

## **Working Paper 283**

# **The use of subsidies by Development Finance Institutions in the infrastructure sector**

**Dirk Willem te Velde and Michael Warner**

November 2007

Overseas Development Institute  
111 Westminster Bridge Road  
London SE1 1JD

ISBN 978 0 85003 853 8

© Overseas Development Institute 2007

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publishers.

# Contents

<b>Acknowledgements</b>	<b>iv</b>
<b>Executive summary</b>	<b>v</b>
<b>1 Introduction</b>	<b>1</b>
<b>2 Background information</b>	<b>1</b>
2.1 Main characteristics of DFIs	2
2.2 Similarities and differences in DFI mandates	2
2.3 Rationale for use of subsidies in infrastructure by DFIs	3
2.4 Size of DFI commitments in infrastructure	5
2.5 Sub-sectoral and regional overview of private financing in infrastructure	6
<b>3 Methodology to examine subsidies used by DFIs</b>	<b>7</b>
3.1 Cost of capital	7
3.2 Exemptions: Dividends and taxes	8
3.3 Project level: Structure and margins	8
3.4 Technical assistance	9
3.5 Grant co-financing: DFI or ODA	9
3.6 Discussion and set-up for empirical work	9
<b>4 Discussion on the use and extent of subsidies</b>	<b>11</b>
4.1 The extent of subsidies	11
4.2 Effects of subsidies	21
<b>5 Conclusions, implications and where next?</b>	<b>29</b>
5.1 Understanding DFI Subsidies	29
5.2 Lack of risk taking by DFIs	30
5.3 Lack of transparency in DFI operations	30
5.4 Other implications	31
<b>Appendices</b>	<b>33</b>
Appendix 1: Methodology for assessing the use and extent of subsidies by DFIs in infrastructure	33
Appendix 2: Credit ratings	37
Appendix 3: Private involvement in infrastructure financing: background note	40
Appendix 4: DFI's cost of raising capital	46
Appendix 5: Discussion of the literature on subsidies by DFIs	48
Appendix 6: Discussion of mandates of DFIs	50

## List of tables

Table 1: Annual commitments by DFI to private sector infrastructure (USD(\$) millions)	5
Table 2: Annual commitments in infrastructure (USD\$ millions, 2003-2005)	5
Table 3: Lower cost of borrowing	12
Table 4: Capital adequacy	12
Table 5: Implicit subsidy of exemption from corporation tax	13
Table 6: Implicit subsidy of exemption from dividends	13
Table 7: Key characteristics of DFI senior loans	15
Table 8: Key characteristics of DFI equity, mezzanine finance, guarantees, private equity funds and grants	16
Table 9: Illustrative scenarios project sheet	17
Table 10: Use of technical assistance funds by DFI – illustrative examples	19
Table 11: Information provided by DFIs on TA projects, examples	25

## Acknowledgements

The study is funded by DFID UK and was undertaken by a team of ODI researchers comprising Dr Dirk Willem te Velde ([\(dw.tevelde@odi.org.uk\)](mailto(dw.tevelde@odi.org.uk))), Dr Michael Warner ([\(m.warner@odi.org.uk\)](mailto(m.warner@odi.org.uk))) and Dr Lauren Phillips ([\(l.phillips@odi.org.uk\)](mailto(l.phillips@odi.org.uk))) with inputs from Georgina Dellacha and Chris Taylor. The key contact for this study is Dr Dirk Willem te Velde. The team would like to thank DFID for their support and helpful comments throughout the project. We are also indebted to the DFIs, without whose co-operation this study would not have been possible. The views expressed in this report are those of the authors alone and do not necessarily reflect the views of DFID or the DFIs.

