed; corporate securitization
- **Implementation of EU Directives:** raised £ 80 Billion since privatization in 1989 through corporate loans without recourse to public sector

Corporate finance: Rating levels

Purely indicative

Financial ratios	AA	A	BBB
Available Cash Flow / interest expenses	5.0-7.0	3.0-5.0	2.0-3.0
Available Cash Flow / Debt (%)	30-40%	13-25%	8-16%
Debt / Total Assets	20-40%	40-60%	55-80%

Besides the stability of the UK regulatory framework, the **cash flow** and the **debt/equity** ratio are key rating parameters Source: Standard&Poor's, 2004

Corporate finance: Portuguese water financing model

- **Before 1993:** > 350 utilities
- **1993-2009:** reorganization of the sector by creating 17 large regional utilities for bulk water supply and wastewater treatment; strong economic regulator
- **Public corporate lending:** Aguas de Portugal (100% public) obtained EIB loans for EUR 1,600 m
- **Implementation of EU Directives:** from 31% wastewater coverage in 1993 to 72% coverage in 2009; from 50% compliance with water quality standards to 97% compliance

Public finance: examples in France and Holland

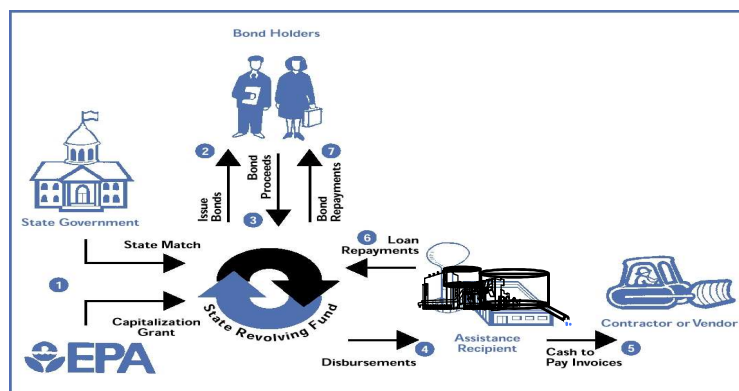
France

- Regulation by **concession contract** in each municipality
- Six “**Agences de l’Eau**” (1964) provide subsidies and loans
- **Investment charges** are separated from O&M charges in bill

Holland

- **Vertically separate sector**: 16 drinking water companies; municipal sewerage companies; 26 water boards for sewerage treatment
- All **100 per cent public** companies
- Nederlandse Waterschapsbank (1954) **publicly owned** lender

Public finance: example USA



Source: EPA/ Michael Curley, 2004

Leverage public funds through bond emissions (public funds/debt~0.6)
 Achieve **financial economies of scale** through a centralized vehicle

The financing of the Romanian water sector

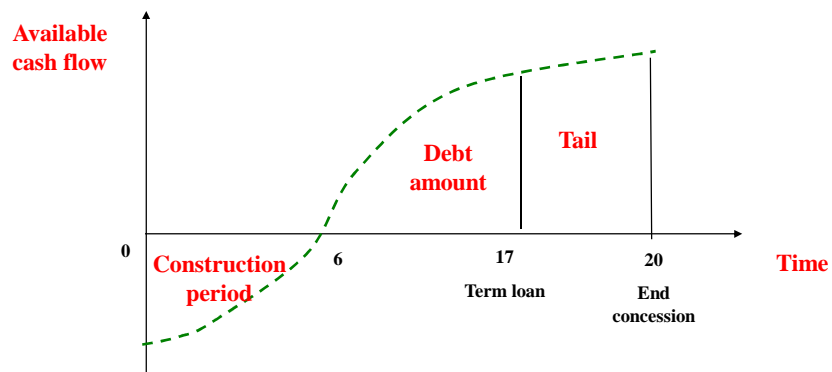
Regulatory set-up

- 1975-1990 **Centralization** (42 multi-utilities, state funds)
- 1990-2005 **Fast decentralization** (one utility/municipality)
- 2005-2020 **Progressive re-centralization** (target: 10 regional)

