

Official Journal

of the European Union

L 85



English edition

Legislation

Volume 56

23 March 2013

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Price: EUR 3

⁽¹⁾ Text with EEA relevance

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Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.

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II

(Non-legislative acts)

DECISIONS

COMMISSION DECISION

of 8 May 2012

on State aid SA.22668 (C 8/08 (ex NN 4/08))

(notified under document C(2012) 3025)

(Only the Spanish text is authentic)

(Text with EEA relevance)

(2013/126/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular the first subparagraph of Article 108(2) thereof,

Having regard to the Agreement on the European Economic Area, and in particular Article 62(1)(a) thereof,

Having called on interested parties to submit their comments pursuant to the provisions cited above ⁽¹⁾ and having regard to their comments,

Whereas:

I. PROCEDURE

- (1) On 22 February 2007, the Commission received a State aid complaint from Complainant A ⁽²⁾ concerning support allegedly given by the Region of Valencia to the Ciudad de la Luz film studios. Complainant A confirmed on 15 March 2007 that its complaint could be forwarded to the Spanish authorities.
- (2) On 10 April 2007, the Commission forwarded the full complaint to the Spanish authorities, requesting information about the alleged aid. The Commission had not previously been notified of any film support measures in Valencia for State aid approval.
- (3) After requesting an extension of deadline on 18 April 2007 (granted on 24 April), the Spanish authorities replied to the Commission's request for information on 15 June 2007.

- (4) On 30 April 2007, Complainant A provided links to articles published in *Variety* allegedly setting out the production subsidies offered for filming in Valencia and confirming that Ciudad de la Luz was attracting large budget film productions ⁽³⁾.

- (5) The Commission requested additional information from the Spanish authorities on 13 July 2007. After requesting an extension of deadline on 18 July 2007 (granted on 19 July), the Spanish authorities replied to the Commission's request for information on 8 October 2007.

- (6) On 15 July 2007, the Commission received a complaint from Complainant B ⁽⁴⁾. After having obtained the agreement of the complainant, the Commission forwarded its complaint to the Spanish authorities on 2 August 2007.

- (7) By letter dated 13 February 2008, the Commission informed the Spanish authorities that it had decided to initiate the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union in respect of the aid. Spain replied to this on 28 April 2008.

- (8) The Commission decision to initiate the procedure was published in the *Official Journal of the European Union* ⁽⁵⁾. The Commission invited interested parties to submit their comments on the aid.

⁽¹⁾ OJ C 134, 31.5.2008, p. 21.

⁽²⁾ Complainant A is a major European film studio. It has asked that its identity is not made public.

⁽³⁾ 'New Valencia studio offers film rebates' <http://www.variety.com/article/VR1117958591.html?categoryid=19&cs=1>; 'Polanski's Pompeii takes shape' <http://www.variety.com/article/VR1117963040?refcatid=19&printerfriendly=true>

⁽⁴⁾ Complainant B is a major player in the European film sector. It too has asked that its identity is not made public.

⁽⁵⁾ See footnote 1.

- (9) The Commission received comments from interested parties, and forwarded them to Spain on 3 October 2008. The Spanish authorities' comments were received on 21 November 2008 and on 29 December 2008.
- (10) After a meeting between the Commission and the Spanish authorities on 11 February 2009, Spain provided additional information on 30 March 2009.
- (11) The Commission sent a further request for information to Spain on 26 August 2009 to which the Spanish authorities replied on 20 October 2009, providing additional information on 1 February 2010.
- (12) The Commission sent a further request for information to Spain on 24 May 2011, informing Spain of the appointment of an independent economic consultant, Ecorys. Spain replied on 7 June 2011. The Commission replied to Spain on 22 July 2011.
- (13) The Commission sent Spain its final request for information, including the report from Ecorys, on 1 August 2011. Spain provided its comments on the Ecorys report on 3 October 2011. Spain provided further data on the public investment in Ciudad de la Luz SAU on 11 April 2012.
- ## II. DETAILED DESCRIPTION
- (14) Ciudad de la Luz is a major film studio complex just outside Alicante (Valencia). The Valencia Regional Government (*Generalitat Valenciana*) took its initial decision to invest in the Ciudad de la Luz project on 24 October 2000.
- (15) Ciudad de la Luz SA was incorporated on 2 November 2000. Its objective was to carry out the necessary activities for the promotion, organisation and management of the 'Ciudad de la Luz' site, including the construction, management and operation of audio-visual and cinematographic facilities, as well as other related leisure and accommodation activities.
- (16) 75 % of the original EUR 600 000 share capital of Ciudad de la Luz SA was owned by Parque Temático de Alicante SAU, which later became Sociedad Proyectos Temáticos de la Comunidad Valenciana SAU (SPTCV). SPTCV is a public entity which carries out investment activities on behalf of the Valencia Regional Government. The remaining 25 % belonged to Producciones Aguamarga SL, a private company which was responsible for the remaining construction work, for promoting Ciudad de la Luz and for managing the studios.
- (17) In November 2001, the share capital was increased to EUR 9 million, with SPTCV purchasing all the additional shares, taking its holding to 98,4 %. SPTCV increased its holding further in February 2003 and May 2004 through similar purchases of new share capital. Producciones Aguamarga sold its 0,2 % share of Ciudad de la Luz SA ⁽⁶⁾ to SPTCV in July 2004 (for EUR 139 059). Since then, the Valencia Regional Government has held 100 % of the share capital of Ciudad de la Luz SAU via SPTCV. Since that time, Ciudad de la Luz SAU has been a public undertaking entirely owned by SPTCV and subject to public law as to tendering and financial supervision. However, Producciones Aguamarga continued to manage Ciudad de la Luz.
- (18) The film studio complex opened for filming in August 2005. Designed to accommodate the largest film productions, construction began in 2002 and has been divided into three phases:
- Phase 1 (completed): 6 air-conditioned sound stages with a combined area of 11 000 m², production support buildings, 15 050 m² of workshops/storage, and 2 external filming areas (back lots) of a total of 14 hectares.
 - Phase 2 (completed after the formal investigation opened): catering facilities, an administrative building, a post-production laboratory and a third external filming area (back lot) of 5 hectares with an aquatic filming tank.
 - Phase 2B (work not started): a large, deep natural-horizon water tank.
 - Phase 3 (work not started) a 5 000 m² sound stage (intended to be the world's largest), another back lot and 4 TV studios.
- (19) The studio complex also houses a university school dedicated to audiovisual production (cinema, TV, radio, internet) which offers master's degrees covering all aspects of production (artistic, technical marketing, communication). The initial plans in 2000 included other additional investments in adjacent malls, hotels and a sports complex which were to generate positive
- ⁽⁶⁾ With the capital transfer of 7 October 2004, Ciudad de la Luz SA became Ciudad de la Luz SAU, a company with a single shareholder (sociedad anónima unipersonal) with all of its share capital owned by SPTCV.

cash inflows for the project, but which have not been developed to date. Although the necessary land was provided by the Generalitat in 2004 and invitations to tender for operation of these businesses under concession were launched in 2005, the bids were not attractive enough and the additional investments have not been followed up.

- (20) Certain aspects of the 'state-of-the-art' facilities at Ciudad de la Luz put it well ahead of the limited number of competing major film studios in Europe in terms of capacity for large-budget films. For instance, the 5 000 m² sound stage in the original plans for Ciudad de la Luz would have been the largest in the world⁽⁷⁾. The Commission notes that large sound stages are only of interest to major film productions.
- (21) Until recently, the studio was managed by Aguamarga Gestión de Estudios SL, which acted as agent for the film studio in return for remuneration on the basis of a multi-annual management contract with the shareholder.

Public investments by SPTCV and business plans of Ciudad de la Luz

- (22) Prior to the start of the construction works, in 1999-2000, the feasibility, scope and strategic guidelines of the development of Ciudad de la Luz were analysed by third party consultants in four studies submitted by Spain in the course of the formal investigation procedure.
- (23) These studies explored the growth prospects of the number of film productions⁽⁸⁾, compared alternative locations in the Region of Valencia for the construction of film studios⁽⁹⁾ and provided a preliminary analysis⁽¹⁰⁾ and business plan⁽¹¹⁾ for a film studio complex. They had not been submitted by the Spanish authorities before the Commission's decision to open a formal State aid investigation concerning the project. The data in the opening decision of 22 February 2008 were from a study (by Consultia) which the Spanish authorities had

informed the Commission was carried out in 2002. However, after the opening decision, Spain subsequently informed the Commission that this study had been carried out in 2004.

- (24) The conclusions of the 2000 business plan developed by Arthur Andersen⁽¹²⁾ were positive, including its profitability prospects in the medium to long term. The positive cash flows of the film studio project were documented for a five-year period (2002-2006) after completion of the construction of the studio buildings, a conference hall and school for film and television techniques.
- (25) The cost of construction of these phases was estimated to be 16,9 billion pesetas (EUR 101,7 million). The land cost was not included and the business plan indicated that the costings could vary by +/- 30 %. Subsequent phases to complete the project were not costed.
- (26) On the basis of this business plan, between 2000 and 2004, SPTCV carried out or committed investments in Ciudad de la Luz through share capital increases and land totalling EUR 104 259 759. See details in recital 53.
- (27) Since the construction took two years more than expected and the investment schedule was modified to be increased significantly, in 2004 Ciudad de la Luz/SPTCV commissioned a new study and business plan from Consultia⁽¹³⁾. The Consultia study also concluded positively on the profitability of the project, with a business plan for the period 2004-2014 showing a positive return for the investment by SPTCV until 2014 and in the longer term.
- (28) The share of Ciudad de la Luz SA held by Producciones Aguamarga SL was bought out by SPTCV in July 2004 for EUR 139 059. Unlike SPTCV, Producciones Aguamarga SL had made no further investment in Ciudad de la Luz SA after its initial EUR 150 000 investment in November 2000. So the share of Ciudad de la Luz SA held by Producciones Aguamarga SL had fallen to 0,2 % by the time this was acquired by SPTCV. After this transaction, the company became wholly publicly-owned and hence became Ciudad de la Luz SAU.

⁽⁷⁾ Source: *Hollywood Reporter* article 'Let there be light' — 31 October, 2006: <http://www.hollywoodreporter.com/news/let-be-light-141371>

⁽⁸⁾ Annex I to reply from Spain of 28 April 2008: 'La Industria Audiovisual: Continuo crecimiento' (*Estudios e Investigaciones Audio-visuales* — January 1999).

⁽⁹⁾ Annex IV to reply from Spain of 28 April 2008: 'Estudio de Alternativas de Ubicación de un Centro de Producción Audiovisual de Alta Tecnología en la Comunidad Valenciana — Executive Summary' (PriceWaterhouseCoopers — 30 January 2000).

⁽¹⁰⁾ Annex II to reply from Spain of 28 April 2008: 'Ciudad Audiovisual de la Comunidad Valenciana — Análisis Preliminar de la Viabilidad del Proyecto' (Arthur Andersen — undated).

⁽¹¹⁾ Annex III to reply from Spain of 28 April 2008: 'Plan de negocio y viabilidad de la ciudad audiovisual de la Comunidad Valenciana' (Arthur Andersen — undated).

⁽¹²⁾ See footnote 10.

⁽¹³⁾ Annex VI to reply from Spain of 28 April 2008: 'Líneas Estratégicas y Plan de Negocio 2004-2014' (Consultia IT — 7 May 2004).

- (29) On the basis of the modified work schedule and business plan, SPTCV, as sole shareholder, granted two participating loans of EUR 95 million in 2005 and EUR 20 million in 2007. The accounts of Ciudad de la Luz SAU to 31 December 2010, provided by the Spanish authorities in April 2012, show that SPTCV went on to invest a total of EUR 45 829 840 in convertible loan stock between 2008 and 2010. These accounts also show that SPTCV was owed interest on the 2005 and 2009 participating loans totalling EUR 7 222 160 for 2009 and 2010. In addition, EUR 1 814 187 of unpaid interest on the convertible loan stock had accumulated by 31 December 2010. Therefore, the investment of public funds by SPTCV in Ciudad de la Luz, including the interest pending on the loans provided, totalled EUR 274 125 946 by the end of 2010.

Commercial strategy and business results of Ciudad de la Luz

- (30) In the 2000 business plan, Ciudad de la Luz was aiming to become the studio complex with the second largest capacity in Europe (after Pinewood) and to attract Spanish productions (cinema, TV and commercials) supplemented with a target of sixteen foreign (EU and US) film productions per year. The 2004 revised business plan considered that one of the strategic objectives of Ciudad de la Luz should be to make large film and TV productions its main clients.
- (31) The 2004 business plan regarded the main international competitors of Ciudad de la Luz to be large studios outside the US, particularly those which have similar characteristics to Ciudad de la Luz, namely Pinewood-Shepperton (UK), Cinecitta (Italy), Barrandov (Czech Republic), Babelsberg (Germany), Cinecité Montreal & Lions Gate (Canada) and Warner Roadshow & Fox (Australia).
- (32) In the initial 2000 business plan, the planned tariffs for studio services (e.g. back lot rental, workshop) were envisaged within a range of the tariffs applied by comparable studios in the EU (i.e. Shepperton and Elstree in the UK, Babelsberg in Germany). The 2004 revised business plan also presents a strategic pricing model with reference to the tariffs applied by studios with international reputation, roughly 15-20 % cheaper than established leaders (USA and Pinewood UK) but 50 %-100 % more expensive than EU studios (Barrandov in the Czech Republic and Babelsberg in Germany).
- (33) In practice, the national and international targets of the business strategy of Ciudad de la Luz have not materialised. Out of 33 films shot in Ciudad de la Luz between 2005 and 2009, 28 are Spanish productions and only 5

are EU co-productions (Greece, France). Apart from occasional highlights provided by major European co-productions such as *Asterix at the Olympic Games* and most recently a US-Spanish coproduction, in practice the films shot at Ciudad de la Luz since it opened in August 2005 have been mainly Spanish national productions.