# Executive summary

Development finance institutions (DFIs) have the potential to contribute to growth and poverty reduction by supporting the development of a vibrant private sector in developing countries. DFIs operate in sectors such as infrastructure where they help to overcome the considerable risks posed by private sector projects with large sunk costs. This paper focuses on the use of subsidies by DFIs in the private infrastructure sector, comprising water and sanitation, transport, telecoms, and energy. Well-targeted and transparent subsidies have the potential to deliver development. At the same time, however, they can distort competition among DFIs or with private companies, particularly when there is a lack of transparency about how such subsidies are being used.

We examine the operations of 10 bilateral, regional and multilateral DFIs. Together they account for some USD(\$) 7.5 billion a year in 2005 in contributions to private sector infrastructure operations – equal to around a fifth of all investments with a private sector component and on a par with grant aid to the industry.

This paper examines the nature and extent of subsidisation to private sector infrastructure in developing countries. We use the following definition:

*A subsidy is an explicit or implicit transfer from the public sector (here: donor countries) to the private sector (here: developing country firms and funds) resulting in a different set of conditions and prospects for private sector projects than would normally be the case without such transfers. These transfers can be aimed at private sector beneficiaries directly (e.g. through interest rate subsidies) or indirectly through its effects on the conditions under which DFIs are allowed to operate (e.g. lower costs of capital through a triple A status on the basis of a state guarantee).*

This report does three things. First, it seeks to provide a better understanding of the types and sources of DFI funding; second, it suggests that there may be a lack of risk taking by DFIs relative to their high liquidity; last, but not least, it argues that there is a lack of transparency in DFI operations generally and in the use of technical assistance specifically. This is elaborated below.

## Understanding DFI subsidies

There are three main forms or categories of subsidies in the operations of DFIs:

### *1. High levels of DFI liquidity*

There are a number of benefits associated with high levels of liquidity including DFI's ability to hold portfolios with a higher risk profile than private investors. High levels of liquidity arise from (i) large levels of paid-in stock; (ii) additional callable capital; (iii) exemptions on dividends and corporation tax; (iv) cost of borrowing at sub LIBOR due to AAA credit ratings and state guarantee; (v) income from trading in borrowings; and (vi) retained earnings from returns on debt and equity investments.

### *2. Ability to access or manage TA funds*

The total amount of TA funds available to DFIs is impressive. We estimate that some USD(\$) 200 million is currently spent annually by DFI on TA activities. Some TA services are provided for a fee or on a costs sharing basis, while others are grants and/or DFI's own money. Some TA funds are meant for general upstream programmes while others are intended for current or prospective clients only.

### *3. Longer maturities and interest rate subsidies*

The main way in which DFIs subsidise operations at project level is through the provision of longer maturities on loans than those offered by private banks. This is undoubtedly a good thing and ensures additionality of finance. Beyond this, there is limited evidence of a deliberate lowering of interest rates

by some DFIs, i.e. subsidies passed on directly to the beneficiary companies. There is, however, no evidence, of a widespread lowering of rates among DFIs when compared with market norms. In general, DFIs tend to provide loans on commercial terms, implying that they price loans at a mark-up over base rate (LIBOR or EURIBOR); this mark-up is based on perceptions of country and project risk as well as administration costs (and, in some cases, political risks). Commercial terms are interpreted in different ways, in part reflecting the use of different risk models (each DFI will use its own model in the absence of risk ratings). Although they do differ it would nevertheless be desirable for DFIs risk modelling to be more transparent. DFIs also have to take into account what the market can bear. In some cases this implies adjusting the rates and bringing them into line with rates provided by other private sector investors. In other cases, DFIs try to equalise the rates amongst each other (including in subordinated loans). The only major and consistent exception to this rule is the EIB which is mandated to use interest rate subsidies of 3% under certain circumstances. It has been a challenge to obtain commercially sensitive and confidential information on interest rates used in different deals or by different DFIs in the same deal. Information gathered during this research suggests that a DFI can sometimes price below other DFIs either in existing deals or in bidding processes.