Financing example (Water company Compania Apa, Brasov)

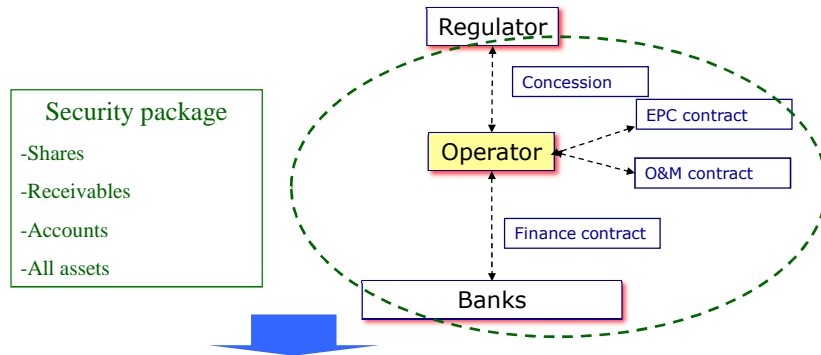
- Loans: 10%
- Local authorities: 2%
- EU Cohesion funds: 76%
- Government: 12%

Project finance: cash flow based greenfield lending



Example: Long **availability period** (6 years) and **3 year tail**

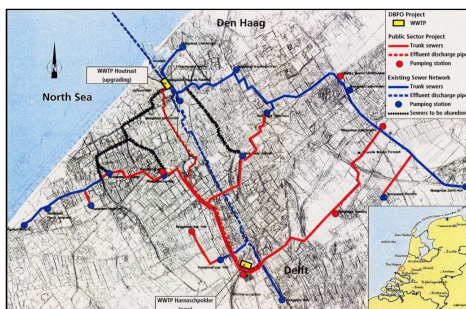
Concession finance: cash flow based brownfield lending



Advantages: Tailor-made, high leverage, long term

Needed: size, water-tight documentation, risk allocation, DSCR > 1.5

Project finance: Delfland WWTP DBFO - Holland



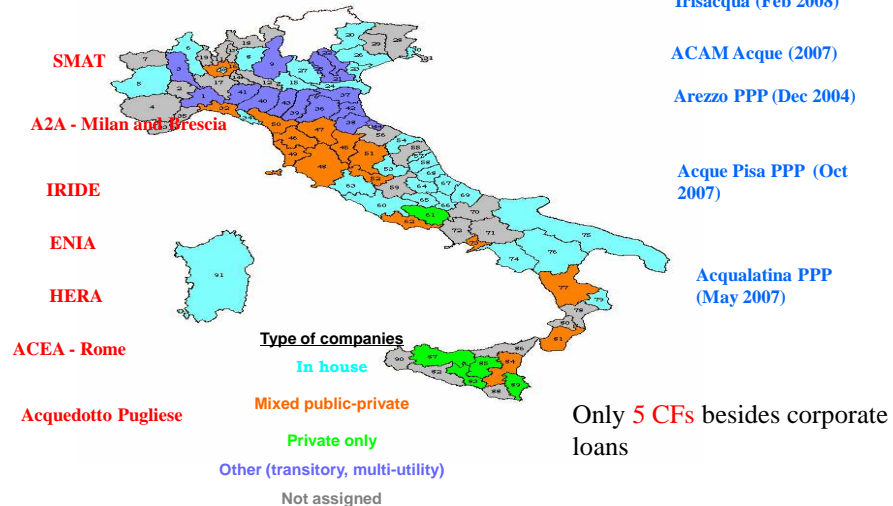
- 30-year wastewater treatment plant construction and operation contract
- 27 year loan
- Fixed payments with construction and performance risk
- 10% equity, WACC 7%

