

EIB PRIORITIES STUDIES

*Recent trends in the PPP market in Europe: slow recovery and increasing EIB involvement*Economics Department
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Executive summary

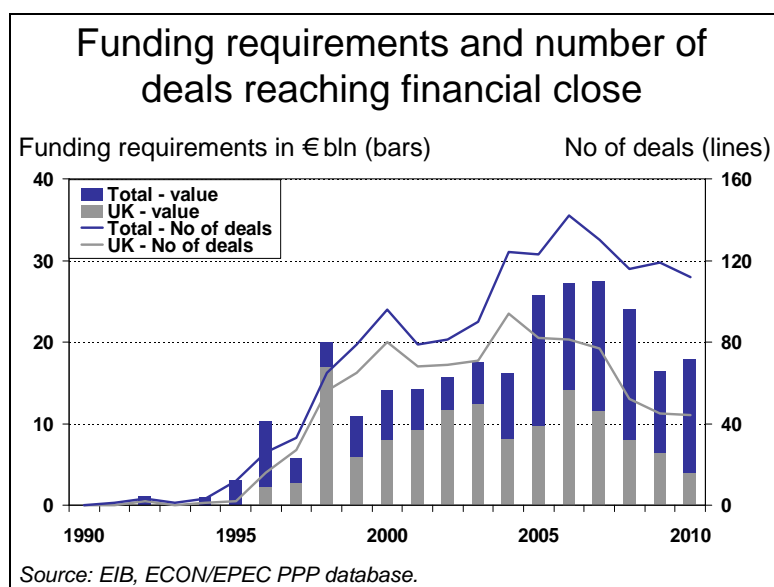
This note analyses the most recent developments in the PPP market in EU-27 and the involvement of the EIB. It relies on a database compiled jointly by the Economics Department of the EIB and the European PPP Expertise Centre (EPEC).¹

- The PPP market contracted considerably during the 2008-09 financial crisis. In 2010 a slow recovery started and continued in the first half of 2011. Having said this, the number and total value of PPPs remain well below their pre-crisis peak levels.
- As to the financing of PPPs:
 - Our data suggest, perhaps somewhat counter-intuitively, that the share of equity in PPP finance contracted during the crisis. Bond financing dried up following the disappearance of monoline guarantees. At the same time, there was a notable increase in the share of public loans and grants covering together 28% of the total funding requirements in 2010. This should be considered a temporary phenomenon due to the crisis and the contraction in the supply of private funds. The crisis may also have changed the type of projects - and thus financing structure - being pursued.
 - The crisis also led to an increase in the cost of financing: according to our data private loans, covering 60% of the funding requirements, were priced at 80 basis points (bps) above Libor/Euribor before the crisis; since 2009 the spread is roughly 240 bps.
- The crisis has highlighted the importance of EIB funding for the PPP market. The EIB has considerably increased its market share (in terms of funding requirements) and, on average, has been involved in larger projects. The Bank financed roughly 18% of the funding needs of all PPPs in Europe. The aggregate value of PPPs with EIB involvement accounted for 50% of the EU PPP market in 2010, compared to 16% in 2007.
- The future of the European PPP market will be shaped by fiscal constraints, changes in financial regulation, emergence of new funding models and instruments, as well as public policy decisions to continue developing PPPs in sectors and projects where they have the greatest potential to deliver genuine efficiency gains.

¹ For more details see Kappeler and Nemoz (2010) Public-Private Partnerships in Europe – before and during the recent financial crisis, EFR 2010/4, EIB.

Recent evolution of the PPP² market in Europe

The chart below shows the number and aggregate value of PPP projects inside the EU-27. The grey line and bars represent the number and value of UK PPPs.