## Lack of risk taking by DFIs

At present, liquidity is increasing in many DFIs, due in part to high earnings from the sale of equity positions as well as the types of subsidies offered by DFIs. A high level of liquidity enables DFIs to maintain a portfolio of investments in riskier countries and sectors than a commercial institution, whilst maintaining its high credit rating and low cost of borrowing. High liquidity can also lead to DFIs offering more favourable terms at the project level, e.g. debt with longer maturities (important for infrastructure), subordinated debt, credit guarantees (to support local currency lending), or acting as ‘lender of record’ for the purposes of syndicated loans.

Given a high level of liquidity, it seems logical to suggest that DFIs can take higher risks without jeopardising their core business. However, any proposition that DFIs could do more to invest in high risk infrastructure sectors and frontier areas needs to be handled with care. The central question is whether each DFI is operating at its optimum level of exposure given its liquidity. This optimum lies in an investment portfolio that balances the cost of managing elevated levels of investment risk (i.e. loss provisions on loans and guarantees, equity impairment revaluations, and retained earnings designated to technical assistance and grants), with the need to maintain levels of liquidity sufficient to ensure stable and high institutional credit ratings, in turn securing access to lower costs of borrowing and ongoing confidence in the credibility of the institution.

We have not performed such an analysis. Whether DFIs are operating at this optimum might be informed by past experience, for example by looking at what happened during the Asian financial crisis of the late 1990s. During this period DFI portfolios were presumably far riskier, loan losses higher and returns lower. And yet this poorer financial performance does not seem to have adversely affected the institutional credit ratings.

## Lack of transparency in DFI operations

There are four areas where increased transparency will benefit the DFI sector and its direct beneficiaries.

### 1. Technical assistance used by DFIs:

While it is possible to obtain a quick overview of the TA funds, it is striking that a data collection exercise (similar to that which fed into the WTO/OECD trade capacity building database) has yet to be conducted on DFI support for private sector. Obtaining an overview of *all* the TA funds available, what they are for, how they can be accessed, whether they are tied, and what effects they have is not at all straightforward. A data collection exercise would be helpful, providing more transparency in such

operations helping to avoid the impression that such funds may be used to incentivise future borrowers. It would also be in the interests of the DFIs, strengthening their ability to manage TA funds effectively, including a better marketing of TA. Transparency could also act as an incentive for reform in the DFI sector, including the untying of TA.

#### *2. Interface between DFIs and ODA generally*

Given the need for finance in frontier markets where the returns are lower or riskier, coupled with the fact that DFIs need to price at commercial rates of return, suggests there might be a case for combining aid and DFI finance. There is, however, a lack of transparency in how DFIs manage grants for infrastructure co-financing, particularly in terms of their involvement in simultaneously determining the level of subsidy and participating as a financier in the non-subsidy portion of the investment.

#### *3. Terms of deals*

More transparency is also required in disclosing the terms of past deals. We experienced considerable difficulties in collecting this information, and a greater degree of transparency in this area would help to dispel the myth that all DFIs are engaged in using subsidised interest rates, or that they are competing with each other on interest rates. We have uncovered some limited evidence of differences in interest rates offered by DFIs in the same deals, so the hypothesis is that it can happen. It is now up to the DFI sector to provide evidence of the scale of this practice.

#### *4. Overall size and importance of DFIs*

Little is known in the development community about the extent of DFI operations. Few will know for example that the main DFIs provide at least USD(\$) 45 billion a year and that this is not reported separately in development finance publications or shared among development fora.

### **Other implications**

A number of other issues were covered by our research. First, are DFIs using an optimal risk strategy? It is not straightforward to assess this, or whether and how their current levels of cash and capital could be better spent or leveraged to support more projects in low-income countries. A joint review of DFI mandates and instruments by DFIs and their shareholders would be worthwhile. This could focus on the suitability of mandates in encouraging risk-taking in frontier and infrastructure markets; and on ways in which DFIs interpret their multiple, and possibly competing, aims around private capital mobilisation, productive enterprises, investment climate and economic growth.