Investment: €320m
1.2 million people

Corporate and Concession finance in Italy

Corporate Finance

Concession Finance



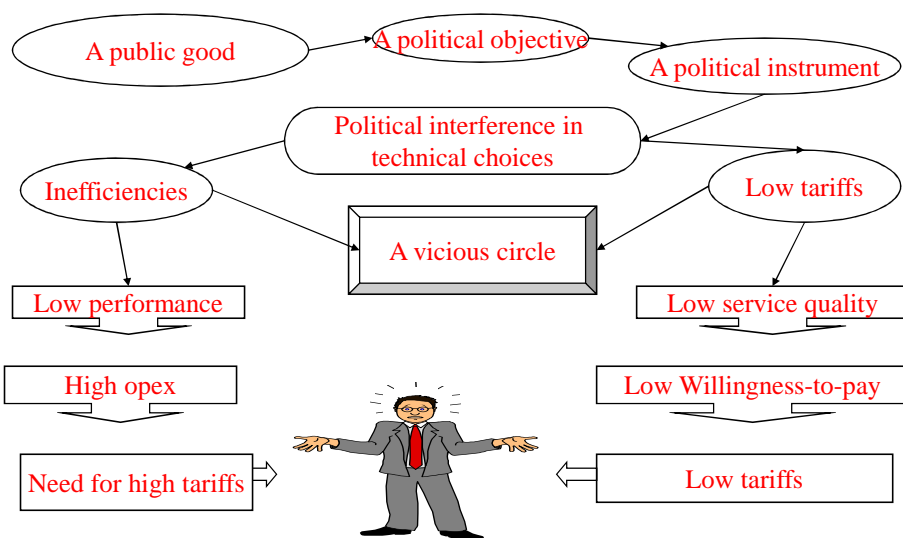
Problem of non bankable Concessions

- Need for **due diligence** on the Economic&Financial Plans
- **Debt remaining** at the end of the Concession
- **Unfair/inefficient risk allocation**
- **Unclear tariff review** mechanisms
- Unclear service targets and **penalty** mechanisms
- Risk of **early termination** without adequate compensation

Summary of key issues for private financing

- **Stable and transparent** regulatory framework
- **Risk allocation** in Concession contract
- **Track record** of corporates
- **Solid financial ratios** or rating levels
- **Public sector support**
- **Financial economies of scale**

The tariff dilemma



The tariff formula

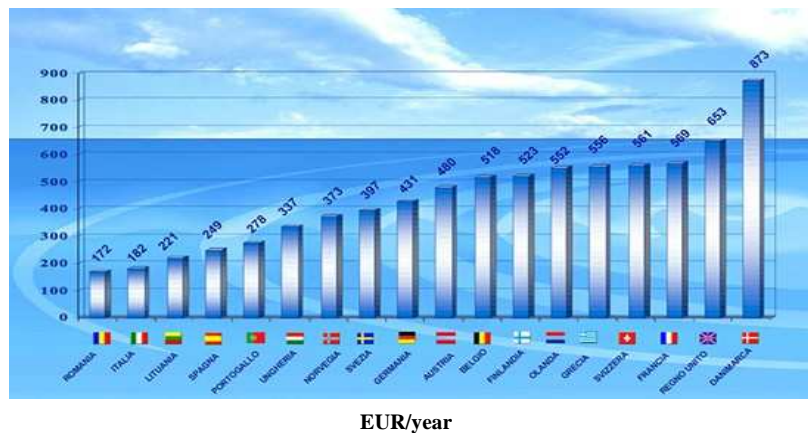
EU Directive 2000/60 « full cost recovery »

- C= Operating and maintenance costs (personnel, materials, energy, chemicals)	→	Price cap (X-efficiency factor)
- A=Depreciation (extraordinary maintenance and life cycle costs)	→	Technical life or Concession term?
- R=Return on invested capital (WACC)	→	7% nominal return
- Scarcity or shadow value of the resource		Not applied



