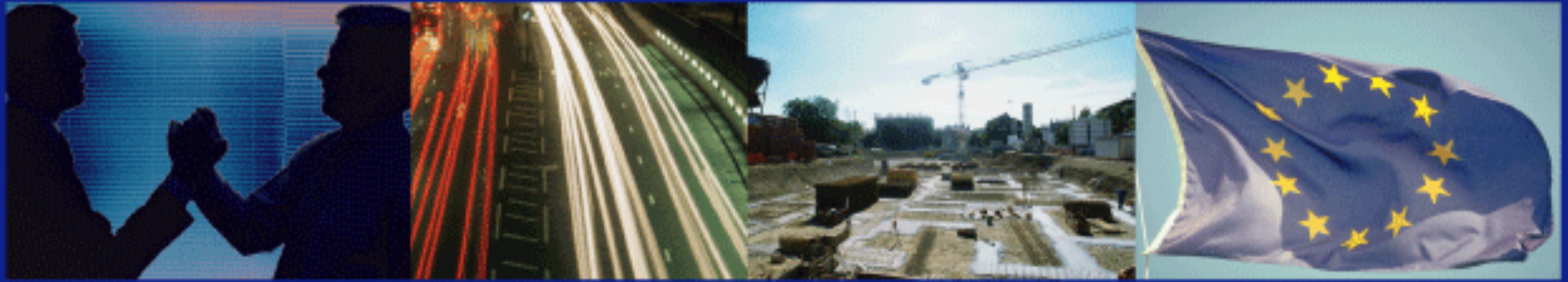


# Creation of a Public Parking Lot in the City of Palermo (Sicily Region)

**Pasquale Marasco**

PPP Task Force, Presidency of the Council of Ministers, Italy



## **Models and Strategies for Public-Private Partnerships (PPPs): Experiences from Italy and Bulgaria**

Varna, 14 June 2007



**Bulgaria - Italy Bilateral Cooperation**



# AGENDA

- **Project general characteristics**
- **Analysis of the economic and financial Model inputs**
- **Evaluation of Project profitability and financial sustainability**



### General Characteristics

**Parking srl** is a project company set up by a sponsor specialised in creation and management of parking lots.

**Parking srl** received from an important Italian Municipal Administration the concession to build and manage a public parking lot – both basement and ground levels – as well as the facilities to host the related management offices.

The concession envisages 3 years of construction and 27 years of management activities.

So as to ensure the intervention's profitability, estimated to exert an extremely relevant social impact, the Municipality has made a Municipal land available for surface rights, as well as its participation with a contribution estimated at 50% of the investment value.