- (34) Despite the prospects shown by the 2004 business plan setting 2010 as the first year of (modest) positive operating results, the commercial operation of Ciudad de la Luz has been loss-making to date. Ciudad de la Luz had cumulative losses of EUR 84 million by the end of 2010, compared to the cumulative profits of EUR 12 million by the same date forecast by the 2004 business plan. In comparison to the studios mentioned above, Ciudad de la Luz has failed to attract the planned amount of non-Spanish productions so far and, even for Spanish demand, the results are below expectations. Operating losses are also bigger than expected.

Grounds for initiating the procedure

- (35) The Commission's investigation was prompted in 2007 by a complaint from Complainant A, as well as a subsequent complaint from Complainant B, both of which are prominent players in the film sector in different Member States. The complaints alleged illegal State aid in the public funding of Ciudad de la Luz and, especially, in the system of film-specific incentives put in place by Ciudad de la Luz.
- (36) As noted above, at the time the Commission opened the formal investigation procedure in February 2008, the only basis for the investment decision that had been provided by the Spanish authorities was the Consultia business plan, purportedly carried out in 2002. After a preliminary assessment, the Commission had serious doubts that a market investor would have invested on the same terms and on the same scale as the Valencia Regional Government.
- (37) As to the possible compatibility of the aid, the Commission had no information enabling it to verify whether the conditions of the Regional Aid Guidelines applicable to the Region of Valencia at the time (2000-2004) were met. The Commission also doubted that the

cultural exception referred to in Article 107(3)(d) of the Treaty could be applied, since Ciudad de la Luz was not promoting culture or heritage conservation, could be used for all sorts of audiovisual works, including commercials, and was competing with other operators to attract commercial productions.

- (38) The Commission also noted possible State aid in the incentive system for shooting at Ciudad de la Luz and identified the relevant film producers as beneficiaries. The film-specific incentives were targeting specific activities in a specific location on the basis of unknown criteria and thus appeared not to meet the rules laid down in the Commission's 'Cinema Communication'.

III. COMMENTS FROM INTERESTED PARTIES

- (39) The Commission received comments from ten interested parties in total. Four of these are active in the exploitation of film studio business in Member States other than Spain (Complainant A, Complainant B, Barrandov Studio and Mediterranean Film Studios Limited); five are active in the Spanish film sector (the Federación de Asociaciones de Productores Audiovisuales Españoles – FAPAE, the Associació de directors de cinema valencians, the Empreses audiovisuals valencianes federades – EAVF, the association Productors audiovisuals valencians and the Sociedad Proyectos Temáticos de la Comunidad Valenciana – SPTCV SAU); and one was a national film funding and policy body (UK Film Council).

Observations by active film studios

- (40) In its confidential submission of 25 June 2008, Complainant B expresses its concerns about the aid through which Ciudad de la Luz developed and operates at present. It claims that the measures taken by the Commission in opening the procedure are essential for its company and the sector.
- (41) In its confidential submission dated 30 June 2008, Complainant A confines its comments on the in-depth investigation to four issues: (i) the costs of financing the studios, (ii) the approach to financing a 'start-up business', (iii) the final disposal valuation and (iv) the other incentives granted by Ciudad de la Luz. In its view, 'a private investor would regard even an established and profit-making studio business as at least a medium risk investment This is based on the fact that, although a studio business is asset backed ..., its operational gearing

is likely to be high, which makes profit difficult to forecast. Further uncertainty is introduced by factors such as the cyclical nature of the film production sector.'

- (42) According to Complainant A, a weighted average cost of capital (WACC) of about 15 % might be appropriate for an established studio business, although 'the return expected by [Complainant A's] private equity investors was higher than that'. A start-up studio business would be viewed by a private investor as 'a medium to high risk venture and would therefore expect materially higher returns from its investment (albeit that some lead time to profitability would be tolerated). Given that there is usually limited (if any) capacity for start-ups to borrow from conventional sources, the WACC for a start-up business is generally increased by both the higher equity returns that are required and the lack of lower cost debt.'
- (43) As to the final disposal value of Ciudad de la Luz indicated in the opening decision, Complainant A considers it unrealistic. It also claims that a private investor would generally find it unusual for a multiple of earnings before interest and tax of more than 12-15 to be a good proxy for valuation.
- (44) Finally, as to the incentives granted to attract productions, Complainant A alleged that they appear to have effectively subsidised the cost to film production companies of bringing in qualified technical and support staff, which are allegedly lacking in the Valencia region. Complainant A considers that the incentives have a serious adverse effect on competition as the studios would have found it more difficult to attract film productions without such incentives.
- (45) In their initial submission of 25 June 2008, Barrandov Studio stressed that the alleged aid distorts the relevant market and disadvantages other competitors and requested an additional time period to submit further comments, given the complexity of the case. Those comments reached the Commission on 15 September 2008. Barrandov Studio subscribe to the grounds of the complaint alleged by Complainant A and stress that the size and number of sound stages indicate that Ciudad de la Luz is focused on high budget US films rather than on Spanish ones. The low density of film professionals

and infrastructure in Alicante compared to Madrid or Barcelona does not indicate a logical choice of location. In terms of strategy, an investor in the studio business would split their clientele into local clients providing stable income and foreign clients focused on large foreign productions. Ciudad de la Luz adopts the opposite strategy, based on the provision of studio services at extremely low prices which disregard the establishment costs. Moreover, given the uncertainty caused by the difficulty of forecasting revenues beyond 3-5 years in the industry, a private investor would have requested a much faster return. In Barrandov's opinion, this assertion is corroborated by a confidential business plan illustrating its recent investment in new studios, which was undertaken on the assumption of having net earnings from the second year of operation and a pay-back period of less than 8 years. Nor does Barrandov see any rational explanation for the amount of profits (EUR 341 million) expected by the Spanish Authorities by 2014.

particular, Ciudad de la Luz allegedly provides the Spanish production industry with sophisticated and state-of-the-art services in Spain which would otherwise need to be obtained abroad at higher cost. Against the allegation that Ciudad de la Luz targets super-productions, the FAPAE alleges that Ciudad de la Luz greatly benefits low-budget Spanish productions and focuses on national or local culture, thereby contributing to cultural objectives set out in the former Article 87(3)(d) (now Article 107(3)(d)). The observations dated 21 May 2008 of the *Empreses audiovisuales valencianes federades (EAVf)* and those dated 16 May 2008 of the association of *Productors audiovisuals valencians* largely echo, sometimes verbatim, the comments of FAPAE.

- (46) In its submission of 27 June 2008, Mediterranean Film Studios Limited confines its comments to the water tanks that Ciudad de la Luz announced. They claim that their own water tanks are unique in Europe and comparable only to those of Fox in Baja California (Mexico). Given the low occupancy rate per year of their tanks, they allege that in their view and the industry consensus view, there is already enough capacity in the Mediterranean area or in Europe for filming water tanks.

Observations by parties active in the Spanish film sector

- (47) In its comments dated 30 June 2008, the *Federacion de asociaciones de productores audiovisuales espanoles (FAPAE)* considers that Ciudad de la Luz has introduced more competition in the market for big production facilities and that the complainants simply wish to maintain their market position and bar the entry of competitors which propose credible alternative service and price-wise to their studios which dominate the European market. The FAPAE also claims that studios such as Barrandov, Cinecittà, Babelsberg or Mafilms have built up their market position and reputation around public support in different forms, including public participation in share capital. More generally, the FAPAE stresses that the maintenance of cultural diversity justifies strong public intervention in the industry. In

- (48) In their comments of 5 June 2008, the *Associació de directors de cinema valencians* stresses that the dominance of the US cinema industry marginalises European productions through a variety of allegedly abusive practices. In their view, corrective measures are necessary for European cultural creations to compete on a level playing field. This association alleges that the public intervention in Ciudad de la Luz is fully instrumental in that respect, to the benefit of European, Spanish and Valencian production and with a view to defending their cultural identities.

- (49) The observations of *Sociedad Proyectos Temáticos de la Comunidad Valenciana SAU* (the 100 % owner of Ciudad de la Luz SAU, itself owned by the *Comunidad Valenciana*) dated 23 June 2008, in essence reproduce the same subsidiary arguments and rely on the evidence adduced by Spain. Some aspects on which their observations place particular emphasis are the following. Firstly, the fact that a private investor partly funded the project at its inception in 2000 based on the studies available shows that the investment by public authorities followed the logic of a private investor. Both studies in 2000 and 2004 concluded without any reservation that the project was profitable. Secondly, the incentives provided to specific films are commercially justified for a new business and granted as a 'sponsoring contract' in exchange for promotion activities which generate a return on the reputation of the studios whilst triggering advertising costs for the recipients. A study carried out in this respect estimates the economic return of sponsoring contracts for Ciudad de la Luz to be to EUR [...] (*) million.

(*) Data omitted on grounds of confidentiality has been replaced by [...].

Observations by national film funding bodies

- (50) The UK Film Council asserts in its letter of 25 June 2008 that there is a case to answer in the decision opening the formal investigation procedure.

and not in 2002, as the Spanish authorities had previously informed the Commission.

- (52) By the time of the 2004 study, more than EUR 90 million had already been invested in the project. Consequently, the Spanish authorities claim that two investment decisions were taken: one in 2000 for the first phase of the project and one in 2004 for the planned extension.

IV. COMMENTS FROM SPAIN

- (51) After the formal investigation was opened, the Spanish authorities revealed that the initial investment decision was based on a business plan prepared in 2000, and not on the one which they had submitted previously. This business plan was in a study carried out in 2004,

- (53) The timetable for investments in the Ciudad de la Luz, as last updated by the Spanish authorities in April 2012, was as follows:

Date	Description	Public investment (in EUR)
24.10.2000	Valencia Region decides to develop Ciudad de la Luz	—
2.11.2000	Ciudad de la Luz SA is created (75 % owned by Parque Temático de Alicante SAU, 25 % owned by Producciones Aguamarga SL)	450 000 [75 % of 600 000]
21.11.2001	Parque Temático de Alicante SAU invests unilaterally for a capital increase of EUR 9 million in Ciudad de la Luz SA (increasing its share to 98,4 %)	9 000 000
6.2.2003	Proyectos Temáticos de la Comunidad Valenciana SAU ⁽¹⁾ invests unilaterally in a capital increase of EUR 30 million in Ciudad de la Luz SA (increasing its share to 99,6 %)	30 000 000
4.5.2004	Proyectos Temáticos de la Comunidad Valenciana SAU invests unilaterally in a capital increase of EUR 54 870 660 in Ciudad de la Luz SA (increasing its share to 99,8 %)	54 870 660
23.7.2004	Proyectos Temáticos de la Comunidad Valenciana SAU acquires the 0,2 % share of Ciudad de la Luz SA owned by Producciones Aguamarga SL (with a nominal value of EUR 150 000) for EUR 139 059 (increasing its share in Ciudad de la Luz SA to 100 %)	139 059
9.3.2005	Proyectos Temáticos de la Comunidad Valenciana SAU ceded the land on which the studios were built to Ciudad de la Luz SA, thereby increasing its equity by EUR 9 800 040 (even though the land had been valued at EUR 1 030 856 in the accounts of Proyectos Temáticos de la Comunidad Valenciana SAU). Before this date, the project had already received permission from the Valencian Government to build the studios on the site.	9 800 040
Summer 2005	Ciudad de la Luz SA starts its activities as a film studio	—
28.4.2005	Participating loan of EUR 95 million	95 000 000
26.12.2007	Participating loan of EUR 20 million	20 000 000
30.6.2008	Convertible loan stock issued with an option to convert the loan to shares before 31 December 2008	10 000 000

Date	Description	Public investment (in EUR)
2.1.2009	Convertible loan stock issued with an option to convert the loan to shares before 30 June 2009.	10 000 000
17.3.2009	Convertible loan stock authorised up to EUR 30 million with an option to convert the loan to shares before 30 December 2009.	25 829 840
31.12.2010	Unpaid interest on participative loans in 2009 & 2010	7 222 160
31.12.2010	Unpaid interest on unconverted loans in 2009 and 2010	1 814 187
	Total	274 125 946

(¹) Previously known as Sociedad Parque Temático de Alicante, SAU.