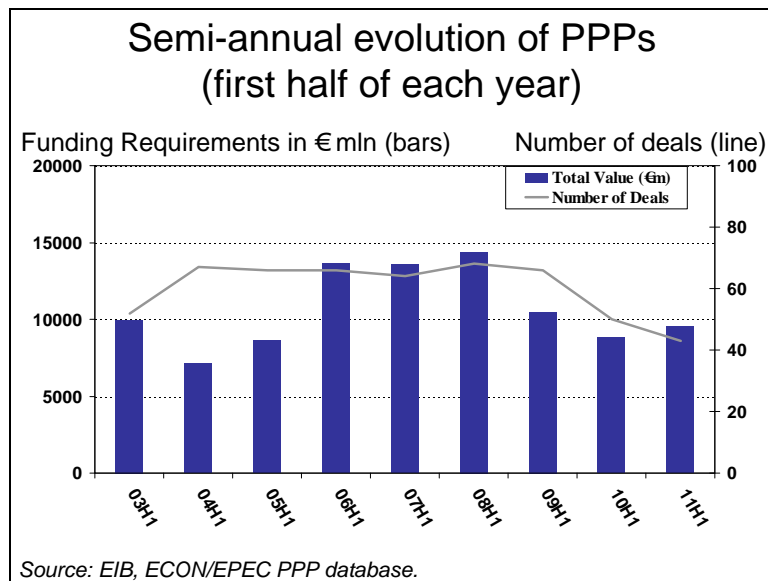
The total PPP market in Europe grew steadily over the past two decades reaching its peak in 2007. Since then, both the number and aggregate value of deals declined considerably. In 2010 the aggregate market value returned to positive growth but remained at a level comparable to the one in 2003 – not inflation adjusted.

The chart also shows that until the mid 2000s the UK alone accounted for more than 50% of all PPP deals in Europe. Its share has since steadily declined to account for 39% European PPPs in 2010. The chart also shows that the aggregate value of PPPs in Europe excluding the UK (blue bars) did not decline that much during the crisis. The Annex includes tables with the number and value of PPPs by country and year.

To capture the latest developments the next chart focuses on the evolution of PPPs during the first half of each year. While this approach does not consider a large part of our data (second half of each year), it allows for a consistent comparison of past developments with the latest data available for the first half of 2011.³

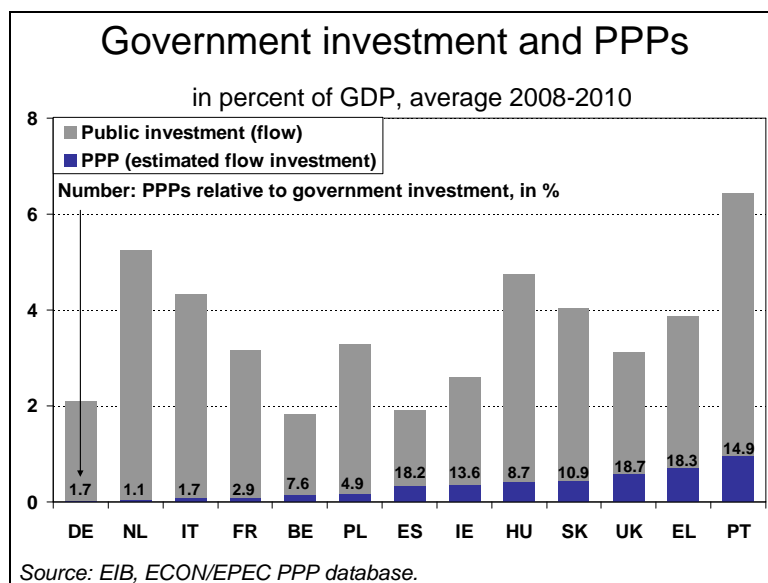
² Data are collected from a variety of sources, in particular Dealogic ProjectWare, InfraNews, Infrastructure Journal and Inspiratia, cross-checked where appropriate against EIB's own project files. The list of PPP projects forming the dataset has been validated, where possible, by EPEC members. The data however remain incomplete. As a consequence, the findings of this publication should be treated with caution. The data do not cover projects with funding requirements of less than Euro 5 million. Here, to be counted as a PPP, a project must be based on a long term, risk sharing contract between public and private parties. The project must include the bundling of design, construction, operation and/or asset maintenance, together with a major component of private finance. The project values referred to in this publication represent the amount of external funding requirements at the time of financial close (i.e. the date at which the main project and financing agreement are signed and debt drawdowns can be made).

³ See also EPEC's Market Update, Review of the European PPP Market - First semester of 2011 at <http://www.eib.org/epec/resources/epec-market-update-h1-2011.pdf>



The chart suggests that after a notable decline in the aggregate value of PPPs in the first half of 2009 and 2010, a moderate recovery took place in the first half of 2011. At the same time, the number of deals (grey line) continued to decline in the first half of 2010 and 2011. This suggests a tendency towards fewer but larger deals in early 2011.