Second, what are the constraints to more deals in frontier markets? It is not clear *a priori* whether the main constraint to further deals in high risk countries is the lack of bankable projects, the lack of TA and grant co-financing, or simply the lack of staff time to assess risk (it is not unusual for staff to secure less than one deal a year). It may be worth examining whether support for more investment officers aimed at frontier markets in combination with TA would go some way towards resolving this problem (and it need not go against DFI mandates).

Finally, as DFI and ODA resources are increasingly pooled and combined, it is important to draw up transparent operational guidelines on how they work together, and to emphasise the comparative advantages of each. Should DFIs be both managers and implementers of grants and / or technical assistance projects?



## 1 Introduction

Development finance institutions (DFIs) have the potential to contribute to growth and poverty reduction by supporting the development of a vibrant private sector in developing countries. DFIs operate in sectors such as infrastructure where they help to overcome the considerable risks posed by private sector projects with large sunk costs. This paper focuses on the use of subsidies by DFIs in the private infrastructure sector, comprising water and sanitation, transport, telecoms, and energy. Subsidies may include both explicit subsidies (e.g. interest rates set at below-market levels) and implicit subsidies (e.g. no need to pay dividends).

The ultimate aim of this paper is to identify whether subsidies advanced to the private sector by DFIs are being used effectively to promote development outcomes. The underlying assumption is that well-targeted and transparent subsidies have the potential to deliver development. They may also, however, distort competition among DFIs or with private companies, particularly where there is a lack of transparency about how subsidies are being used.

This study covers the operations of DFIs which aim to promote the private sector in developing countries by supporting privately owned companies, state-owned companies which operate on commercial terms and at arms-length from government, and financial intermediaries. Infrastructure refers to four sub-categories: telecommunications, transport (Roads, railways, airports and ports), energy (Electricity and gas), water supply (and sanitation).

The main task of the report is to examine the purpose and extent of subsidies. The term subsidy is contentious. We propose the following definition: A subsidy is an explicit or implicit transfer from the public sector (here: donor countries) to the private sector (here: developing country firms and funds) resulting in different investment climate and / or operational environment than would be the case in the absence of DFI funding. These transfers can be aimed at private sector beneficiaries directly (e.g. interest rate subsidies) or indirectly through changing the structure of incentives associated with a project and / or altering investor's perception of risk (e.g. lower costs of capital through triple A status on the basis of a state guarantee).

The structure of the report is as follows. Section 2 provides background information about DFIs, infrastructure and the involvement of DFIs in infrastructure. Section 3 proposes a methodology to examine the use and extent of subsidies. Section 4 provides the summary results, which can be seen in more details in the appendices to this report (some of which may contain confidential information). Section 5 concludes with implications.

## 2 Background information

This section discusses background information on the Development Finance Institutions which are the focus of this report. Section 2.1 introduces key characteristics of DFIs. Section 2.2 discusses the differences and commonalities in the DFI mandates. Section 2.3 provides a rationale for the use of subsidies by DFIs in infrastructure. Section 2.4 estimates the level of DFI commitments to private sector infrastructure, and Section 2.5 provides a regional and sub-sectoral overview of private investment in infrastructure.

## 2.1 Main characteristics of DFIs

This report focuses on the three types of DFIs:

1. Bilateral DFIs (CDC, DEG, FMO, PROPARCO)
2. Regional DFIs (EBRD, EIB, IADB, ASB, AfDB)
3. Multilateral (IFC)

The financial operations of these DFIs include the provision of loans, equity, guarantees and other financial products. There are also differences amongst the DFIs. The state is the sole shareholder in some bilateral DFIs (UK, Germany) and in other cases part owners (France, Netherlands). The regional and multilateral DFIs have subscribed capital from different countries. The bilateral DFIs tend to have operations solely with the private sector in developing countries, while the regional development banks (excl. EBRD but including EIB's external operations) tend to focus primarily on the public sector (e.g. via sovereign loans for commercially run public enterprises).