- (54) The Spanish authorities focused their responses on attempting to demonstrate that the investment is not State aid as a market investor would have invested in the project on the same terms and conditions (applying the market economy investor principle). They have provided reports from economic consultancy LECG to support this.
- (55) Even if the Commission considered that at least part of the investment was State aid, Spain alleged that all the films shot in Ciudad de la Luz met the cultural criteria of the Valencia film incentives, which were approved by the Commission in April 2008, December 2008 and July 2009 (¹⁴). According to Spain, the cultural exception provided in Article 107(3)(d) TFEU can be applied to investment aid upstream or downstream of the production of films.
- (56) Spain also notes that any aid contained in the public funding of Ciudad de la Luz and in the incentives offered to films should be viewed in the perspective of the distorting effects of national film support schemes approved by the Commission in other Member States which attract major film productions to competitors of Ciudad de la Luz (¹⁵).
- (57) Spain also contends that the Regional aid guidelines applicable at the time (1998) would have allowed an aid intensity of 36 % for the investment project. The
- additional conditions introduced later in the 2002 Multi-sectoral framework for large investment projects with less than 25 % market share and 5 % capacity increase on the market would also be met.
- (58) Spain provided a second LECG report which criticised the analysis of the 2004 business plan by the Commission services. LECG criticised the analysis of the Commission services and provided alternative values for the data and risk factors, as well as providing retrospective valuations of the land on which Ciudad de la Luz was constructed.
- (59) A second economic analysis by the Commission services examined the 2000 business plan and the retrospective land valuations provided by Spain. In addition, an independent economic assessment of the market economy investor principle test was carried out by an independent consultancy at the request of the Commission. The independent report was sent to the Spanish authorities on 30 September 2011.
- (60) The Spanish authorities reiterated their view, as in their observations to the opening decision, that the profitability prospects of Ciudad de la Luz should be benchmarked against its main EU competitors in the film studio business (e.g. Babelsberg, Pinewood) and not, as Ecorys (¹⁶) does, with diversified US audiovisual conglomerates (Time Warner, Disney) (¹⁷). The Spanish authorities maintain that this benchmarking should be based on publicly available information (e.g. Bloomberg) from the
- (¹⁴) State aid decisions N379/07 (2.4.2008), N309/08 (15.12.2008) and N108/09 (30.7.2009).
- (¹⁵) The national subsidy can be as high as 24 % of the production costs in the UK and 20 % in Germany. The subsidy race between national film support schemes to attract inward investment from major film productions is being addressed by the Commission in its review of the Cinema Communication.
- (¹⁶) The economic consultancy Ecorys prepared an independent study on this case. See in detail section V.
- (¹⁷) However, Ecorys also includes the European studios Babelsberg in the benchmarking, aggregated to the other worldwide companies.

time of their investment decision (i.e. 2000 and 2004, not 2008). Finally, they also claim that a number of misunderstandings or technical flaws invalidate the conclusions of the Ecorys study⁽¹⁸⁾. The Spanish authorities claimed that, if these were corrected and the appropriate benchmarking with competitors carried out, the profitability of the prospects of the investment decision based on the evidence available at the time would meet the requirements of the MEIP test.

V. ASSESSMENT OF THE AID

- (61) According to Article 107(1) of the TFEU, 'any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market'. It follows that in order to be qualified as State aid, the following cumulative conditions have to be met: (1) the measure has to be granted out of State resources, (2) it has to confer an economic advantage to undertakings, (3) the advantage has to be selective and distort or threaten to distort competition, (4) the measure has to affect intra-Community trade.

Economic advantage

- (62) As pointed out above, the Spanish authorities have argued that the measure does not constitute State aid, as it fulfils the market economy investor principle ('MEIP') test. This test considers whether a market investor would have invested in the project on the same terms and conditions as the public investor at the time when the decision to make public investment was taken. In this respect it is relevant that initially there had been a private investor in the project⁽¹⁹⁾ and that the Spanish authorities had commissioned several studies which concluded that the project would generate a positive cash flow (see recital 22).

- (63) As pointed out in recital 17, in the case of Ciudad de la Luz, initially a private investor (the managing company) held 25 % of the project (i.e. EUR 150 000 of the initial share capital of EUR 600 000). However, this private investor withdrew before it had committed any further funds itself (it was bought out by SPTCV in 2004). Subsequently, no other private investor invested in the project.

- (64) The fact that the only available private investor had only committed a marginal amount while withdrawing at the moment where the bulk of the investment had to be committed may be considered as *prima facie* evidence that a private investor would not have carried out such a project under the conditions available at the time. Furthermore, the situation of this private investor was very specific (and therefore not in line with the market investor considered by case law), since it was also responsible for initiating the project, for overseeing the construction work and for managing and promoting the studios in return for a management fee. This means that its initial investment could be rational for other reasons than its mere profitability, when considered in isolation.

- (65) In the absence of any private shareholder, the regional authority based its investment decision on the results of the consultancy studies. However, the mere existence of such studies is not sufficient for fulfilling the MEIP test. Before committing funds on the scale invested into Ciudad de la Luz, one would expect a private investor to examine thoroughly the business plan and the assumptions on which such studies are based. A private investor would have to come to his own judgement whether the specific assumptions used to justify the business plan are appropriate in this particular case. Furthermore, a private investor can be expected to compare the expected return of the Ciudad de la Luz project with the expected return of alternative projects. Such an analysis had not been done at the time. Further, it was even not feasible to carry out such a comparison on the basis of the estimated positive cash flows provided in these studies.

- (66) In the context of a State aid investigation, jurisprudence requires the Commission to carry out its own assessment of the facts⁽²⁰⁾. It is therefore necessary to judge the validity of reports carried out at the time of the transaction.

- (67) In view of the reports submitted by the Spanish authorities since the opening decision, there appear to have been two investment decisions concerning the project. The first of these was in 2000 based on the Arthur Andersen business plan of 2000 (covering investments

⁽¹⁸⁾ Study on applying the market economy investor principle to the public investment in Ciudad de la Luz — Final report (Ecorys — 19 July 2011).

⁽¹⁹⁾ For instance, in Citynet Amsterdam, the Commission considered that the MEIP was fulfilled, as the public investor invested on terms comparable to those of the private investor in the project. Decision of 11 December 2007, C 53/2006.

⁽²⁰⁾ In *Valmont*, the CFI considered that the Commission should not have simply relied on the existence of an independent expert's assessment to determine whether a sale of land involved the granting of State aid. The CFI required that the Commission should also have verified its evidential value, something which the CFI then did itself (Case T-274-01). In *Hamsa* (Case C-316/02) and *Lenzing* (Case C-525/04), the Court of Justice recognised that the Commission has a margin of discretion with regard to economic matters, but that it 'must establish whether the evidence relied on is factually accurate, reliable and consistent ...'.

in the period 2002-2006). In 2004, potentially to review whether further investment in the project was appropriate, the Consultia report was commissioned (covering actual investments in the period 2002-2004 and forecast investments in 2004-2014). Consequently, the MEIP should be assessed for both investment decisions.

(or similar) business and financial risk as the one under consideration. According to the Capital Asset Pricing Model (CAPM), the cost of equity capital, K_e should be estimated by the following formula:

$$K_e = R_f + \beta(R_m - R_f)$$

- (68) The Commission has assessed whether a hypothetical private investor would have invested in the project creating the company Ciudad de la Luz. According to the market economy investor principle, the investment undertaken is considered to be State aid if the expected compensation to be received by the State is lower than what a private investor would have requested under the circumstances of that particular project.

where R_f is the risk-free rate, $(R_m - R_f)$ is the market risk premium and β is the 'Beta', a measure of the systematic (non-diversifiable) risk associated with the stock of Ciudad de la Luz, which reflects both the business and financial risk.

- (69) In order to finance a project, investors need to invest some capital. Such capital has a cost, the cost of capital. Typically, there are two broad sources of capital: equity capital and (financial) debt capital. The total cost of capital is the weighted average cost of capital (WACC), taking into account the proportion of equity capital and the proportion of debt capital. The cost of debt capital and cost of equity capital are expected costs and not historical costs. In the particular case of Ciudad de la Luz, the business plan envisaged that the project would be fully financed with equity capital. Therefore, the total cost of capital is the equity capital.

- (72) For the risk free rate, R_f , market practice ⁽²³⁾ suggests to take the long-term (typically 10 years) government bond rate in the country of operation (these are considered the least risky investments). The average annual return on 10 year government bonds in Spain was 4,1 % in 2004 ⁽²⁴⁾. For the market risk premium, one should take the historical market risk premium over a reasonably long time period. It is common market practice to take the difference between the historical return on a diversified equity index in the country of operations, and the risk free rate. According to Fernández (2004) ⁽²⁵⁾, the historical market risk premium over government bonds in Spain (during the period 1991-2003) was between 6,8 %-9,3 %. The Commission took a conservative approach in the estimation of the market risk premium and considered the lower bound of this interval, namely 6,8 %. A subsequent and more recent paper by the same author ⁽²⁶⁾ comes to reinforce the validity of this value, by presenting the required equity premium during the period 2000-2004 in the range of 6-7 %.

- (70) A private equity investor would have been willing to invest in Ciudad de la Luz if the expected internal rate of return ⁽²¹⁾ was higher than or equal to the opportunity cost of equity capital ⁽²²⁾ (i.e. the return that he could have obtained in a similar project).

- (73) For the estimate of beta, the Commission used publicly available information pertaining to companies that have been identified as direct competitors to Ciudad de la Luz by Spanish authorities, namely Carrere Group ⁽²⁷⁾ and Babelsberg. These figures were reported by financial analysts that carried an in-depth analysis of the two companies. An average of the two betas, adjusted to match the financial risk profile of Ciudad de la Luz, gives a value around 1,5. This is a conservative

- (71) The Commission has calibrated the Capital Asset Pricing Model to obtain the cost of equity capital. The cost of equity capital reflects the opportunity cost of investment for shareholders in companies or projects with the same

⁽²¹⁾ By definition, the internal rate of return corresponds to the discount rate which makes the net present value of the investment equal to zero.

⁽²²⁾ Brealey and Myers, 2000, Principles of Corporate Finance, Sixth Edition (Chapter 5, p. 100).

⁽²³⁾ See for e.g. Brealey and Myers, 2000, Principles of Corporate Finance, Sixth Edition (Chapter 8).

⁽²⁴⁾ <http://www.tradingeconomics.com/spain/government-bond-yield>

⁽²⁵⁾ Pablo Fernández 2004, 'Market risk premium: required, historical and expected', Working paper IESE Business School.

⁽²⁶⁾ Pablo Fernández (2009): 'The equity premium in 150 textbooks', Working paper IESE Business School.

⁽²⁷⁾ http://www.carreregroup.com/fr/documents/financials/Etude_Financiere_13062001.pdf

approach, since the investment in Ciudad de la Luz is likely to involve a higher degree of idiosyncratic risk as the other two established studios. Ciudad de la Luz it is a green-field investment in a region which does not host either Spanish or international film producers. In other words, Ciudad de la Luz's beta is probably higher than that of its competitors.

expected cash flows presented in the 2004 business plan represented an upper bound⁽²⁹⁾. The stream of cash flows determines its expected return. The Commission also takes at face value the expected return of Ciudad de la Luz. However, it calibrates the cost of raising capital. This would have to be done by any rational private investor.

(74) Applying the formula above (see recital 71), the Commission obtained that the expected cost of equity capital should be approximately 14,9 %.

(78) On the basis of the 2004 business plan proposed by Ciudad de la Luz, the internal rate of return of this project is 5,74 % (see Annex I). A private investor in Ciudad de la Luz, facing an opportunity cost of capital of at least 14 % (as computed above, see recital 73), would not have undertaken this investment, since its internal rate of return is lower than the opportunity cost of capital.

(75) By way of comparison, as discussed in Annex I, Spain submitted that the application the CAPM Model would show that a private investor 'would require' a risk premium, not a return, of 3,75 % in 2000 and 2,07 % in 2004.⁷ This calculation is based on a beta of $\beta = 0,395$. A beta of 1 represents the portfolio of all stocks, so the 'average' stock. A beta significantly below 1 would therefore imply a particular low-risk investment. Spain did not substantiate such assumption and did not back it up with any hard and verifiable data.

(79) Furthermore, the Commission computed the Net Present Value (NPV) of the investment in Ciudad de la Luz in order to give the magnitude of how much the project would be worth for the private investor. The object of any investment decision is to find real assets that are worth more than they cost, in other words, investments that have an expected return higher than the opportunity cost of capital. If this is not the case, as for Ciudad de la Luz, the value of the project is negative and consequently the investment is not viable for any rational private investor. The NPV of any project quantifies how much the investment is worth at the moment of taking a decision, and is computed by discounting the stream of cash flows forecasted in the business plan using the discount factor, which is the cost of capital. Intuitively, the higher the cost of capital, the lower the NPV.

(76) As stated above (see recital 70), a private investor would only invest in a project with an internal rate of return larger than the opportunity cost of capital. The Commission notes that the 2000 business plan evaluated only the initial phases of the project in detail. The Commission's analysis (see Annex II) arrived at a negative net present value, based on the 2000 business plan and taking the cash flows presented in the business plan at face value. On this basis, a private investor would not have invested in the project.

(80) For Ciudad de la Luz, using the opportunity cost of capital of 14 % and the cash flows provided in the Consultia business plan of 2004 (which are taken at face value by the Commission as explained in recital

(77) When establishing the internal rate of return, the Commission again takes a conservative approach by not questioning the assumptions of the business plan, in particular the stream of cash flows forecasted for the proposed project. However, it should be noted that the cash flows forecasted in the 2004 business plans appear to be unduly optimistic, especially taking into account the losses incurred by the company during the period 2002-2004⁽²⁸⁾. Given the information at the Commission's disposal, one can therefore consider that the

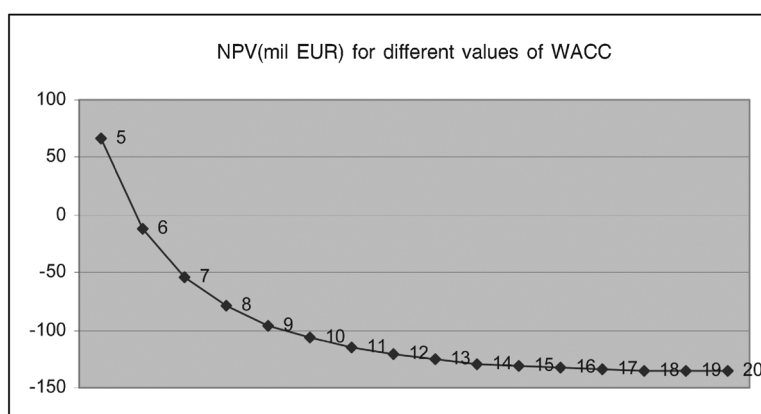
⁽²⁹⁾ The independent Ecorys report goes further, looking also at the assumptions of the business plan and criticising several of them. For instance, it points out that 'the choice of its location does not seem strategically obvious as no synergies with surrounding film industry could be identified. And there are other regions in Spain with similar geographical locations nearer to existing film industry cluster' (p. 30). Further: 'Note in this respect that especially in the first years of operation of the studio and the school, there will be no locally trained and graduated resources locally available. Therefore a prudent private investor would probably have preferred another location to implement a similar film studio' (p. 31). With regard to the 2004 investment, it points out: 'It can be questioned if a private investor would choose to build a greenfield film studio in an area where no adequate human resources were available in the first years of operation of the studio and the school' (p. 39).