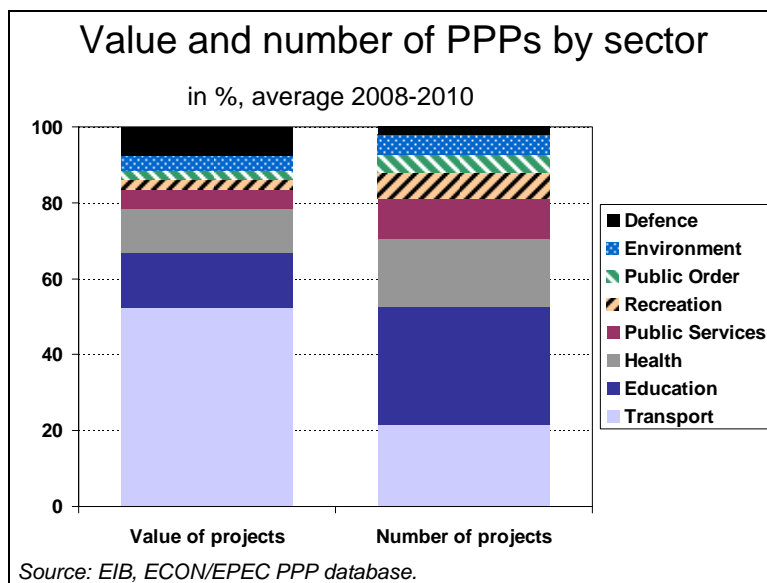
To assess the macroeconomic importance of PPPs in Europe, the next chart shows estimated investment flows of PPPs relative to GDP and compares them with the share of government investment for selected countries. The numbers in the chart refer to the share of PPPs relative to the total (government investment and PPPs).⁴



Between 2008 and 2010, estimated PPP investment flows represented less than 1% of GDP in all EU countries. As share of GDP, PPPs are of most macroeconomic significance in Portugal, Greece and the UK. In Germany, where many small PPP deals have been signed in recent years, the macroeconomic significance of PPPs remains negligible.

⁴ To make data on PPP funding needs (stocks) comparable to investment flows, we spread the value of each PPP project over five years. As suggested by EIB project experts, 5 years roughly represent the duration of a typical major works contract. Having said this, the actual investment period may vary considerably across sectors and projects.

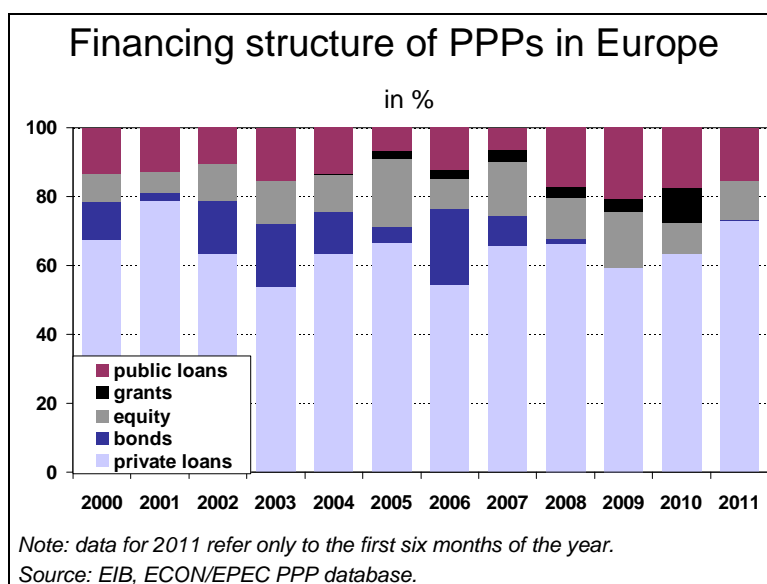
The chart below provides an overview of the sectoral distribution of both value and number of projects as average over the period 2008-2010.



In terms of value, transport is by far the largest sector representing roughly 53% of the total PPP market, followed by education and health. In terms of number of deals, the largest sector is education followed by transport and health. The average project in the transport sector is about four times larger than in education. Defence projects are also comparatively large on average. Note that there is some variation in the sectoral distribution of PPPs across years. At the same time, these changes do not suggest any obvious trend.