The DFIs differ in their financial operations. For instance, Dellacha and Te Velde (2007), *Analysis of Development Finance Institutions Financial Accounts*, find that the level of commitments, size of the portfolio, regional distribution, split in financial instruments, cash availability, returns on assets and equity differ significantly. The IFC and EBRD are by far the biggest in terms of annual commitments to the private sector, followed by the EIB, FMO, and DEG and then the other regional banks and Proparco and CDC. Some concentrate primarily on loans (e.g. EIB, Proparco) others primarily on equity (e.g. CDC).

The volumes of DFI finance are considerable but generally understated compared to aid. A total of 12 DFIs (IFC, EBRD, IADB, AsDB, AfDB, EIB, DEG, NIB, OPIC, PROPARCO, CDC, MIGA) committed USD(\$) 44.5 billion of finance in 2005, up from USD(\$) 40 billion in 2004 and USD(\$) 36 billion in 2003, representing an average annual growth of 10%. A significant share of DFI contributions is provided to the private sector. In 2005, around half or USD(\$) 21.4 billion was committed to the private sector, with an average annual growth rate of 14% between 2003-2005. A small share (16%) is invested in sub Saharan Africa, while 84% is invested in other countries; a small share is invested in low-income countries (such as those in South Asia). DFI loan financing is reported as OOF, not ODA, and as such is not reported separately in key financial publications. DFI gross equity investments are reported as positive ODA under certain circumstances while sales appear as a negative item in financial accounting.

## 2.2 Similarities and differences in DFI mandates

The mandates of the DFIs share a common focus on fostering economic growth and sustainable development. DFIs with a special mandate to provide financing exclusively to the private sector<sup>1</sup> emphasise the importance of financing long-term viable enterprises because only profitable sustainable business will contribute to growth in the long run. In these cases there is a related objective of increasing impact by demonstrating the benefits of successful investments to other suppliers of capital and, by so doing, raising the amount capital mobilized. This would contribute to the development of the financial sector as a whole. The mandates of the DEG and PROPARCO contain an explicit reference to engage in projects which emphasize compliance with social and environmental responsibility principles, but this seems lacking in many other instances.

References to subsidies are explicitly mentioned in the case of the mandates of FMO and the EIB Investment Facility. However, with a view to safeguarding the institutions' continuity and sustainability, subsidies are to be used in exceptional circumstances. With the exception of the CDC, DFIs are able to

---

<sup>1</sup> Exceptions are Asian Development Bank, African Development Bank and Inter-American Development Bank who lend primarily to sovereign states.

a greater or lesser extent to make subsidies available via the use of technical assistance which is sometimes explicitly provided for in their mandates.

Shareholders rights are almost identical across DFIs whether owned by sovereign member states or not. Even though distribution of dividends is allowed in all cases (provided there is enough revenues once reserves or past losses are covered), it is only in the case of FMO and PROPARCO<sup>2</sup> that a dividend seems to have been paid out (an EBRD shareholder did call for a dividend payout, but lost out to the other shareholders, who voted for the profits to be transferred to reserves to be used for riskier projects in the future). The FMO and PROPRACO include private sector financiers as shareholders.

## **2.3 Rationale for use of subsidies in infrastructure by DFIs**

DFI's rationale for using subsidies in private sector infrastructure operations can be broken down as follows:

What is the rationale for subsidies in infrastructure generally?

What is the rationale for the involvement by DFIs in infrastructure financing generally?

What is the rationale for the public sector to provide subsidies to DFIs for their investments in infrastructure?