⁽²⁸⁾ Source: ORBIS Company Report.

76), the NPV of the investment is around minus EUR 130 million (see Annex). Consequently, this investment opportunity is not worthwhile for a private investor.

- (81) The Commission has also undertaken a robustness check showing that the result is very solid. Above a reasonable threshold, the result is hardly sensitive to the value of the opportunity cost of capital, as estimated by the Commission. In other words, significant changes in the parameters calibrated by the Commission in calculating

the cost of capital do not alter the result. The graph below plots the approximate values of the NPV against different values of the cost of capital (WACC) from 5 % to 20 %. The graph illustrates that the NPV becomes negative for a WACC of between 5 % and 6 %. Hence, if the cost of capital is higher than 6 %, a private investor would not undertake the project. Moreover, for values of WACC higher than 10 %, the value of the NPV is practically unaffected. The Commission has estimated a WACC of around 14 %, hence in a range where it can be concluded with high degree of confidence that the project is not profitable.



- (82) In response to the Commission's assessment, on the basis of a consultancy report⁽³⁰⁾, the Spanish authorities argued that the Commission's assessment was flawed. Firstly, while the CAPM analysis as such was considered to be the correct approach, the consultancy report questioned the parameter values used by the Commission. In particular, the equity premium and the 'betas' should have been lower. Secondly, to establish the relevant benchmark, the Commission should not have used only the Consultia IT's business plan but also the Arthur Andersen's 2000 business plan. Thirdly, the Commission did not use the appropriate financial ratios to estimate the expected profitability of the Ciudad de la Luz project. Finally, the Commission did not take into account expected revenues deriving from the development of hotels and office space.

assessment. Annex II also explains why the Spanish authorities' request for lower 'betas' is mistaken. The Commission uses values from public studies which calculated betas for close competitors of Ciudad de la Luz. The Spanish authorities' proposal to use historical betas is refuted by financial experts.

- (83) These arguments were rebutted by the Commission. As regards the equity premium, Annex II explains in some detail why the values in the range proposed by Spain cannot be valid. Most importantly, the values proposed for the premium were estimated values for 2009 and not those which prevailed in 2000 and 2004. Clearly, the parameters to be used for the estimation of the CAPM should be contemporaneous to the date of the business decision. In fact, for the relevant period, the author quoted by the Spanish authorities himself provides estimates which are in line with the Commission's

- (84) In reply to the Spanish authorities' request to consider the 2000 business plan, Annex II provides such a calculation. As can be seen, due to a higher risk premium and to a higher risk-free rate, in that case the WACC would be even higher than in 2004. Also, this calculation leads to a negative NPV. Finally, with regard to possible revenues deriving from hotels and office space, the assertions made by the Spanish authorities were based on new evidence, namely six land valuation reports drawn up subsequently. This evidence was not part of the information available to a potential investor at the time. While the Andersen report mentions the possibility of developing a hotel complex, it does not contain information about expected profitability and there was no business plan pertaining to the development of the land. Annex II nevertheless looks in detail at the proposed *ex post* reports on land development. They are seriously flawed. For instance, benchmark prices proposed for office space in the Ciudad de la Luz complex are those of the most prestigious business streets in Alicante. Given that the Ciudad de la Luz complex is outside the city of Alicante and next to an industrial complex, these benchmark prices are highly inflated. Similarly, the benchmark prices for hotels are

⁽³⁰⁾ Reference to second LECG report.

based on 4 or 5 stars hotels. No indication is given that there would be sufficient demand for such hotels outside of Alicante (and located close to a highway and an industrial complex).

would not have invested in 2000 and would not have continued to invest in the project on the basis of the 2004 business plan.

(85) Apart from its own internal assessment, the Commission also commissioned an independent study on whether a private investor would have carried out such an investment in Ciudad de la Luz under the same terms ⁽³¹⁾. The Ecorys report considers various scenarios which estimate the cost of equity capital to be between 12,5 % and 21,4 % for the investment in 2000 and between 10,9 % and 15,9 % for the further investment in 2004. Thus, the result of the Commission's study is within the range calculated by Ecorys. By way of contrast, the internal rate of return calculated on the basis of the business plan is well below the minimum cost of equity capital as estimated by Ecorys.

(86) Ecorys' overall conclusion is therefore that it does not seem likely that the investments made in 2000 and 2004 were congruent with the conduct of a diligent private investor in a market economy. With regard to the 2000 investment plan, Ecorys finds that the reconstructed business case shows a negative NPV of PTA 9,3 billion. Investing in the stock market would have been a much more interesting investment for a prudent market investor. As regards the 2004 investment Ecorys concludes that 'a diligent market investor would most probably not have decided to complete the full CDL project, but may have opted to operate the 6 sound stages already invested in, or to close down the project and take the loss' ⁽³²⁾. Finally, Ecorys considers that a private lender would not have provided a participating loan or any other debt to the project since the project cash-flow was insufficient for debt service payments.

(87) It is therefore concluded that neither the investments made in Ciudad de la Luz between 2000 and 2004, nor those made since then fulfil the market economy investor principle and therefore constitute an advantage for the undertaking Ciudad de la Luz SAU. Since the MEIP tests are not fulfilled, a market economy investor

(88) Consequently, the Commission considers that the economic advantage is the whole value of the investment. The loans granted to Ciudad de la Luz by SPTCV were subordinated loans, which means that they were treated on the balance sheet as something similar to equity. As already noted by the Commission in the opening decision, the interest on the loans was calculated with on a fixed and one variable part. The rate of the fixed part was very low, and would not be acceptable to a market economy lender. The unusually low fixed part of the loan could be in principle compensated by the prospect of an adequate remuneration on the participating loan thanks to the variable part linked to the profitability of the project, but this could not be the case for the project under scrutiny (see the reasoning above about the market economy investor principle). Furthermore, no financial costs were included in the forecast profit and statement provided to the Commission by the Spanish authorities for the period 2002-2014. Finally, in theory the loans were to be paid back in April 2015, that is after the date of termination of the project (and possibly its disposal), planned for 2014, which a Market Economy Lender would not have accepted. In their reply dated 20 April 2009 to the opening decision, the Spanish authorities explained that these loans should, from an economic point of view, be considered as capital injection as the lender and the shareholder are the same (i.e. SPTCV). Indeed, as none of the loans paid in 2005, 2007, 2008 and 2009 have been (even partially) repaid, and the beneficiary has not paid any interest for these loans, they must be considered de facto as equity investment. According to the information provided by the Spanish authorities in April 2012, this was a total of EUR 265 089 599 by the end of 2010 ⁽³³⁾.

Selectivity

(89) The aid is also selective since the benefits arising from the support confers an advantage only to the undertakings active in the sector, and in fact only to some of them.

State resources

(90) The Commission notes that the Generalitat Valenciana has funded the investment through its fully-owned investment arm SPTCV and that the studies which led

⁽³¹⁾ Ecorys, *Study on applying the market economy investor principle to the public investment in Ciudad de la Luz*, 19 July 2011.

⁽³²⁾ Pages 30 and 39 of the Ecorys report.

⁽³³⁾ As set out in recitals 29 and 53. As the loans are considered equity investment, interest charges are not taken into account.

to the public investment in Ciudad de la Luz were carried out for the Generalitat Valenciana. Hence, these allocations can be considered as State resources.

Distortion of competition

- (91) When State aid strengthens the position of an undertaking compared with other competing undertakings, the latter must be regarded as affected by that aid. The support strengthens the position of Ciudad de la Luz compared with other competing undertakings by allowing it to enter the market of film studios. Competition between undertakings profiting from the measure and those not profiting from it is distorted. Even assuming that film productions in other Member States in which other film studios are located receive subsidies, this is not a relevant argument to deny the existence of a distortion of competition. A measure does not escape the qualification as State aid merely because other Member States may also have adopted their own market-distorting measures. No such 'balancing' takes place in assessing the condition related to the distortion of competition.

Effect on trade

- (92) Finally, the Commission considers that the measure in question affects trade between Member States. Film studios market their facilities on an international basis. Film producers regularly negotiate prices and conditions with a number of film studios based in different Member States. The Commission has approved aid schemes in Spain and other Member States which support the production of audiovisual works and, hence, indirectly encourage the use of national technical facilities, including film studios. However, the fourth criterion of the 2001 Cinema Communication excludes aid supplements for specific production activities, including the use of film studios.

Conclusion

- (93) In view of the above, the Commission considers that the project grants a selective economic advantage to Ciudad de la Luz. The project is publicly funded, distorts competition and has an effect on trade between Member States. Therefore the Commission regards the notified measure as constituting State aid within the meaning of Article 107(1) of the Treaty on the Functioning of the European Union.

Compatibility

- (94) The Commission must first ensure that the aid is not contrary to the provisions of the TFEU in areas other

than State aid. In this case, the Commission's assessment is without prejudice to any further findings with regard to the compatibility with EU public procurement legislation. The aid does not contain any other elements which could present problems regarding the principle of general legality of the aid.

- (95) As noted in the opening decision, as a subsidiary argument in the event that the Commission considered that the measures at hand constitute State aid, the Spanish authorities have claimed, that such measures would be compatible with Article 107(3) as regional aid and as aid aimed at promoting culture.

Regional aid

- (96) Regional aid for the construction of Ciudad de la Luz may be justified on the grounds that the investment is carried out in an assisted area. The Spanish authorities have suggested that an aid intensity of 36 % would be allowed by the regional aid rules applicable at the time of the initial investment decision in 2000-2006.

- (97) As this is unnotified aid, the Regional Aid Guidelines for 2000-2006 ⁽³⁴⁾ apply. Point 4.2 of the Guidelines states: 'To ensure that productive investment is viable and sound, the recipient's contribution to its financing must be at least 25 %.' Footnote 20 of the Guidelines clarifies that this minimum contribution of 25 % must not contain any aid. Although there was a private investor for 25 % of the initial share capital of EUR 600 000, this private investor was the management company for the project in return for a fee and did not make any further investment in the project to match the majority of the public investment in the project. Consequently, this first investment cannot be considered in isolation from the public investment as it is not a standalone investment. Moreover, the private investor was bought out by SPTCV in July 2004, at which time its holding dropped to 0,2 %.

- (98) The Spanish authorities have argued that the 25 % investment from SPTCV itself could be regarded as the recipient's contribution. The Commission considers that such an approach, in which 25 % of the investment is covered by a publicly-owned body which does not behave as a private investor (see above, section V, subsection 'economic advantage') while the remaining 75 % of the investment is also provided from state resources, cannot ensure that the productive investment aided is viable and sound.

⁽³⁴⁾ OJ C 74, 10.3.1998, p. 9.

(99) As the investment in Ciudad de la Luz has been completely financed through public funds from SPTCV, this condition is not met.

(iii) Is the aid measure proportional, i.e. could the same change in behaviour be obtained with less aid?

Sectoral aid to the audiovisual sector

(100) In certain situations, the Commission has cleared aid to the audiovisual sector under Article 107(3)(c) taking into account the cultural objectives of Article 167 TFEU. The cultural exception can be used in combination with other legal bases for compatibility, such as aid to certain economic activities under Article 107(3)(c) TFEU ⁽³⁵⁾. Although it has not been proposed by the Spanish authorities, in the light of the comments from other parties, that legal basis is considered in what follows.

(101) An assessment under Article 107(3)(c) of the TFEU is carried out under a three-step test balancing the benefits and the negative effects of the measure in question.

(102) In applying this balancing test, the Commission assesses the following questions:

(a) Is the aid measure aimed at a well-defined objective of common interest (i.e. does the proposed aid address a market failure or other objective)?

(b) Is the aid well designed to deliver the objective of common interest? In particular:

(i) Is the aid measure an appropriate instrument, i.e. are there other, better-placed instruments?

(ii) Is there an incentive effect, i.e. does the aid change the behaviour of firms?

(c) Are the distortions of competition and the effect on trade limited, so that the overall balance is positive?

Objective of the measure

(103) A 'market failure' is said to exist if the market outcome does not lead to the highest total social welfare. A inefficient market outcome may arise in the case of so-called public or merit goods ⁽³⁶⁾. Such goods generate positive external effects where the social benefit exceeds the private benefit. As a result, the quantity supplied is below the optimum — which in turn could justify public intervention (and possibly public subsidies).

(104) In the EU there exists a highly competitive, commercial market with a number of large film studios. In addition, for large film productions, European film studios face significant competition from studios outside the EU. Prima facie evidence therefore does not support a market failure on the basis of insufficient supply and high entry costs. In their reply to the opening decision, Spanish filmmakers claim that the Spanish market did not have similar high quality services prior to the construction of Ciudad de la Luz. In particular, Valencian filmmakers have pointed out that having access to a local film studio would allow them to reduce the cost of production (lower transportation costs, proximity to other services which are necessary for film production, etc.).

(105) However, the fact that domestic film producers would benefit from Ciudad de la Luz does not suffice to establish a 'market failure' as defined above. First, to consider that Ciudad de la Luz addresses a market failure with regard to local film production in Spain would be contrary to the objective declared by the Spanish authorities. The 2004 Consultia report considers only local studios as 'indirect' competitors, as Ciudad de la Luz would instead be directed towards large film productions.