Funding of PPPs

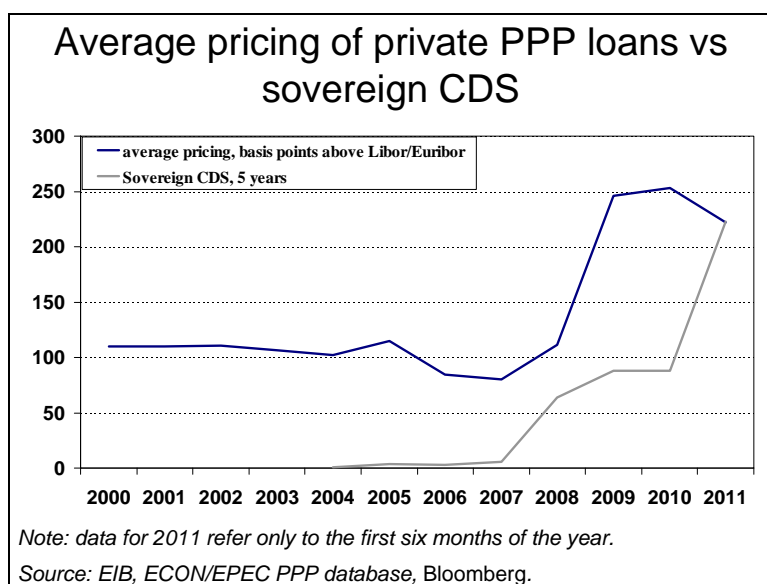
We next decompose the financing structure of PPPs into private and public loans, grants, bonds and equity.



Before the crisis, roughly 60% of the total value of PPPs was financed through private loans. Bonds, equity and public loans covered about equal shares of the total funding requirements - with some variation across years. Grants appeared as a notable source of financing only in 2005. The chart suggests that since the outset of the crisis, bond financing basically disappeared in the absence of monoline guarantees and – perhaps somewhat counter-

intuitively – that the share of equity declined. Instead, the share of public loans and grants increased notably covering together 28% of the total funding requirements in 2010. Out of these 28%, the EIB alone provided roughly 18 percentage points (see chart on page 6). The remainder of multilateral and government funds provided in 2010 mainly consisted of grants. Non-EIB public loans and grants together increased from 3% pre-crisis to roughly 10% of the overall funding requirements in 2010. Data available for the first half of 2011 suggest that the share of grants and part of the public loans are again gradually declining, while the share of private loans is increasing. Note however that anecdotal evidence suggests that these private loans are in cases guaranteed by the public sector, revealing an additional source of government involvement.

The next chart provides some insights into the pricing of private loans, the most important funding source of PPPs. It shows the average spread over Euribor/Libor of the principal loan. Note that for some projects data are available for both construction and operation phase. One might expect a decrease in the price in the second phase, as the construction risk disappeared at that stage. Our data, however, suggests that there is no big difference. For comparison, the chart also shows the weighted average of sovereign CDS spreads as a rough proxy of market conditions.



Spreads over Libor/Euribor declined in the run-up to the financial crisis, from 110 basis points (bps) in 2000 to 80 basis points in 2007. The financial crisis dramatically reversed this tendency: between 2007 and 2009 spreads tripled to more than 240 bps. In the first half of 2011 spreads declined only moderately compared to 2010. For comparison, the chart also shows the weighted average of sovereign CDS, which we consider a broad measure of market conditions. In 2008 the pricing of PPP loans started to rise at the same time but less so than CDS spreads. In 2009 and 2010 PPP spreads increased more than CDS spreads. The cost of bank loans has risen due to their current balance sheet constraints as well as due to prospective regulatory changes, which are likely to increase the risk-weighting of long-term assets.⁵

At a sectoral level, transport projects turn out to be characterised by a higher spread than most other sectors. This can be partly explained by the fact that transport PPPs do often include user-pay models, which implies a higher risk for lenders.

Prospects of the PPP market in Europe

According to the Infrastructure Journal, due to the sovereign debt crisis, most Euro Area economies will slow down investment activity in early 2012. At the same time, social

⁵ PPP funding requirements by country are used to weigh CDS spreads in this chart. Thus, relatively big PPP markets such as Greece, Portugal and Spain have a large weight.

infrastructure is expected to remain dominant especially in the UK, France, Germany, Ireland, Netherlands, Portugal, Belgium, and Spain.