- **Unit tariff** depends on volume projections
- **The rules / timing for updating tariffs** need to be clear

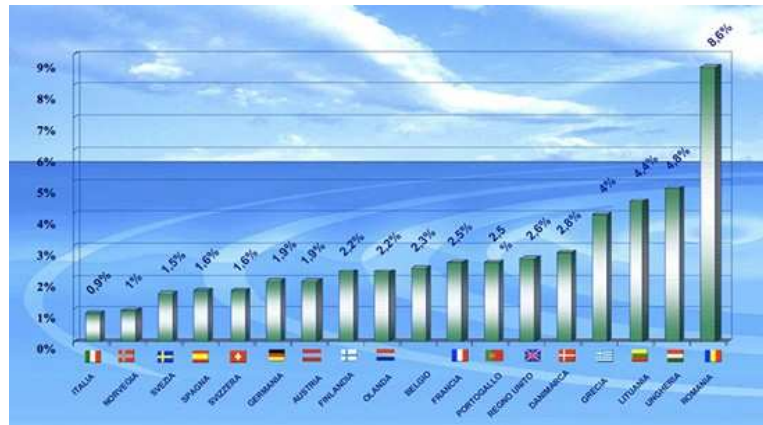
Water tariffs across Europe: Average cost per household



- **Romania** lowest cost in absolute terms, **Italy** close to it

Source: IWA

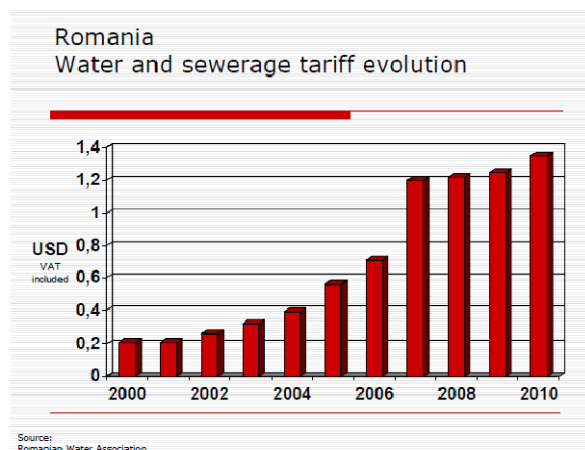
Water tariffs across Europe: % of household income



• Romania highest in % terms, Italy lowest

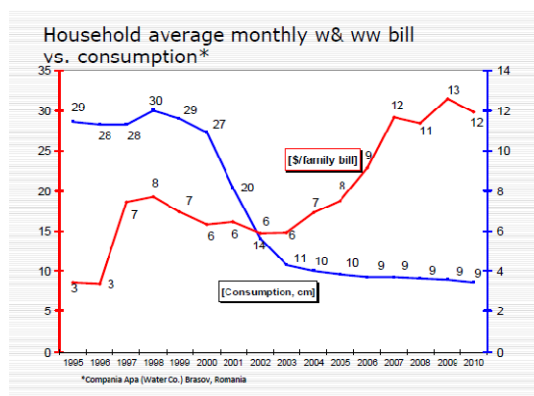
Source: IWA

Increase of tariffs in Romania



• Tariff increase to cover operating costs and investments

Demand elasticity to price



- Higher prices have significant **impact on consumption levels**
- Important to consider when **developing financial projections**

Ways to improve social affordability

- **Increasing block tariff structure:** but considering family size and number of people connected
- **Portugal:** limit water bill to 3% of household income (social&family tariff), no cost of connection
- **Chile:** direct subsidy given to low income families limited to 15 m³ per month (multi-dimensional poverty indicator)
- **Colombia:** zonal poverty criterion with six social levels depending on the neighbourhood (poor pay 30% of cost)
- **Issue of targeting**
- In lower income countries (e.g. Africa) tariff structure is not sufficient to reach social objective: need transfers/ taxes

Questions?