## Project General Characteristics

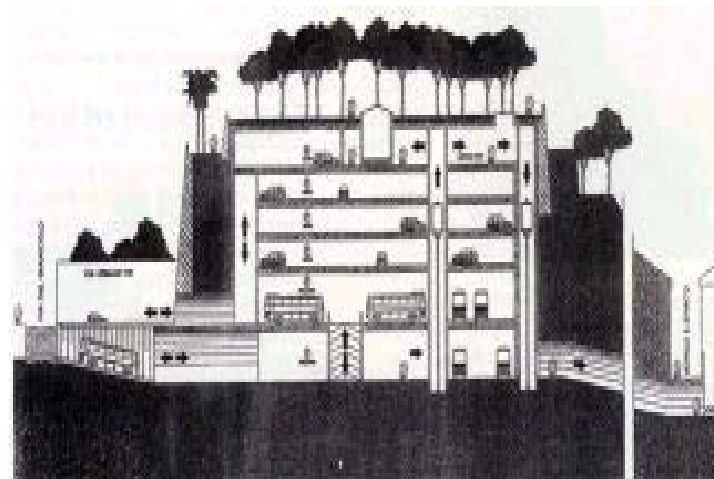
### General Characteristics

Basement  
Parking Spaces

400

Ground level  
Parking Spaces

100

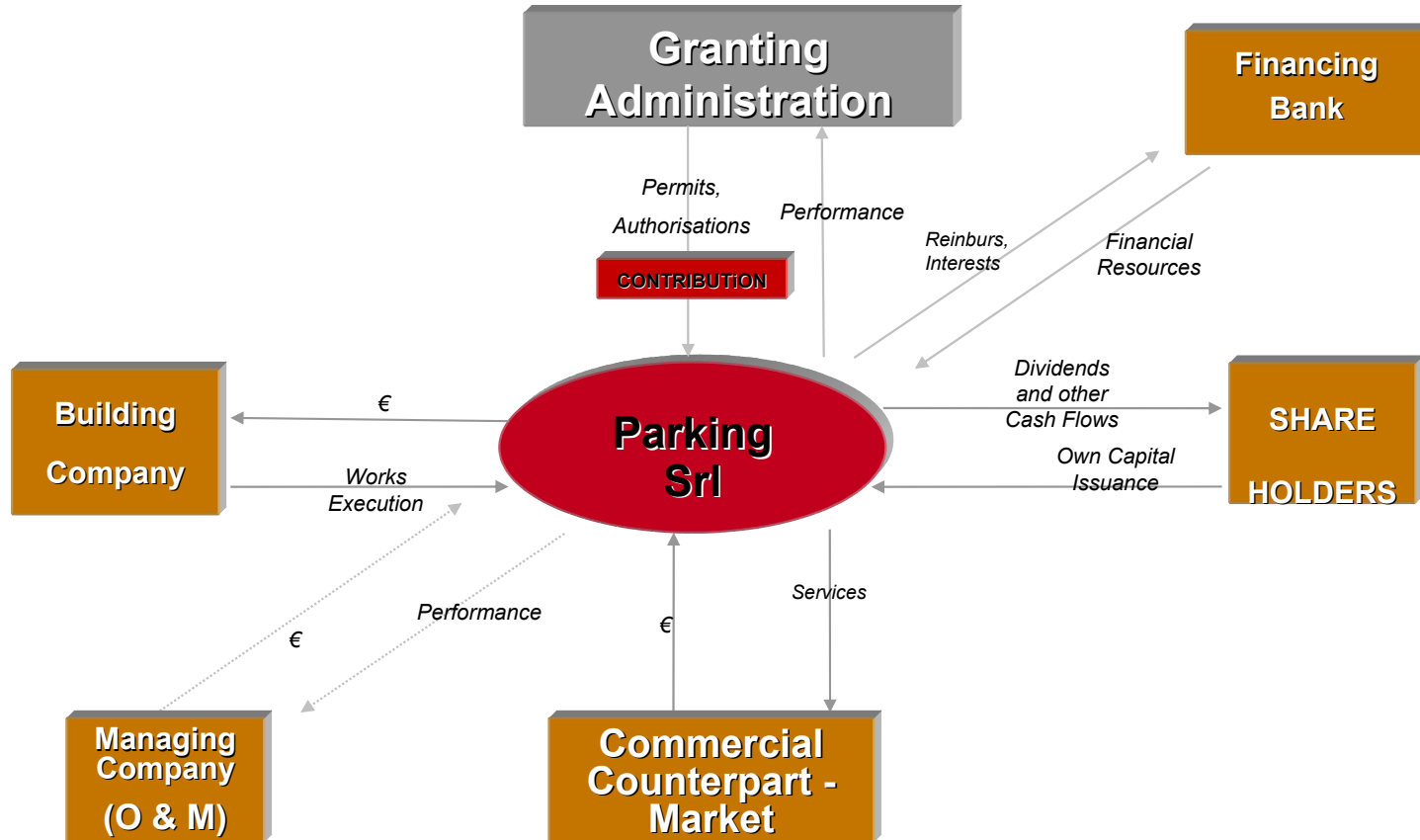


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# Project General Characteristics

## Operational Structure



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## Project General Characteristics

### Utilisation and Sources

#### Utilisation

Execution Costs	€ 8,520,000
Pre-redemption Inter.s	€ 665,000
Bank commissions	€ 237,000
VAT on Construction	€ 852,000
Taxes on Outputs	€ 44,000
Other Taxes/Duties	€ 4,000
Stock of Cash	€ 435,000

**TOTAL**

€ 10,757,000

#### Sources

OWN CAPITAL	€ 2,532,000
CONTRIBUTION	€ 3,500,000
REVISED GOM (MOL)	€ 69,000
BANK DEBT	€ 4,095,00
VAT REIMBURSEMENT	€ 568,000

**TOTAL**

€ 10,757,000



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## Project General Characteristics

### *Economic and Financial Model*

The creation of a Model aims to verify the economic and financial feasibility of a public parking lot – both basement and ground levels. On the basis of the hypotheses set by the Model's users (base hypothesis), the Model allows calculating financial needs as well as the volume of resources potentially generable through the creation and management of the parking lot.