⁽³⁵⁾ See in particular, NN 84/2004 of 22 March 2006 — France — Régimes d'aide au cinéma et à l'audiovisuel. In this case, the Commission cleared *ex post* on the basis of Articles 107(3)(c) and/or (d) TFEU, aid measures to support, notably, film distribution, creation, refurbishment or modernisation of cinemas, video-music or video distribution, R & D and development of post-production technologies. See also N 192/2008 of 11 April 2008 — Spain — Promotion of dubbing and subtitling of movies in Basque.

⁽³⁶⁾ Public goods exist in cases where it is not possible to provide a good or service to one person without excluding others or where there is non-rivalry in consumption (e.g. street lighting, roads). Goods of general interest or merit goods are those goods and services that the government feels that people will under-consume and which therefore ought to be subsidised or provided for free (e.g. education, public libraries).

- (106) Secondly, in order to show a market failure with regard to Spanish film producers, one would have to assess whether the social benefit from a studio such as Ciudad de la Luz is higher than the cost. Among other elements, this would require consideration of whether existing facilities are not sufficient, i.e. that Spanish film makers could not use the existing film studios in Spain (such as Video Planning, Cartuja Producciones and Loasur Audiovisual in Andalucía, Media Park in Cataluña, Platós Valencia in Valencia, and Estudios Barajas, Estudios El Álamo, Estudios Los Ángeles and Flash Estudio in Madrid) or in other Member States. While Spanish film producers pointed out some (unquantified) cost advantages from Ciudad de la Luz, they did not argue that such local studios would be essential for domestic film production.

Well-designed aid

- (107) In addition, as there is no well-defined market failure which would be addressed by the measure, the aid cannot be considered to be appropriate and proportionate to address that market failure. If the purpose of the film studio was to support local film production, it would have been necessary, among other issues, to compare the investment carried out with other measures which could have achieved comparable efficiencies from the point of view of film producers. Such a comparison has not been provided by the Spanish authorities.

Distortion of competition and trade

- (108) The balancing test further requires an assessment of the negative effects in terms of distortion of competition and trade. Given that production has fallen significantly below original expectations and that it has attracted mainly local film production, one may consider that until today the distortive effect of the Ciudad de la Luz studios may have been limited. However, the number of film productions made at Ciudad de la Luz is not a good indicator of its possible distortive effects. Ciudad de la Luz's entry into the European film studio market has increased overall studio capacity. Basic economic reasoning implies that such an increase in supply will generate an overall price reduction irrespective of the amount of production Ciudad de la Luz is able to attract. As it would affect the overall market price, such a price reduction could not be observed by comparing Ciudad de la Luz's price-setting with that of its competitors. Furthermore, the building of Ciudad de la Luz may encourage other Member States to carry out

similar investments. Finally, given its modern facilities, Ciudad de la Luz's position in the market may change in the future.

- (109) On the basis of the above, the measure cannot be considered to be compatible under Article 107(3)(c), as it does not address a market failure of the sector and risks adversely affecting competition and trade.

Cultural aid — investment in film studio construction

- (110) The Spanish authorities have not provided any arguments to modify the Commission's view expressed in the opening decision that it 'considers that there is no element indicating that [the cultural] exception can be applied to State aid that provides the construction and operating costs of a new, large film studio complex.' The opening decision discounted the possibility of treating the studios as 'cultural infrastructure' as they are highly specialised and their use is limited to the audiovisual sector (for making films, TV productions and commercials).
- (111) To apply the cultural exception provided for in Article 107(3)(d) TFEU to funding not covered by the Cinema Communication, the aid would need to have been not only necessary, proportionate and adequate, (as for the Article 107(3)(c) assessment above) but also directed towards a cultural objective. As it is found that these criteria are not under Article 107(3)(c), the same applies with regard to Article 107(3)(d).

Cultural aid — incentives to film producers

- (112) In December 2008, the Commission approved the film incentives offered by the Valencia region on the basis of the Cinema Communication⁽³⁷⁾. Prior to this, any incentives granted by the Valencia regional government in connection with filming at Ciudad de la Luz cannot be considered compatible in cases where filming in Ciudad de la Luz had been a condition of the aid (this is contrary to the fourth criterion of the Cinema Communication, which excludes aid supplements for specific film production activities).

⁽³⁷⁾ The 2001 Cinema Communication sets out the criteria by which the cultural derogation of Article 107(3)(d) could be applied to aid schemes supporting the production of audiovisual works.

- (113) Finally, there is no need to examine further in the framework of the present decision, whether aid was granted to film producers.

VI. CONCLUSION

- (114) The Commission finds that Spain has granted State aid to Ciudad de la Luz SA in breach of Article 108(3) of the Treaty on the Functioning of the European Union. The investment in Ciudad de la Luz made by the Valencia region would not have been made by a private investor on the same terms and conditions. As a result, the entire public investment in the project is considered by the Commission to be illegal aid.
- (115) Consequently, the aid amount up to December 2010 is the total of EUR 265 089 599 of direct public investment in Ciudad de la Luz SA and any incentive granted to film producers under the condition that filming took place at Ciudad de la Luz.
- (116) According to the Treaty on Functioning of the European Union and the established case law of the Court of Justice, the Commission is competent to decide that the State concerned must abolish or alter aid ⁽³⁸⁾ when it has found that it is incompatible with the internal market. The Court has also consistently held that the obligation on a State to abolish or alter aid regarded by the Commission as being incompatible with the internal market is designed to re-establish the previously existing situation ⁽³⁹⁾. In this context, the Court has established that this objective is attained once the recipient has repaid the amounts granted by way of unlawful aid, thus forfeiting the advantage which it had enjoyed over its competitors on the market, and the situation prior to the payment of the aid is restored ⁽⁴⁰⁾.
- (117) In accordance with that case-law, Article 14 of Council Regulation (EC) No 659/1999 ⁽⁴¹⁾ lays down that 'where negative decisions are taken in respect of unlawful aid, the Commission shall decide that the Member State concerned shall take all necessary measures to recover the aid from the beneficiary.'

HAS ADOPTED THIS DECISION:

Article 1

The initial share capital and the subsequent share capital increases amounting to EUR 94 459 719, land allocated to Ciudad de la Luz amounting to EUR 9 800 040, the participating loans amounting to EUR 115 million, the convertible loan stock issued since 2008 totalling EUR 45 829 840 granted unlawfully to Spain by Ciudad de la Luz SA prior to 31 December 2010, and any incentive granted to film

producers under the condition that filming takes place at Ciudad de la Luz, in breach of Article 108(3) of the Treaty, constitute State aid incompatible with the internal market.

Article 2

1. Spain shall recover the incompatible aid granted under Article 1 from the beneficiary.
2. The sums to be recovered shall bear interest from the date on which they were put at the disposal of the beneficiary until their actual recovery.
3. The interest shall be calculated on a compound basis in accordance with Chapter V of Council Regulation (EC) No 794/2004 ⁽⁴²⁾.
4. Spain shall cancel all outstanding payments of the aid referred to in Article 1 with effect from the date of adoption of this Decision.

Article 3

1. Recovery of the aid referred to in Article 1 shall be immediate and effective.
2. Spain shall ensure that this Decision is implemented within four months following the date of notification thereof.

Article 4

1. Within two months following notification of this Decision, Spain shall submit the following information:
 - (a) the total amount (principal and interest) to be recovered from the beneficiary;
 - (b) a detailed description of the measures already taken and planned to comply with this Decision;
 - (c) documents demonstrating that the beneficiary has been ordered to repay the aid.

2. Spain shall keep the Commission informed of the progress of the national measures taken to implement this Decision until recovery of the aid referred to in Article 1 has been completed. It shall immediately submit, at the request of the Commission, information on the measures already taken and planned to comply with this Decision. It shall also provide detailed information concerning the amounts of aid and interest already recovered from the beneficiary.

⁽³⁸⁾ Case C-70/72 *Commission v Germany*, paragraph 13.

⁽³⁹⁾ Joined Cases C-278/92, C-279/92 and C-280/92 *Spain v Commission*, paragraph 75.

⁽⁴⁰⁾ Case C-75/97 *Belgium v Commission*, paragraphs 64-65.

⁽⁴¹⁾ OJ L 83, 27.3.1999, p. 1.

⁽⁴²⁾ OJ L 125, 28.4.2004, p. 4.

Article 5

This Decision is addressed to the Kingdom of Spain.

Done at Brussels, 8 May 2012.

For the Commission
Joaquín ALMUNIA
Vice-President

ANNEX A

Information about the amounts of aid received, to be recovered and already recovered

Identity of the beneficiary	Total amount of aid received under the scheme (*)	Total amount of aid to be recovered (*) (Principal)	Total amount already reimbursed (*)	
			Principal	Interest

(*) Millions of national currency.

ANNEX I

Ciudad de la Luz (CDL) — Approach for the calculation of an appropriate cost of capital in capital budgeting decisions — July 2009**Objective**

The objective of this report is to establish whether the investment in the project creating the company Ciudad De la Luz (CDL) can be qualified as State aid. According to the market economy investor principle, the investment undertaken is considered to be State aid if the expected compensation to be received by the State is lower than what a private investor would have requested under the circumstances of that particular project.

A private equity investor ⁽¹⁾ would have been willing to invest in the CDL project if the expected internal rate of return ⁽²⁾ was higher than or equal to the opportunity cost of equity capital ⁽³⁾ (i.e. the return that he could have obtained in a similar project).

In the analysis which follows, we calibrate the Capital Asset Pricing Model (CAPM) to obtain the cost of equity capital. This is the relevant measure that determines whether a private investor would have undertaken the CDL project.

The resulting parameter range is then compared to the *ex-post* performance of a representative sample of CDL's competitors. This is the approach adopted by LECG in its submission, namely to use *ex-post* performance to establish a benchmark for the opportunity cost of capital for this type of projects. As will be seen below, the measure of *ex-post* performance chosen by LECG is not the correct one to establish a benchmark. More importantly, any *ex-post* performance metric is an imperfect proxy for *ex-ante* required returns.

We find that the opportunity cost of capital for this project should be around 14,91 %. Hence, a private investor would require an internal rate of return of more than 14,91 %. According to the business plan proposed by CDL in 2004 (which is the most recent financial information on which the present project is based), the internal rate of return for the investment in CDL was 5,74 % ⁽⁴⁾.

Consequently, a private investor would not have invested in the CDL project since its internal rate of return is lower than the opportunity cost of capital.

The Cost of Equity Capital ⁽⁵⁾

The cost of equity capital is the minimum required rate of return CDL must offer to its shareholders to compensate them for:

- the time value of money;
- the risk associated with investing in CDL.

It is important to stress that the relevant rate of return is an expected future return, not a historical return. The cost of equity capital reflects the opportunity cost of investment for shareholders in companies or projects with the same (or similar) business and financial risk as the one under consideration.

In what follows, we apply a widely accepted method of estimating the cost of equity capital, namely the Capital Asset Pricing Model (CAPM):

$$K_e = R_f + \beta(R_m - R_f)$$

Where:

- K_e the cost of equity capital, expressed in %;
- R_f is the risk-free rate, expressed in %;
- $(R_m - R_f)$ is the market risk premium, expressed in %;
- β is the 'Beta', a measure of the systematic (non-diversifiable) risk associated with CDL's stock, which reflects both the business and financial risk.

⁽¹⁾ In the absence of debt.

⁽²⁾ By definition, the internal rate of return corresponds to the discount rate which makes the net present value of the investment equal to zero.

⁽³⁾ Brealey and Myers, 2000, *Principles of Corporate Finance*, Sixth Edition (Chapter 5, p. 100)

⁽⁴⁾ The use of this benchmark should not be interpreted as deeming that this figure is accurate. Cash flow forecasts are difficult to establish with precision; therefore, 5,74 % probably represents at most an upper limit.

⁽⁵⁾ The appendix provides the general definition of the weighted average cost of capital (WACC), which includes both equity and debt.

For the risk-free rate, market practice suggests taking the long-term (typically 10-year) government bond rate in the country of operations.

For the market risk premium, one should take the historical market risk premium over a reasonably long time period. It is common market practice to take the difference between the historical return on a diversified equity index in the country of operations, and the risk-free rate.

Application to Ciudad De La Luz

The average annual return on 10 year government bonds in Spain was 4,1 % in 2004 ⁽¹⁾.

$$R_f = 4,1 \%$$

According to Fernández (2004) ⁽²⁾, the historical market risk premium over government bonds in Spain (during the period 1991-2003, which corresponds approximately to the period prior to our investment) is between 6,8 % and 9,3 % (the difference lies in the method to calculate the average — arithmetic versus geometric). We consider the lower bound of this interval for our estimation of the market risk premium.

$$(R_m - R_f) = 6,8 \%$$

Finally, for the estimate of beta, we use publicly available information pertaining to companies that have been identified as direct competitors to CDL by the Spanish authorities.

In 2001, KBC Securities provided a report containing the necessary information to calculate the net present value of a 10-year investment in the **Carrere Group**. Note that both the date and the investment's maturity roughly coincide with the case at hand. The discount rate used in the KBC report was 12 %, while the reported beta stood at 1,8. Taking into account that the financial risk profile of **Carrere** is different from that of CDL (Carrere's capital structure includes debt), we have to adjust this beta and compute the unlevered beta in order to isolate the business risk profile. The formula to obtain the unlevered beta is given by:

$$\text{Beta}_{\text{Unlevered}} = \text{Beta}_{\text{Levered}} / [1 + (1 - T) D/E]$$

where T is the applicable tax rate. The tax rate for France, where Carrere is established, is around 33 %, and the debt to equity ratio data can be found in the original KBC report. At the time of the share issue, the debt to equity ratio stood at 10 %. This magnitude has been confirmed with Bloomberg data.