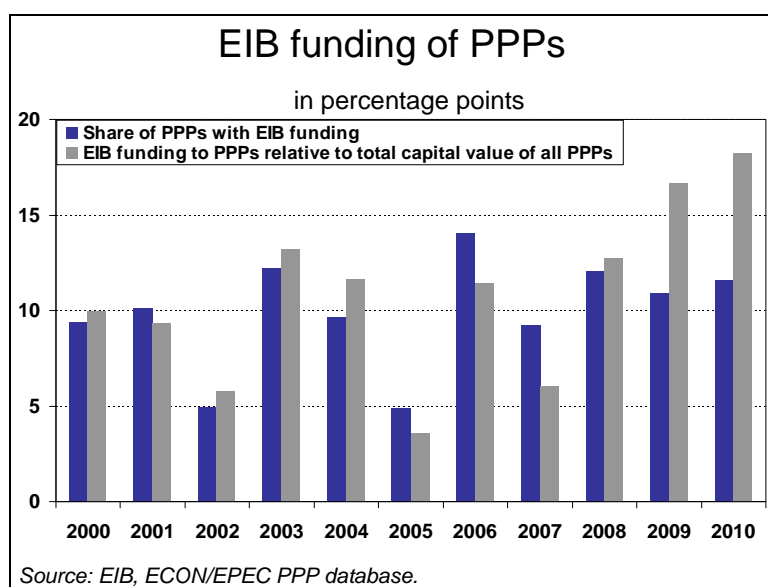
According to Moody's, the outlook for and fundamentals of the PPP market in Europe are stable. Deteriorating public finances have created unprecedented volatility in the cost of borrowing, but also have increased the attractiveness of PPPs as an alternative way to finance infrastructure in some countries.

Several countries are currently reconsidering their use of PPPs. Some countries such as Italy and Slovenia see PPPs as means to foster economic growth. France has also strengthened its efforts to keep its PPP program ongoing and Spain launched an "Extraordinary Infrastructure Plan" this summer, which among others underpins the use of PPPs. The Dutch government announced a boost to infrastructure spending in the next two decades including transport projects procured as PPPs.

Last, as mentioned, the role of the government and institutions such as the EIB has increased significantly during the crisis. For a proper functioning of the PPP model – as a vehicle to involve the private sector to reap efficiency gains in the provision and financing of infrastructure assets and services – the crisis-related greater involvement of the public sector should remain a temporary phenomenon.

Role of the EIB in the European PPP market

This section discusses the role of the EIB in funding PPPs across Europe.⁶ When considering the figures below it is good to bear in mind that PPP projects and the EIB's involvement in them are lumpy, which complicates the interpretation of observed changes from one year to the next. With that in mind, the next chart shows the relative involvement of the EIB in the PPP market in Europe.

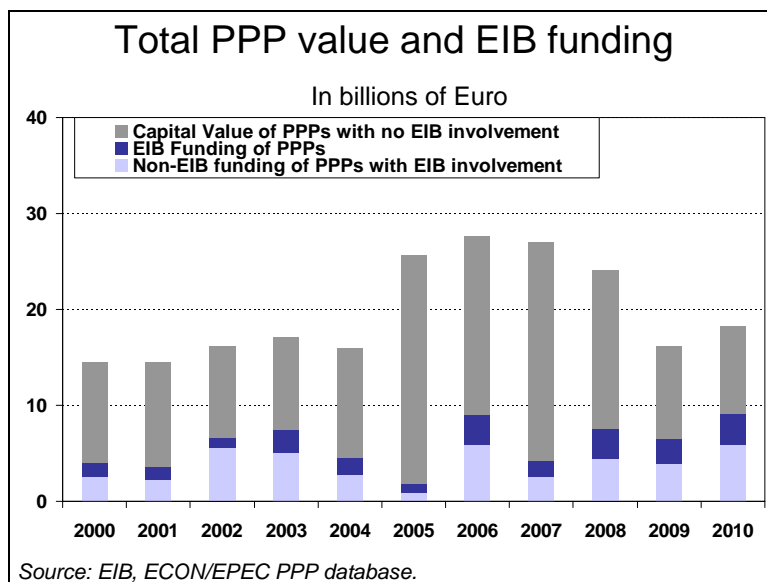


In the run up to the recent crisis, the EIB was involved in less than 10% of the PPP deals in Europe (blue bars) – with a few exceptions, e.g. in 2006 - and financed a similar share of the total funding requirements of all PPPs (grey bars). In 2009, the EIB provided 17% of the total funding requirements of PPPs and roughly 18% in 2010. At the same time, the share of PPP deals receiving EIB funding augmented only moderately. This suggests that the EIB has expanded its involvement mainly by financing larger (and not more) projects. With a trough in

⁶ Data on EIB financing are from EPEC (2011) "PPP's financed by the European Investment Bank between 2000 and 2010" and the Infrastructure Journal. Only projects that fall under our definition of PPPs are included (see Kappeler and Nemoz (2010) for more details).