The Model is itemised in 6 electronic sheets, each respectively related to the following sections:

<b>Base Hypothesis</b>
<b>Investments and Financement</b>
<b>Taxes and Duties</b>
<b>Economic Account (EC)</b>
<b>Patrimonial Status (PS)</b>
<b>Cash Flow (CF)</b>
<b>Indices</b>



### Project Profitability and Bankability Objectives

The profitability and bankability objectives that the Project is to ensure so as to allow adequate economic returns to bearers of own capital and guarantee punctual reimbursement of the bank loan are quantifiable as follows:

A) **Profitability** defined as:

- ✓ Shareholders' ROI internal rate equal at least to 10%
- ✓ Project ROI internal rate at least higher than 5.95% (discount rate used to calculate the net present value (VAN). The ROI internal rate shall not only be calculable but possibly also higher than the average pondered cost of the risk capital and debt capital invested in the Project
- ✓ Project VAN higher than zero. Positive VAN value indicates that the investment can generate returns (*i.e.* cash flows) higher than the resources employed in the Project (*i.e.* invested capital)



### Model Functioning

B) **Financial structure** hypothesised as follows:

- ✓ Bank loan equal to 75% of investments
- ✓ Capital contributed by shareholders equal to 25% of investments

C) **Bankability** defined as:

✓ Project capacity to pay off the debt contracted within maximum 15 years (*Average loan life in the medium/long term in similar projects*) and fulfilling the following bankability criteria:

- ⇒ *Average Annual Debt Service Cover Ratio (ADSCR)* index equal at least to 1.35x
- ⇒ *Average Loan Life Cover Ratio (LLCR)* index at least equal to 1.45x



# Model Input Analysis

## DEMAND ESTIMATE

ITEM	Definition/Pattern of Calculation	Assumed Value in the Model
<b>Istat Inhabitants</b>	Istat populations of the Municipality where the sports centre will be built, as well as neighbouring municipalities, meant as those municipalities that will assumingly use the sports facilities.	<u>ISTAT inhabitants amount to 250,000 units.</u>
<b>% Potential</b>	Potential users are calculated by reducing the number of Istat inhabitants via a percentage of potential users, which allows identifying overall potential users excluding those ones who cannot or do not want to practise swimming owing to various reasons (age, interests, etc)	The base Simulation envisages a <u>% of potential usage equal to 20% of overall potential users.</u> The demand trend is also simulated by considering a % of increase in potential users over the concession years equal to 2% every 4 years.
<b>% Actual</b>	The actual usage rate allows identifying that segment of potential users that will actually use the sports centre in light of several factors (i.e. distance, sports centre activities, existence of other swimming pools, etc)	The base Simulation envisages <u>an actual usage rate equal to 5%.</u> A growing trend in the actual usage percentage as of 2010 is simulated.



# Analysis of Economic and Financial Model Inputs

## Timing Hypotheses

ITEM	Definition/Pattern of Calculation	Assumed Value in the Model
<b>Start of Concession</b>	Starting year of Concession ( <i>i.e.</i> signing of contract).	Concession is envisaged to start in 2004.
<b>End of Construction</b>	Year of conclusion of construction works.	Construction works are envisaged to end in 2006.
<b>End of Concession</b>	Final year of Concession.	Concession is envisaged to end in 2033.



# Analysis of Economic and Financial Model Inputs

## Macroeconomic Hypotheses

ITEM	Definition/Pattern of Calculation	Assumed Value in the Model
<b>Inflation Rate</b>	The inflation rate selected is the ISTAT index for consumer prices.	The assumed inflation parameter value is in line with medium-long term expectations (2.5%).
<b>Interest Rate (Base Rate)</b>	The interest rate on the main loan is equal to the base rate plus a spread applied by the Bank. The base rate is the IRS rate and automatically adequates the rate accordingly to the loan life. Simulated rates refer to IRS of 10/11/03.	The assumed base rate value applied for the bank loan is equal to 4.45%
<b>Margin</b>	It is the margin applied by the Bank on base rate. For project financing operations ranges between 1% and 1.5%.	The assumed margin value is 1.5%
<b>Active/Passive Rate</b>	The active rate is the rate perceived by the Project company onto its current account. The passive rate is, instead, the rate paid by the Project Company onto its bank account in case of overdraft, which is to be higher than the base rate plus margin. Both active and passive rates are automatically calculated by the Model.	In the Model: <ul style="list-style-type: none"><li>✓ Passive rate: 5.5% (base rate increased by 1%)</li><li>✓ Active Rate: 2% (base rate decreased by 2.5%)</li></ul>



# Analysis of Economic and Financial Model Inputs

## Basement Parking Spaces

### ITEM

### Definition/Pattern of Calculation

### Assumed Value in the Model

#### Proceeds from Rotation Parking Spaces

Calculated per: hour/space/day – rotation; rotation parking operative days; rotation parking toll (Euro); rotation parking payment rate; monthly subscription prices (Euro).