Using these parameter values, we obtain the following value for the unlevered beta:

$$\text{Beta}_{\text{Unlevered}} = 1,68$$

A similar assessment was made in Germany in 2008 by Der Spezialist für Finanzaktien for **Studio Babelsberg**, another firm identified as a direct competitor to CDL by Spanish authorities. That report assumed a cost of equity of 12 %, and a beta of 1,5. At the time the report was published, **Studio Babelsberg** was a debt-free company, meaning that its capital structure was identical to CDL's; hence there is no need to adjust the beta in this case.

This direct evidence obtained from detailed reports pertaining to two direct competitors indicates that the beta applicable to CDL is (at least) in the 1,5-1,68 range. In addition, the investment in CDL is likely to involve a higher degree of idiosyncratic risk for the reasons already expounded by the Commission. In other words, CDL's beta is probably higher than that of its competitors.

In what follows, we take the arithmetic average between these two figures and assign it to CDL (despite the fact that the idiosyncratic risk associated with CDL is probably higher). It should be noted that these figures were provided by financial analysts who carried an in-depth analysis of Carrere and Studio Babelsberg.

Thus, the lower bound of the expected return on equity for a private investor would be:

$$K_e = 4,1 + 1,59 * 6,8 = 14,91 \%$$

Obtaining this number is useful, as it implies that a value for the WACC substantially below **14,91 %** can be dismissed out of hand.

Pitfalls in the Methodology of LECG

The estimation made by the LECG study, leading to a discount factor of 5,15 %, is methodologically flawed. LECG claimed that the right proxy for the weighted average cost of capital (WACC) is the realised Return on Assets (ROA) of one, or possibly two, competitors (Pinewood and Babelsberg).

⁽¹⁾ Global Insight.

⁽²⁾ Pablo Fernández (2004), *Market risk premium: required, historical and expected*. Working paper IESE Business School.

First of all, the accounting returns, such as ROA, should in general not be considered as a correct measure for an investor's expected average return for at least three reasons ⁽¹⁾. Accounting returns are calculated on an annual basis, whereas a rational investor will consider the return over the entire life time of the project. Secondly, accounting information is historical information about the company and therefore better adapted to evaluate *ex post* performance of the firm than *ex ante* expected performance on the investments. Finally, investors are not really interested in accounting earnings but rather in monetary gains, i.e. the cash flows they receive from their investment.

Furthermore, LECG should have compared the WACC measure with the ROCE (Return on Capital Employed), and not with ROA. The WACC measure refers to the total capital, i.e. equity and financial debt. However, in the liabilities side of a typical balance sheet, you find not only equity and financial debt but also current liabilities, i.e. payables to suppliers. Therefore, total assets are equal to or higher than total capital and for a given return, ROA is lower than or equal to ROCE ⁽²⁾. Hence, it is the ROCE that should be compared with the WACC and not the ROA. A project realises positive value if and only if the realised return on capital employed is equal to or greater than the WACC.

Competitors data

Before turning to market data, we would emphasise again that the relevant benchmark is the *ex-ante* cost of equity capital. *Ex-post* observed returns are only an imperfect proxy for *ex-ante* expectations, as *ex-post* realised returns are not necessarily equal to *ex-ante* required returns. If investors are interested in the past performance of an industry, they should look at the ROCE, an *ex-post* return relatively neutral to the capital structure of different firms, since it includes both debt and equity. As the level of leverage in a company increases, the return on equity for shareholders increases, as compared to the ROCE.

In what follows, we analyse data on the ROCE of a representative group of competitors from various sources and observe that results are not out of line with our calibration exercise.

1. Amadeus data

Amadeus is a comprehensive, pan-European database containing financial information on over 11 million public and private companies in 41 European countries provided by Bureau van Dijk (BvD) Electronic Publishing. BvD is one of the world's leading providers of firm level balance sheet data, with Europe being most extensively covered.

The median is the number separating the higher half of a sample from the lower half. If the observed values are arranged in either ascending or descending order, the median is the value in the middle.

The arithmetic mean (average) is the sum of all the observations divided by the number of observations.

For many distributions, the median and mean coincide. Empirically, the two may differ substantially if, despite large sample size, the observed distribution is skewed (e.g. because it contains a number of outliers, i.e. extreme observations).

The data we present below is characterised by values for the mean that are higher than the median (positive skewness). Since the mean is sensitive to outliers, we focus on the median instead. Note that this choice leads to a finding of lower returns as compared to using the sample average.

Peer group analysis

If we consider a very broad sample comprising all NACE 921 (Motion picture and video activities), this yields more than 11 000 observations for the period 1994-2008.

	Median
Return on capital employed (ROCE)	13,56 %

⁽¹⁾ Hans W. Friederiszick and Michael Troge, DG COMP, CET, 'Applying the MEIP to State Owned Companies — Lessons learned from the German Landesbanken Cases', *Competition Policy Newsletter*, No 1, Spring 2006.

⁽²⁾ This confusion frequently arises because in the textbook finance literature, some authors assume a simplified balance sheet, with only equity and financial debt, and no current liabilities. In such cases, indeed, ROA is equal to ROCE. But in the real world this is not usually the case.

Pinewood-Shepperton, Carrere Group and Barrandov Studio belong to the narrower four-digit NACE code 9211 (Motion picture and video production). In addition to the NACE classifications, Amadeus provides a finer definition of peers by grouping firms within the same NACE code according to their size. Pinewood-Shepperton, Carrere Group and Barrandov Studio belong to the group of 'very large companies' in NACE 9211 ('very large' is not an absolute measure, but relative to other firms belonging to NACE 9211). The median ⁽¹⁾ for this peer group of 45 companies over the period 2000-2006, in the cases where data were available, is as follows:

	Median
ROCE	10,1 %

Studio Babelsberg is listed in Amadeus under the same NACE code as the previous three companies, but is considered only as 'a large company'. The 'large company' peer group for NACE 9211 is formed by 133 companies. The median of the group over the same period (2000-2006) is:

	Median
ROCE	10,1 %

Cinecitta Studios is listed under the 'advertising' NACE code meaning that the peer group is inadequate for comparison purposes. CDL, too, has been assigned to a peer group with NACE code 7413 (Market research and public opinion pooling), in our opinion not relevant for our assessment.

2. ORBIS data ⁽²⁾

In order to obtain information on firms mentioned in the submission provided by the Spanish authorities, it was necessary to turn to ORBIS. In ORBIS, information was available for the following companies:

- Pinewood Shepperton
- Studio Babelsberg
- Carrere Group
- Cinecitta
- Ealing Studios
- Barrandov
- Prime Focus
- Ray Corp
- Europacorp

The median over these companies and over the period 2002-2007 is:

	Median
ROCE	10,82 %

Since this group of companies is made-up of clearly identified competitors, there is no risk of including an 'outlier' that is not really active in the same segment as CDL (which may be the case for the peer groups that have been constructed in Amadeus). We therefore also report the average for that group over the 2000-2007 period.

	Average
ROCE	12,26 %

⁽¹⁾ As mentioned above, the median for this group is lower than the arithmetic average. For this peer group analysis, Amadeus provides the yearly median ROCE pertaining to the entire peer group. In order to aggregate over time (the figure reported in the text), we computed the 'median of the yearly medians'.

⁽²⁾ ORBIS is a global database which has information on over 50 million companies worldwide (Bureau van Dijk Electronic Publishing).

Conclusion

Our calibrated opportunity cost of capital for the investment in CDL stands at 14,91 %. If we accept at face value the 2004 business plan proposed by CDL and LECG's analysis, the internal rate of return of this project is 5,74 %. However, we stress that the cash flows forecasted in the 2004 business plans appear as unduly optimistic, especially taking into account the actual losses incurred by the company during the period 2002-2004 ⁽¹⁾. Given the information at our disposal, we can conjecture that the expected cash flows presented in the 2004 business plan represented an upper bound.

As stated in the introduction, an investor would only invest in a project with an internal rate of return larger than the opportunity cost of capital. Consequently, an investor in CDL would have required a much higher internal rate of return (i.e. at least 14,91 %) in order to invest in this project. We can conclude that the investment made in CDL did not fulfil the market economy investor principle.

With a WACC = 14,91 %, and assuming that the 2004 cash flow forecasts represent an upper limit, we computed the NPV of the project as the sum of discounted cash flows. On the basis of the submission provided by the Spanish authorities, it emerges that the 199 million investment is the sum of the cash flows in the period 2005-2007. The cash flow of the last period includes the residual value, computed using the dividend discount model:

$$V_t = \frac{D_t(1+g)}{r-g}$$

Where D_t stands for the dividend to pay in year t , g is the dividend growth rate and r the discount rate.

This expression is highly sensitive to the parameters D_t and g . Obtaining accurate estimates for D_t and g is beyond the purpose of this note. For this reason, we use as a benchmark the values proposed by the Spanish authorities, namely $D_t = 8\,651$ (last period cash flow) and $g = 2,553\%$ (the inflation rate). However, we apply our estimated discount rate of 14,91 %. On the basis of these parameter values, the project yields a negative net present value of- NPV = - 131,65 mil.

	2002	2003	2004	2005	2006	2007	2008
Cash flow	- 884	- 1 792	- 2 601	- 118 177	- 55 813	- 25 088	4 462
Discount	$(1 + \text{WACC})^2$	$1 + \text{WACC}$	1	$1/(1 + \text{WACC})$	$1/(1 + \text{WACC})^2$	$1/(1 + \text{WACC})^3$	$1/(1 + \text{WACC})^4$
14,91 %	1,3204	1,1491	1,0000	0,8702	0,7573	0,6591	0,5735
DCF	- 1 167,26	- 2 059,19	- 2 601,00	- 102 843,09	- 42 268,78	- 16 534,56	2 559,16

	2009	2010	2011	2012	2013	2014	NPV
Cash flow	5 526	6 561	6 842	8 057	8 307	80 447	
Discount	$1/(1 + \text{WACC})^5$	$1/(1 + \text{WACC})^6$	$1/(1 + \text{WACC})^7$	$1/(1 + \text{WACC})^8$	$1/(1 + \text{WACC})^9$	$1/(1 + \text{WACC})^{10}$	
14,91 %	0,4991	0,4344	0,3780	0,3290	0,2863	0,2491	
DCF	2 758,17	2 849,86	2 586,30	2 650,40	2 378,07	20 041,62	- 131,65

Comments on the last submission (25 March)

The 25 March submission lacks methodological rigour and makes some central claims that are at best unsubstantiated. It states that:

⁽¹⁾ Source: ORBIS Company Report.

...To quantify this return and above all the risk premium that a private investor would require from a project, different models are used, the most common of which is the Capital Asset Pricing Model (CAPM). For example, if this model is applied to the case in hand, a private investor 'would require' a risk premium, not a return, of 3,75 % in 2000 and 2,07 % in 2004.'

and further presents the following table:

Table 1

Estimate of the risk premium required from CDL according to the CAPM model

	Market risk premium	Beta of Ciudad de la Luz	Risk premium required from Ciudad de la Luz
2000	9,49 %	0,395	3,75 %
2004	5,25 %	0,395	2,07 %

In other words, the submission claims that CDL's Beta is $\beta = 0,395$. This is an unsubstantiated conjecture that is not backed up with any hard and verifiable data. In addition, it is hard to reconcile it with common sense.

Below, we provide direct quotes from Brealey and Myers, the central reference in LECG's submission.

'...beta measures how sensitive a security is to market movements. Stocks with betas greater than 1,0 tend to amplify the overall movements of the market. Stocks with beta between 0 and 1,0 tend to move in the same direction as the market, but not as far. Of course, the market is the 'portfolio of all stocks', so the 'average' stock has a beta of 1,0.' (Chapter Seven, pg. 174).

In other words, higher-beta stocks mean greater volatility and are therefore riskier.

Investment in CDL is at least as risky as investment in its established competitors whose betas are substantially above 1 (see evaluations made by KBC Securities and Spezialist für Finanzaktien).

Finally, in terms of the risk-free rate, it seems highly opportunistic to refer to the present temporary financial crisis in order to rebut the value chosen by the Commission, which corresponds to the risk-free rate in the period of the investment in CDL.

Appendix

In order to finance a project, investors need to invest some capital. Such capital has a cost. This is the cost of capital.

Typically, there are 2 broad sources of capital:

- Equity capital (E)
- Financial capital/debt (D)

The sum of equity capital and debt capital gives us the total capital (C), expressed in EUR. Each of these 2 sources of capital has a certain cost. We note:

- K_e the cost of equity capital, expressed in %;
- K_d the cost of financial capital (debt), expressed in %.

The total cost of capital is therefore the weighted average cost of capital (WACC), taking into account the proportion of equity capital and the proportion of debt capital. We have therefore:

$$WACC = K_e \frac{E}{C} + K_d \frac{D}{C}$$

Note also that K_d and K_e are the expected cost of financial capital and of equity capital, and not the historical cost.

Taking into account the tax advantages of debt financing, and assuming T is the tax rate applicable to CDL, we have:

$$WACC = K_e \frac{E}{C} + K_d \frac{D}{C} (1 - T)$$

In the particular case of CDL, no mention of debt is made in the 2000 business plan. Since the project is fully financed with equity capital we have the following:

$$WACC = K_e$$

ANNEX II

[adapted from the document of March 2010]

Reply to the submission of 19 October 2009 prepared by LECG

The reply of the consulting company LECG to the Commission's analysis focuses on four issues:

(1) Alleged erroneous use of the CAPM model.

While LECG accepts that a CAPM-based analysis is the correct avenue to pursue, it questions the parameter values that have been used by DG COMP. More precisely, LECG asserts that:

— the equity premium should have been lower

— the 'betas' should also have been lower

(2) The Commission should not have limited itself to Consultia IT's business plan, but should also have used Arthur Andersen's 2000 business plan to establish the relevant benchmark.