2007 and the then following rebound, EIB involvement was counter-cyclical in the run-up and during the recent financial crisis.

To better understand the amounts involved, the chart below decomposes the total funding needs of PPPs into three parts: (1) The value of PPPs without any EIB involvement, (2) the funding provided by the EIB for PPPs and (3) non-EIB funding of PPPs with EIB involvement.



In 2010, the PPP market in Europe amounted to Euro 18.3 billion in total value. This includes Euro 3.3 billion of EIB funding for projects with a total value of Euro 9.2 billion. Expressed in percentage terms, the EIB provided roughly 36% of the total funding needs of the PPP projects it was involved in.

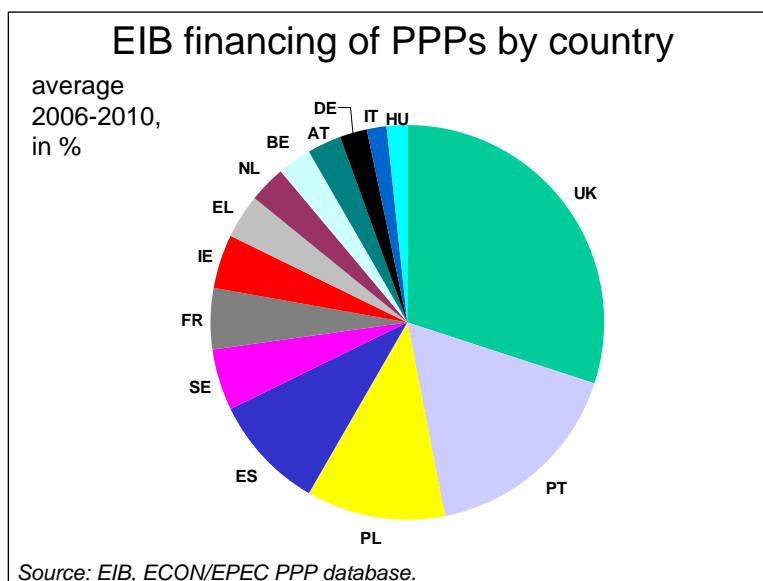
Since 2007 the total PPP market contracted and the EIB expanded its funding. As a result the share of EIB funding increased notably: in 2010, the market share of the EIB (measured as total value of PPPs with EIB involvement relative to the total PPP market by funding needs) reached 50%, compared to 16% in 2007. Note however, that this does not say anything about the economic value added of the EIB involvement in PPPs or its risk taking.

To give a rough picture about the EIB involvement at the country level, the next chart shows EIB funding of PPPs as average over the period 2006-2010 by country.

EIB financing as share of country's total PPP market:

SE	63
PL	57
AT	34
PT	23
IE	21
NL	17
HU	13
BE	12
UK	9
ES	8
FR	8
IT	7
DE	7
EL	6

Average 2006-2010, in %.



As the chart shows, the largest share of EIB funds provided for PPPs goes to the UK. But since the PPP market in the UK is relatively large, EIB funding accounted for only 9% of the total PPP funding needs in the country (table). Sweden⁷, Poland, Austria, Portugal and Ireland received a large share of EIB funding compared to their PPP market size, Greece a comparatively small share.

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⁷ Sweden is a special case as the number is based on 2 projects with very high EIB participation.