Ore/posto/giorno a rotazione	24	▼
Giorni operatività pkg a rotazione	365	▼
Tariffa pkg a rotazione (Euro)	0,8	▼
Tasso di pagamento pkg a rotazione	100%	▼
Prezzo abbonamento mensile (Euro)	160	▼

#### Employment Rate

The Model is capable of simulating three different employment rates over the management period. The rate can be varied so as to correctly estimate the impact that possible decrease/increase in the demand could exert on the Project's economic and financial balance.

Tasso occupazione a partire da	2007	50%	▼
Tasso occupazione a partire da	2018	55%	▼
Tasso occupazione a partire da	2019	55%	▼



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# Analysis of Economic and Financial Model Inputs

## Basement Parking Spaces

ITEM	Definition/Pattern of Calculation	Assumed Value in the Model
<b>Proceeds from Parking Space Subscriptions</b>	Calculated upon monthly subscription prices (Euro).	Prezzo abbonamento mensile (Euro) 160 ▼
<b>Proceeds from Grant of Surface Rights</b>	Calculated upon parking space prices (Euro x '000).	Prezzo per posto auto (Euro x '000) 25 ▼
	So as to envisage this typology of proceeds, it is necessary to activate the related function by selecting the option "YES" and indicating the grant year.	Cessione parcheggi -----> SI ▼
		Anno cessione 2006 ▼
	The proceeds thus obtained can be either recorded onto Economic Account in the grant year or distributed" over the remaining years, by respectively selecting the options "NO" or "YES".	Dilazione ricavi cessione pkg in conto economico SI ▼



# Analysis of Economic and Financial Model Inputs

## Ground Level Parking Spaces

### ITEM

#### Proceeds from Ground Level Parking Spaces

### Definition/Pattern of Calculation

The proceeds resulting from ground level parking spaces depend upon their number, employment rate, hours/spaces/days, operative days, toll (Euro), and payment rate.

For the model to calculate such proceeds, it is necessary to select the beginning of the functioning period.

### Assumed Value in the Model

Posti auto a raso	100
Tasso occupazione pkg raso	30%
Ore/posto/giorno pkg raso	10
Giorni operatività pkg raso	365
Inizio periodo di funzionamento	2005
% di funzionamento ante termine costruzione	65%
Tariffa pkg a raso (Euro)	0,55
Tasso di pagamento pkg a raso	100%
Altri ricavi (Euro 000)	90



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# Analysis of Economic and Financial Model Inputs

## Ground Level Parking Spaces

### ITEM

### Definition/Pattern of Calculation

### Assumed Value in the Model

#### Proceeds from Ground Level Parking Spaces

Furthermore it is possible to envisage that either a part or all of ground floor parking spaces will be operative before finalisation of basement parking spaces. To activate such typology of proceeds it is sufficient to select any percentage other than zero.

% di funzionamento ante termine costruzione 65%

#### Other Proceeds

In the item "Other Proceeds" it will be possible to insert the annual proceeds deriving from activities other than the ones considered (i.e. self-service car washing, petrol station, publicity, etc).

Altri ricavi (Euro 000) 90



# Analysis of Economic and Financial Model Inputs

## Ordinary Maintenance Costs

ITEM	Definition/Pattern of Calculation	Assumed Value in the Model				
<b>Ordinary Maintenance Costs</b>	<p>Ordinary maintenance costs are to be considered as annual and exclusively referred to current management. Ordinary maintenance costs are itemised as follows:</p> <ul style="list-style-type: none"> <li>• Basement parking spaces</li> <li>• Ground floor parking spaces</li> </ul>					
<b>Basement Parking Spaces</b>	Calculated upon total number of basement parking spaces and related rotation parking unitary cost (Euro x '000).	<table border="1"> <tr> <td>Totale parcheggi interrati</td> <td>400</td> </tr> <tr> <td>Costo unitario per parcheggio a rotazione (Euro '000)</td> <td>0,25</td> </tr> </table>	Totale parcheggi interrati	400	Costo unitario per parcheggio a rotazione (Euro '000)	0,25
Totale parcheggi interrati	400					
Costo unitario per parcheggio a rotazione (Euro '000)	0,25					
<b>Ground Floor Parking Spaces</b>	Calculated upon total number of ground level parking spaces and related unitary cost (Euro x '000).	<table border="1"> <tr> <td>Posti auto a raso</td> <td>100</td> </tr> <tr> <td>Costo unitario per parcheggio a raso(Euro x '000)</td> <td>0,1</td> </tr> </table>	Posti auto a raso	100	Costo unitario per parcheggio a raso(Euro x '000)	0,1
Posti auto a raso	100					
Costo unitario per parcheggio a raso(Euro x '000)	0,1					



### Project Cash Flow and Indices

The Model calculates, in a simplified fashion, the main economic prospects (Economic Account and Patrimonial Status) composing the budget, Project cash flow, main profitability indices (ROI) and debt service coverage (ADSCR, LLCR, PCR). Through the project financing technique, the Project cash flow assumes remarkable relevance, being the primary source of debt reimbursement.