(3) The Commission did not use the appropriate financial ratios to estimate the expected profitability of the CDL project.

(4) Furthermore, the Commission did not take into account the expected revenues deriving from the development of hotels and office space.

1. The parameters of the CAPM

1.1. Equity premium

LECG questions our choice of using historical data relating to the premiums, based on Fernández (2004), to estimate the market risk premium in Spain for the years 2000 and 2004. Instead, LECG suggests using the information found in a later paper by the same author⁽¹⁾.

As will be seen below, the LECG report quotes this paper very selectively.

The LECG report argues that the required equity premium should be used instead of the historical equity premium. However, Fernández (2009) states the following:

'It is easy to conclude that there is not a generally accepted equity premium point estimate or a common method to estimate it. [...]

The recommendations regarding the equity premium, taken from 150 finance and valuation textbooks published between 1979 and 2009, range from 3 % to 10 %. Several books use different equity premiums in different pages and most books do not distinguish among the four different concepts that the phrase 'equity premium' designates: historical equity premium, expected equity premium, required equity premium and implied equity premium. [...]

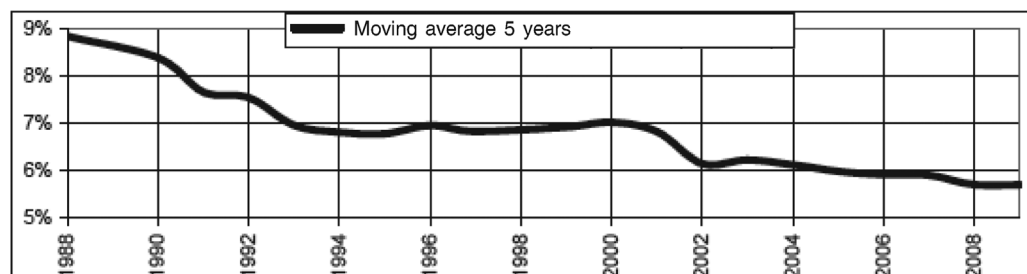
129 of the books consider expected and required equity premium to be synonymous terms and 82 do not distinguish between expected and historical equity premium.'

Furthermore, as regards its concrete value, the LECG study proposes using an equity premium recently presented by Fernández (2009). Fernández suggests using a Required Equity Premium (REP) ranging from, 3,8 % to 4,3 %. There are at least two reasons for which this range is not valid for our purposes. First, it suffers from intrinsic limitations, since it is a subjective valuation by a single individual. It should be noted that Fernández also presents an average value obtained from 150 textbooks (see graph below). Secondly, and most importantly, the suggestion to use a value of 3,8 %-4,3 % is an estimation of the current equity premium, not the one prevailing in 2000 and 2004. The values of the parameters to plug in the CAPM should be contemporaneous to the date of the business

⁽¹⁾ Pablo Fernández (2009): *The Equity Premium in 150 Textbooks*. Working paper IESE Business School.

decision (i.e. *ex-ante* and not *ex-post*). In other words, the relevant equity premium is the one that was prevailing in 2000 (or 2004), not 2009. With respect to that point, Fernández's paper (2009) does provide consensus estimates of the REP in 2000 and 2004. In particular, the 2004 value of the REP is above 6 %, whereas its value for 2000 is around 7 %. Our estimation before this paper was made public was correct, and was in this range, i.e. 6,8 %.

'The figure below shows the evolution of the Required Equity Premium (REP) moving average (last 5 years) used or recommended in 150 finance and valuation textbooks.'



1.2. Beta

As far as the beta is concerned, the LECG report casts doubts on the use of estimations provided by private companies specialised in valuations. Below, we provide the links to the studies we refer to:

Carrere (the information we used can be found on p. 5 of the report below):

http://www.carreregroup.com/fr/documents/financials/Etude_Financiere_13062001.pdf

Studio Babelsberg (see p. 10):

http://www.studiobabelsberg.com/uploads/media/Studio_Babelsberg_14May08.pdf

In our view, this is precisely the place where a private investor would look for information to establish a beta *ex-ante*. These analysts have specific skills to assess *ex-ante* valuations.

The two studies provide betas for certain close competitors of Ciudad de la Luz.

Pablo Fernández, the author extensively, but selectively, quoted in the LECG study, has written widely to show that historical betas (as the ones proposed by LECG) are next to meaningless.

In his paper 'Are calculated betas worth for anything?' (Working paper IESE Business School), Pablo Fernández (2008) presents strong arguments against the use of calculated beta in valuations:

'We show that, in general, it is an enormous error to use the historical beta as a proxy for the expected beta. First, because it is almost impossible to calculate a meaningful beta as historical betas change dramatically from one day to the next; second, because very often we cannot say with a relevant statistical confidence that the beta of one company is smaller or bigger than the beta of another; third, because historical betas do not make much sense in many cases: high-risk companies very often have smaller historical betas than low-risk companies; fourth, because historical betas depend very much on which index we use to calculate them. [...]' ⁽¹⁾ (our emphasis)

The third argument above put forward by Fernández (2008) also serves to illustrate that the betas presented by LECG cannot be right. Indeed, Fernández makes the assertion that high-risk companies are high beta. This is very intuitive: the required return for a high-risk project (such as CDL) ought to be above the return of a diversified portfolio (e.g. the IBEX 35).

⁽¹⁾ Damodaran (Damodaran, Aswath (1994), Damodaran on Valuation. New York: John Wiley and Sons) also makes this point by calculating the beta of Disney. With daily data, he gets 1,33; 1,38 with weekly data; 1,13 with monthly data; 0,44 with quarterly data; and 0,77 with annual data. With a 3-year period, he gets 1,04; 1,13 with 5 years; and 1,18 with 10 years. Also, the beta depends on the index taken as the benchmark; thus, the beta with respect to the Dow 30 is 0,99; with respect to the S&P 500, it is 1,13, and with respect to the Wilshire 5000, it is 1,05.

In another paper, focused on Spain ('On the instability of betas: the case of Spain', 2008, Working paper IESE Business School) Pablo Fernández shows again that it is a serious error to use betas calculated from historical data to compute the required return to equity.

It is a mistake for seven reasons:

1. because betas calculated from historical data change considerably from one day to the next.
2. because calculated betas depend very much on which stock index is used as the market reference.
3. because calculated betas depend very much on which historical period (5 years, 3 years,...) is used to calculate them.
4. because calculated betas depend on what returns (monthly, yearly,...) are used to calculate them.
5. because very often we do not know if the beta of one company is lower or higher than the beta of another.
6. because calculated betas have little correlation with stock returns.
7. because the correlation coefficients (and the R2) of the regressions used to calculate the betas are very small.

The paper provides numerous examples to support all of the seven statements.

2. The relevant time frame

In our previous analysis, we used the year 2004 as a reference year for the calculation of the NPV, as this was the time when the entire investment of EUR 199,4 million had been committed. However, we can easily duplicate our analysis for the year 2000. The resulting WACC would be higher than in 2004 ⁽¹⁾, due both to a higher market risk premium (which according to the information gathered by Fernández should be around 7 % — see section 1.1) and to a higher risk-free rate (which stood at 5,53 % for Spain in 2000 ⁽²⁾). Hence, an internal rate of return of 8,84 % would still be much lower than the cost of capital (more precisely: $WACC = 5,53 \% + 1,59 * 7 \% = 16,66 \%$).

It is possible to go one step further and compute the NPV of the project in 2000. Bearing in mind all the caveats we stressed in our previous analysis (i.e., the use at face value of the cash flows and the parameters used for the calculation of the terminal value, except, of course, for the WACC) we obtain the following negative NPV:

	2000	2001	2002	2003	2004	2005	2006	NPV
Cash flow	- 46 479	- 69 719	9 005	12 616	6 930	7 710	68 698	
Discount	1	$1/(1 + WACC)$	$1/(1 + WACC)^2$	$1/(1 + WACC)^3$	$1/(1 + WACC)^4$	$1/(1 + WACC)^5$	$1/(1 + WACC)^6$	
16,66 %	1	0,8572	0,7348	0,6298	0,5399	0,4628	0,3967	
DCF	- 46 479	- 59 762,56	6 616,67	7 946,13	3 741,50	3 568,16	27 252,87	- 57 116,22

⁽¹⁾ According to our calculations the WACC in 2004 was 14,91, using a risk-free rate of 4,1 % and a market risk premium of 6,8.

⁽²⁾ See OECD Statistics.

3. Financial ratios

The LECG report agrees with our point of view that CAPM is the right instrument to assess the *ex-ante* cost of capital. Moreover, the report does not provide any argument to rebut the use of the ROCE as a proxy for the WACC. Therefore, it is not necessary to repeat the reasoning already set out in the previous note. However, it may still be worth recalling why the ROCE is the most appropriate ratio. Since the economic profitability of a company is measured *ex-post* by the difference between the return on capital employed and the cost of capital, then intuitively, if one were to construct a benchmark based on past data of competitors in order to determine the minimum return required by investors, then the appropriate proxy would be the average industry ROCE.

4. The extension of the investment to hotels and office spaces

The assertions in this point are based on new evidence, namely six land valuation reports. As a preliminary remark, we note that this evidence is produced *ex-post*, and therefore was not part of the information available to a potential investor at the time ⁽¹⁾. Secondly, we note that the Arthur Andersen report only mentions the possibility of developing a hotel complex (in phase III) and certain office space (in phase IV). The report contains an estimate of costs for developing hotels and offices but none of the associated revenues; hence the information to assess the profitability of developing the land is missing. Indeed, no business plan is provided for the development of phases III and IV. In the Consultia IT business plan, the reference to the hotels is made only indirectly through the mention of an area of complementary services, while offices are not even mentioned. Furthermore, these activities are not considered at all in the section on the economic and financial forecasts. In other words, at no stage would the private investors have been presented with a business plan concerning the development of the land. As such, this implies that the *ex-ante* assessment of the project should solely be based on the business plan concerning the film studios; indeed, all the relevant evidence indicates that land development was not part of the original business plan. In fact, the LECG submission of April 2008 explicitly stated, in section 5 (*The operational value of a hotel complex and commercial area in Ciudad de la Luz*) that the details of the investment in the services complex (hotels and commercial area) were not analysed in either of the two business plans because (i) the above mentioned services would in any event be built after the studio and (ii) the profitability of the studio was high enough and therefore it was not necessary to analyse at that moment the additional cash flows Ciudad de la Luz might generate.

The only pertinent information relevant for the assessment of the land is represented by the bids received by Ciudad de la Luz in 2005 for the construction and operation of hotels and a commercial area, which were presented in section 5 mentioned earlier. This represents an evaluation made by the market in a period contemporaneous with the investment decision, a period moreover characterised by the real estate boom. As will be explained in the next section, the Euroval valuations do not offer proper guidance regarding the value of the land plots.

For the purpose of calculating the NPV including this additional land development, it is possible to use the price set by the market (the fact that it is relatively low, as recognised by the Spanish, is indeed evidence that this property development did not seem to be very attractive for private investors).

The following table provides NPV calculations that include the property development on the basis of the bids that were actually made in 2005 (EUR 560 000 per year, adjusted for inflation, as stated by LECG). As can be readily seen, the NPV remains negative.

	2002	2003	2004	2005	2006	2007	2008
Cash flow	- 884	- 1 792	- 2 601	- 118 177	- 55 813	- 25 088	4 462
IPC hotels				1,000	1,021	1,042	1,064
Hotels				560	572	584	596
Total	- 884	- 1 792	- 2 601	- 117 617	- 55 241	- 24 504	5 058
Discount	$(1 + \text{WACC})^2$	$1 + \text{WACC}$	1	$1/(1 + \text{WACC})$	$1/(1 + \text{WACC})^2$	$1/(1 + \text{WACC})^3$	$1/(1 + \text{WACC})^4$

⁽¹⁾ The LECG report of 25 April 2008 follows the same line, as it states at the outset (beginning of section 2.1.) that the relevant question for the application of the MEIP is 'With the information available at the time the investment was made, did the project offer enough profitability to induce a private investor also to decide to undertake this investment? [...] The investment decision must be analysed from an *ex-ante* perspective.'

	2002	2003	2004	2005	2006	2007	2008
14,91 %	1,3204	1,1491	1,0000	0,8702	0,7573	0,6591	0,5735
DCF	- 1 167,26	- 2 059,19	- 2 601,00	- 102 355,76	- 41 835,77	- 16 149,82	2 901,01

2009	2010	2011	2012	2013	2014	NPV
5 526	6 561	6 842	8 057	8 307	80 447	
1,087	1,110	1,133	1,157	1,181	1,206	
609	621	634	648	661	9 401	
6 135	7 182	7 476	8 705	8 968	89 848	
$\frac{1}{(1 + \text{WACC})^5}$	$\frac{1}{(1 + \text{WACC})^6}$	$\frac{1}{(1 + \text{WACC})^7}$	$\frac{1}{(1 + \text{WACC})^8}$	$\frac{1}{(1 + \text{WACC})^9}$	$\frac{1}{(1 + \text{WACC})^{10}}$	
0,4991	0,4344	0,3780	0,3290	0,2863	0,2491	
3 061,91	3 119,74	2 826,09	2 863,46	2 567,38	22 383,73	- 126 445,48

A series of land valuation reports were prepared by Euroval. These reports were commissioned by the Sociedad Proyectos Temáticos de la Comunidad Valenciana, the investor in Ciudad de la Luz (CDL). The reports purport to provide an objective valuation of the land that would be used for the construction of hotels and offices in the CDL complex. They provide a valuation for the years 2000, 2002, and 2009. For each of these years, two plots are valued: one destined for the development hotel complex, and the other for office blocks, making for a total of 6 valuation reports.