Annex

Table 1: Aggregate funding needs of PPPs reaching financial close by country and year.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total	% of total	
AT	0	0	0	0	0	0	0	0	0	0	0	0	144	0	260	0	1027	0	0	0	0	0	1431	0.5	
BE	0	0	0	0	260	285	0	0	227	0	440	0	379	0	0	206	282	644	618	235	1713	395	5683	2.0	
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231	0	0	8	0	239	0.1	
CY	0	0	0	0	0	0	21	0	0	0	53	0	0	0	0	0	658	0	0	0	0	0	732	0.3	
CZ	0	0	0	0	0	699	0	0	0	0	0	79	0	0	0	0	0	21	0	0	131	0	929	0.3	
DE	0	0	0	0	0	41	0	819	930	852	151	250	1177	0	1565	336	409	894	1172	1638	385	639	11258	4.1	
DK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	0	0	161	0	256	0.1	
EL	0	0	0	0	0	0	3319	0	758	1599	0	0	0	0	0	0	1431	5177	1319	782	0	0	14385	5.2	
ES	0	0	555	0	0	90	229	559	121	339	773	987	838	2626	2495	7806	6274	1028	3226	742	4430	497	33615	12.1	
FI	0	0	0	0	0	0	0	97	0	0	0	0	0	0	0	378	0	0	0	0	0	0	474	0.2	
FR	0	73	0	0	880	0	1962	46	0	80	1571	0	974	75	421	2458	1645	1793	2498	880	1786	5786	22928	8.3	
HU	0	0	0	0	0	372	1465	107	0	0	0	0	0	0	487	301	0	1159	537	0	0	0	4426	1.6	
IE	0	0	0	0	0	0	0	0	0	0	0	91	0	274	276	69	594	2008	50	252	100	0	3714	1.3	
IT	0	0	0	0	0	0	47	0	0	0	0	623	0	956	1061	3249	267	2218	538	155	373	788	10273	3.7	
LV	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	
LT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	0.0
LU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	33	0.0	
NL	0	0	0	454	0	618	0	0	0	95	0	1333	74	682	0	0	120	0	1126	83	1014	0	5598	2.0	
PL	0	0	0	0	0	0	0	0	56	0	873	0	0	0	0	679	191	0	974	1593	0	11	4377	1.6	
PT	0	0	0	0	0	555	0	888	750	1456	2560	1910	798	0	1319	379	550	263	3904	2206	3125	0	20661	7.4	
RO	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	20	0	0	0	0	0	40	0.0	
SE	0	0	0	0	0	0	533	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1104	0	1637	0.6
SI	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	35	0.0	
SK	0	0	0	0	0	94	0	0	0	0	0	0	0	0	0	0	0	0	0	1193	0	0	1287	0.5	
UK	0	0	55	0	8	100	2306	2779	17027	5953	8100	9272	11710	12476	8080	9794	14121	11496	8092	6447	3949	1834	133598	48.1	
Total	0	73	610	454	1148	2853	9881	5295	19889	10480	14521	14543	16094	17089	15964	25653	27587	27026	24053	16205	18289	9982	277689	100.0	

Table 2: Number of PPP deals reaching financial close by country and year.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total	% of total
AT	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	3	0.2
BE	0	0	0	0	1	1	0	0	1	0	1	0	1	0	0	1	1	2	1	2	5	4	21	1.4
BG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0.1
CY	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	3	0.2
CZ	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	4	0	7	0.5
DE	0	0	0	0	0	1	0	1	2	3	1	1	3	0	8	4	3	6	6	26	14	6	85	5.7
DK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	0.2
EL	0	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0	2	4	1	2	0	0	13	0.9
ES	0	0	1	0	0	1	3	1	2	4	6	4	3	7	10	15	33	11	20	11	13	5	150	10.1
FI	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0.1
FR	0	1	0	0	1	0	1	1	0	1	2	0	2	1	1	5	11	9	18	17	19	7	97	6.5
HU	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	2	0	1	1	0	0	0	8	0.5
IE	0	0	0	0	0	0	0	0	0	0	0	1	0	2	2	1	2	6	1	3	1	0	19	1.3
IT	0	0	0	0	0	0	1	0	0	0	0	1	0	6	3	8	2	8	3	2	2	2	38	2.6
LV	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
LT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1
LU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1
NL	0	0	0	1	0	3	0	0	0	1	0	1	1	3	0	0	1	0	4	1	3	0	19	1.3
PL	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	1	1	0	1	7	0.5
PT	0	0	0	0	0	1	0	1	1	2	4	2	1	0	4	3	2	2	8	8	3	0	42	2.8
RO	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0.1
SE	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0.1
SI	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
SK	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0.1
UK	0	0	2	0	1	2	16	27	56	65	80	68	69	71	94	82	81	77	52	45	44	20	952	64.3
Total	0	1	3	1	3	12	26	33	65	79	96	79	81	90	124	123	142	130	116	119	112	46	1481	100.0