Below is the analysis of the main items of the Model relatively to the cash flow scheme defined upon evaluation needs (operational management, debt reimbursement, dividends for shareholders).

- Gross Operating Margin (GOM) - *revised*: results from the difference between operational revenues and operational costs, and represents the potential cash flow generated by operational management.
- Cash flow available for debt: resulting after deducting from GOM all taxes/duties (economic cash flow), variations in the Net Circulating Capital (cash flow before investments/disinvestments), Investments (operational cash flow) as well as issuance of own Capital and debt Capital.
- Cash flow before dividends and treasury interests: cash flow available to pay dividends to shareholders.



# Project Profitability and Financial Sustainability

## Bankability Indices

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Tasso di sconto per calcolo LLCR	5,95%	5,95%	5,95%	5,95%	5,95%	5,95%	5,95%	5,95%	5,95%
Flusso di cassa disp. X debito (LLCR)	236	261	840	5.877	768	558	672	683	690
Flusso di cassa disp. X debito (ADSCR)	236	261	840	5.877	768	558	672	683	690
Riserva per il servizio del debito inizio periodo	0	0	435	284	207	249	253	247	296
Rimborso debito m/i + interessi	75	220	370	4.353	569	413	498	506	493
Debito residuo fine periodo	2.535	4.847	7.595	3.574	3.207	2.978	2.647	2.289	1.921
<b>ADSCR (Annual debt service cover ratio)</b>	N/D	N/D	N/D	1,35	1,35	1,35	1,35	1,35	1,40
<b>LLCR (con riserva per servizio debito)</b>	N/D	N/D	N/D	1,51	1,51	1,55	1,58	1,63	1,72
<b>LLCR (senza riserva per servizio debito)</b>	N/D	N/D	N/D	1,43	1,45	1,46	1,49	1,53	1,57

MIN ADSCR	1,35
MAX ADSCR	1,45
MEDIO ADSCR	1,38

MIN LLCR	1,51
MAX LLCR	2,55
MEDIO LLCR	1,83



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# Project Profitability and Financial Sustainability

## Project Internal ROI Indices

	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Prima delle imposte</b>									
Investimenti con contributi	(2.840)	(2.840)	(2.840)	3.500	0	0	0	0	0
Pagamenti IVA	(284)	(284)	(284)	0	0	0	0	0	0
Rimborsi IVA	0	284	284	284	0	0	0	0	0
MOL+disinvestimenti	(7)	33	34	2.067	837	858	879	901	924
Variazione Capitale Circolante Netto	1	(0)	0	70	2	2	2	2	2
<b>FLUSSO X CALC. TIR ANTE IMPOSTE</b>	<b>(3.129)</b>	<b>(2.807)</b>	<b>(2.806)</b>	<b>5.920</b>	<b>839</b>	<b>860</b>	<b>881</b>	<b>903</b>	<b>926</b>
<b>TIR</b>	<b>15,4%</b>								
<b>Dopo le imposte</b>									
Imposte e tasse	(33)	(30)	(58)	(62)	(508)	(299)	(315)	(322)	(331)
<b>FLUSSO X CALC. TIR DOPO IMPOSTE</b>	<b>(3.162)</b>	<b>(2.837)</b>	<b>(2.864)</b>	<b>5.858</b>	<b>330</b>	<b>561</b>	<b>566</b>	<b>581</b>	<b>594</b>
<b>TIR</b>	<b>10,9%</b>								



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## Project Profitability and Financial Sustainability

### Shareholders' Internal ROI Indices

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Erogazioni di capitale	(845)	(771)	(916)	0	0	0	0	0	0
Dividendi	0	0	0	0	0	124	220	239	261
Tesoreria finale	0	0	0	0	0	0	0	0	0
<b>FLUSSO CALCOLO TIR SOCI</b>	<b>(845)</b>	<b>(771)</b>	<b>(916)</b>	<b>0</b>	<b>0</b>	<b>124</b>	<b>220</b>	<b>239</b>	<b>261</b>

**TIR (30 ANNI)** 11,1%



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