Since the reports broadly follow the same methodologies, some of our comments are generic; whenever reference is made to specific assertions, the corresponding report is identified.

This memo describes the limitations of the aforementioned reports and concludes that the valuations presented therein are untrustworthy. In addition, the memo notes that the valuation report is not compatible with some of the claims found in the documents previously provided by Spanish authorities. Last, the memo indicates the kind of evidence that could have been used to obtain an estimate of the value of the land.

4.1. The reports

As can be seen, Euroval has not signed nor stamped any of these reports, i.e. there is no evidence at all that the entity takes responsibility for the valuations.

The Spanish authorities state that the valuation reports on the land drawn up in 2000 and 2002 do not fulfil the requirements of Ministerial Order ECO 805/2003 regarding the valuation of buildings, 'since their purpose is other than the scope of application of that Order' (e.g. p. 3 of the report providing the 2000 valuation for office space). It is not explained why the aforementioned ministerial order should not apply. The aforementioned ministerial order is also mentioned in conjunction with Law 6/1998 on land valuation (p. 13 of the aforementioned report). It is argued that, since it is a retrospective valuation for the year 2000 made in 2002, 'the acting technical team is free to apply the calculation adjustments and hypotheses it considers most appropriate for the objective pursued.' However, the 'adjustments' and 'hypotheses' are not spelled out. Furthermore, it is not clear why existing law can not be applied, particularly with regard to the valuation of the land. Nor is a justification provided for not applying the laws that were in force at the time.

The report providing the *current* (2009) valuation of the plot destined for office blocks contains an even more surprising statement. It is claimed that the valuation methods applicable according to the *current legislation in force* can be adapted because: 'since the purpose of the valuation is a non-monetary contribution at the date in question, the acting technical team is free to apply the calculation adjustments and hypotheses it deems most appropriate for the objective pursued.' In other words, since the valuation will not lead to a monetary transaction, the valuation

methods that have to be applied by law can be modified. To be more precise, since no real money/transaction is involved, the technical team admits that they consider that they can make adjustments that they deem opportune given the 'objective pursued'.

It is therefore no wonder that Euroval has not officially endorsed any of the six reports.

4.1(a) Reports pertaining to the building of office space (NNT plot)

The reports should have also explained more clearly what the qualification of 'tertiary use' for the land entails.

The most glaring limitation of these reports is the way they establish benchmark prices for office space in the Ciudad de la Luz complex. On p. 18 of the 2000 report, nine transactions are listed, including the price paid per square meter. These transactions took place between December 1999 and September 2000, and the average price paid was of EUR 1 111,7 per square meter. This is the value taken to represent the benchmark for office space in the Ciudad de la Luz complex.

The Ciudad de la Luz complex is outside the city of Alicante and next to an industrial complex (*polígono industrial*). By contrast, the nine transactions mentioned above involve offices (average size: 115,26 square meters) located in the most prestigious business streets in Alicante. Using these transactions to establish a benchmark for the 66 576,54 m² that would be built in Ciudad de la Luz simply does not make sense.

The report uses the Spanish Consumer Price Index (CPI — Índice de Precios al Consumo, IPC) to deflate current values. In particular, the IPC is used to deflate a current valuation of the land back to the year 2000 (p. 24). We note that, as its name indicates, the CPI/IPC does not encompass asset price inflation; the index is computed on the basis of a basket of consumer goods. Using the CPI/IPC to deflate land values and/or real estate values is far from being innocuous, for the reasons explained below.

As is well known, Spain experienced a housing boom that lasted more than 10 years (to a notable extent, its current macroeconomic woes are related to that bubble). As a consequence land prices increased much faster than the general CPI.

According to statistics gathered by the Ministry of Housing of the Spanish Government (Ministerio de Vivienda, <http://www.mviv.es/es/>), housing prices in the Alicante province increased by 122,2 % during the period spanning the first quarter of 2000 and the third quarter of 2009 (this time period has been chosen as it corresponds to the one used in the 2000 Euroval report: January 2000 to August 2009). A cursory glance at the time series indicates that house prices increased fastest at the start of the time period under consideration.

The same statistical source also provides data on land prices; unfortunately, the series only begins in 2004. The average price per square metre of urban land in the Alicante province stood at EUR 234,3/m² during the first quarter of 2004. The corresponding figure for municipalities of more than 50 000 inhabitants in the province of Alicante stood at EUR 464,9/m² during the first quarter of 2004.

Since the price of land that can be used for real development of urban land is closely correlated to housing prices, it is possible to obtain an approximation to the deflator for land prices during the period Q1 2000 – Q4 2003 by looking at house price inflation during the same period. According to the Spanish Housing Ministry, house prices in the Alicante province increased by 80,1 % over the period between the first quarter of 2000 and the third quarter of 2003.

Thus, irrespective of whether one takes the average land price for the entire province (EUR 234/m² in Q1 2004), or that for large municipalities (EUR 464,9/m² in Q1), applying a deflator of that order of magnitude (+/- 80 %) would result in a land price in Q1 2000 much lower than that reported in the Euroval report.

It is also worth mentioning that, regarding the evolution of prices, the reports contradict each other. As mentioned above, on p. 18 of the 2000 report, nine transactions are listed, including the price paid per square meter. These transactions took place between December 1999 and September 2000, and the average price paid was of EUR 1 111,7 per square meter. This is the value taken to represent the benchmark for office space in the Ciudad de la Luz complex.

The 2009 report follows the same methodology. On p. 18, seven transactions that took place between April 2007 and December 2008 are listed. The average value is EUR 2 736,22 per square meter. Thus, the 2009 report provides glaring evidence that real estate inflation was far above the 33,5 % used in the 2000 report. By comparing the two reports, we obtain inflation of 146,1 %. This is in line with the Ministry of Housing reports: between the first quarter of 2000 and the second quarter of 2008 (the period of most of the transactions reported in the 2009 report), housing prices in the Alicante province increased by 152,1 %.

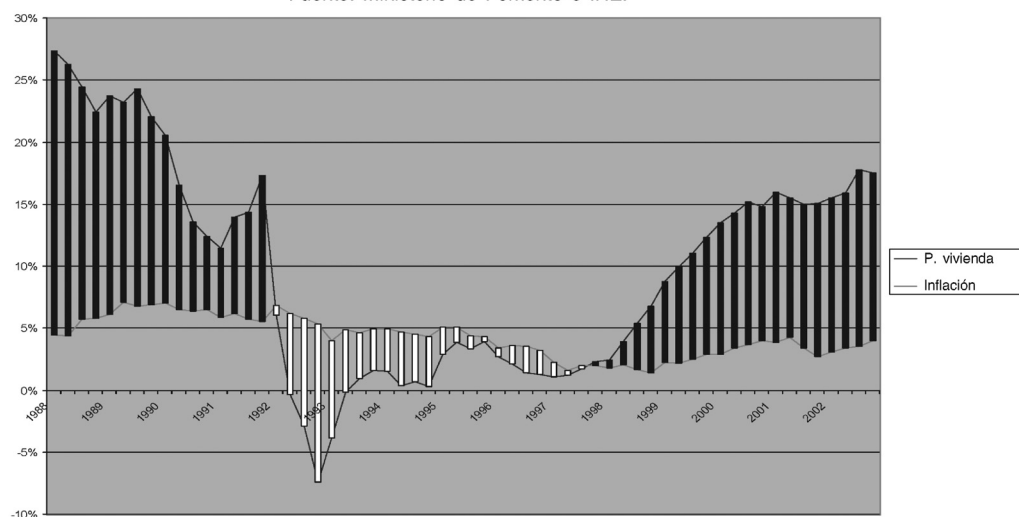
The fact that the figures found in the 2009 report are deflated by 15 % to establish current prices does not change the overall picture in view of the magnitudes involved.

As a by the way, we would also reiterate that using prices for small offices in the centre of Alicante to establish a benchmark for the Ciudad de la Luz complex does not make sense.

Two further comments should be borne in mind. Firstly, during property boom periods, the price of land usually increases faster than final house prices. In any case, the house price index understates land price inflation. Secondly, the average land price for large municipalities is probably not representative of land prices in a location such as that of CDL. Indeed, most of the underlying data used to construct this average price stems from land located in cities or their immediate vicinity (e.g. suburban 'urbanizaciones'); CDL is located outside the city in a location with little (if any) residential housing.

Lastly, house price inflation is illustrated by the material used to teach second-year undergraduates at Universidad Carlos III de Madrid that can be found at: <http://www.eco.uc3m.es/~ricmora/ee/>, materiales, Tema I, slide 67, which we reproduce below. This graphical evidence further confirms that house prices have increased much faster than the CPI/ICP.

Gráfico 20. Crecimiento nominal de los precios de la vivienda e inflación.
Fuente: Ministerio de Fomento e INE.



Original source: LA VIVIENDA EN ESPAÑA: DESGRAVACIONES, BURBUJAS Y OTRAS HISTORIAS, José García Montalvo.

In all the reports, the arguments used to show that the costs of land development are nil are rather thin, given that some additional costs would have to be borne.

Finally, in the case of the office complex (NNT) a difference of 35 % (2002) or more than 50 % (2000) between the values obtained from the two valuation methods (dynamic residual method and increase in CPI) is indicative of the highly speculative nature of the exercise.

4.1(b) Reports on the valuation of the plot destined for a hotel complex (NNH plot)

The 2000 and 2002 reports on the second plot ('NNH') suffer from the same limitations (e.g. use of an inadequate deflator, lack of justification for not applying valuation methods established in Spanish law, etc.). As mentioned above, none of these reports are signed or stamped.

Some additional comments are nevertheless in order. The 2000 and 2002 reports establish benchmark prices for hotel rooms with the help of average prices. However, the source is not provided, nor is it clear whether it refers to Alicante province (2002 report), or the Comunidad Valenciana (2000 report).

The resulting average prices are EUR 44,95/night in the 2000 report, and EUR 47,65/night in the 2002 report. Although the source underpinning these values has not been provided, they are not out of line with previous figures.

By contrast, the 2009 report provides a list of 6 well located hotels, all of which are 4- or 5-star, to establish a benchmark price. The latter is established EUR 104/night. There is no explanation as to why the methodology to establish benchmark prices is different from the one used in the 2000 and 2002 reports.

More importantly, it is hard to understand why the focus is on 4-5-star hotels. Is there any indication that demand would exist for 4-5-star hotels outside Alicante, located next to a highway and a 'poligono industrial'?

In the same line, it is quite telling that the only hotel close to the CDL complex has been omitted. The latter is an IBIS, whose prices range from EUR 49 per night for the summer of 2010 (<http://www.ibishotel.com/gb/reservation/multirates.jshtml> consulted on 24 February 2010). As further evidence, luxury apartments next to a golf course (and relatively close to CDL) charge EUR 80 per night in August 2010 (peak season, see http://www.hotelesoasis.com/WebOasis/EN/ficha_hotel/plantio_golf/descripcion.jsp, consulted on 24 February 2010).

The 2009 report for the NNH plot also contain some surprising statements. One is initially pleasantly surprised to find out that the method to undertake the valuation is in conformity with the law (p. 13 reads 'The methodological references are the criteria laid down in Ministerial Order ECO 805/2003 on real estate valuation and Law 6/1998 of 13 April 1998 on land valuation, the aim of the valuation being to establish the value at the present date.' However, on p. 25, one discovers that, after all, the valuation report *has not* complied with the requirements set out in the Ministerial Order: 'In accordance with Article 61(1)(b) of Order ECO 805/2003 of March 2003 on rules for real estate valuation, we would point out that this Valuation Report does not formally comply with that Order since its purpose is other than the scope of application of the Order' (*'por ser su finalidad distinta al objeto de aplicación de la misma'*).

It is also interesting to note that there is a huge difference between the estimates per square meter for the two plots (NNH and NNT). While not denying that the projected uses (offices vs. hotels) may explain part of the difference, the gap is still striking. For hotels, the values range from EUR 144,12/m² (2000) to EUR 188,35/m² in 2009. For office space, the respective magnitudes range from EUR 491,64/m² (2000) to EUR 800/m² in 2009. What can explain the significant difference in the price evolution (inflation) of these two plots situated next to each other? How is it possible to account for this difference of over 300 %?

Should we conclude that this is due to the fact that the methodology used to value the plot destined for hotels is closer to the standards established by the law? Or should it be put down to the greater transparency of the price of a hotel night?

It is also claimed that variable costs represent 50 % of revenues (e.g. on pp 18-19 of the 2009 report). Where does the estimate of such large margins come from?

Building costs are estimated on the basis of a benchmark price module. For the 2000 and 2002 reports, the correct figures are chosen. However, for the 2009 report, the 2006 figure is used. Why is this?

4.2. Risk premiums

We also note that the reports recognise that investment in hotel facilities is riskier than investment in office space (e.g. on p. 12 and p. 26 of the 2000 report). At all times, the Spanish authorities have consistently envisaged the construction of a 'hotel complex'.

Similarly, the report indicates that the discount rate (*tipo de actualización*) is given by the following formula (p. 16 of the 2000 report):

$$i = \text{Risk-free rate} + \text{risk premium}$$

On the same page, a table provides the minimum risk premiums to be applied. The relevant premiums are above the *ex-ante* expected return on investment in Ciudad de la Luz.

Lastly, the risk premium used in the calculations appearing on p. 21 of the 2000 report (10 %) is lower than the one appearing in the corresponding table on p. 16 (11 %).

4.3. Credible valuations

In order to obtain a credible valuation of the land, valuations for around 2000 of various plots of similar characteristics in terms of size and location (next to the Aguas Amargas industrial complex), and intended for 'tertiary use' and 'hotel use', should have been provided.

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