*What is the rationale for subsidies in infrastructure?*

Infrastructure is often seen as a sector with public good or club good aspects, which tend to lower the incentives for the private sector to provide a sub-optimal level of infrastructure. Hence, public involvement seems warranted. One form this could take would be a subsidy to provide the socially optimal amount of infrastructure.

Infrastructure is a special sector because of the large sunk costs necessarily implied (e.g. power generation, roads) and the close links between returns to investment and government policy and practice. Large sunk costs in developing country contexts are risky and because they are lumpy investments, it might be economically rational for the private sector to hold off until more information becomes available.<sup>3</sup> Mitigation of risks using public subsidies in some form might increase confidence and encourage investment.

Infrastructure plays an important role in achieving the Millennium Development Goals. While almost all the MDGs are explicitly or implicitly linked to water supply and sanitation (WSS) issues 1, Goal 7 on environmental sustainability addresses this issue directly. One of its targets, Target 10, is to 'halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation'.

Halving the proportion of people without access to safe drinking water through investing in infrastructure is a necessary precondition for achieving the MDGs but such investment also contributes to realising the Millennium Development Goals by enhancing economic growth. There are, nevertheless, large unmet needs in the infrastructure sector – up to USD(\$) 20bn a year in Africa alone according to the 2005 Commission for Africa report.

*What is the rationale for DFI involvement in infrastructure?*

The rationale for DFIs involvement in financing infrastructure is clear from the following:

---

<sup>2</sup> Not surprisingly both FMO and PROPARCO have private banks as shareholders.

<sup>3</sup> Dixit and Pindyck (1994) argue that uncertainty has significant negative effects on investment, when investment involves large sunk and irreversible costs and there is the option to delay the decision to make the investment until further information becomes available.

DFIs have a general mandate to provide finance to the private sector for investments that promote development; infrastructure fits within this ambit.

DFIs raison d'être is to engage where there are market failures, i.e. plugging the investment gaps that cannot or will not be filled by the private sector; the key focus is on low income and frontier markets. DFIs engage in countries with few foreign capital flows, especially debt capital. They specialise in loans with longer maturities which are more appropriate for financing long term projects such as those in infrastructure.

DFIs endeavour to act as catalysts, helping companies implement investment plans and providing risk mitigation that enables investors to proceed with plans they might otherwise abandon, given their perceptions of risk which are particularly high in infrastructure projects with large sunk costs.

*What is the rationale for awarding public sector subsidies to DFIs in order to support their investments in infrastructure?*

DFIs capacity to provide technical assistance or grants in support of private sector projects can be instrumental in mitigating the risks associated with government policies and practices and in strengthening the response of investors to reforms.

Where the introduction and implementation of new measures are necessary to the creation of an enabling environment for private sector investment, the technical assistance offered by DFIs can be important. Buiter and Friers (2002) argue that 'The unique characteristics of these institutions provide them with a comparative advantage in providing finance that is related to the design and implementation of structural reforms and institution-building programmes adopted by governments'.<sup>4</sup> In this way, DFIs become financing mechanisms for selecting and monitoring loans whose performance depends significantly on the reform of government policies and practices. The higher the financial risks associated with reforms, the greater the strength of DFIs in providing finance and mitigating risk compared to their private sector counterparts.

Complementarities may also exist between grant aid (beyond TA) and DFI investments. Financing of infrastructure often requires direct public sector involvement either as a financier, a partner or a regulator. By tapping into subsidies, DFIs are able to exploit complementarities between public sector and private sector operations. By using grants and technical assistance, moreover, DFIs can meet their objectives through, for example, improving the regulatory environment, broadening access to finance, assisting in restructuring and privatizing state-owned enterprises, and promoting public-private partnerships. Thus DFIs have a comparative advantage in providing TA related to the private sector.

Based on the DFI's knowledge, experience and capacity to structure the terms and conditions of investment, technical assistance by DFIs can help to strengthen the functioning of markets, transfer and diffuse new technologies and skills, and improve corporate governance and business practices. Such investments can generate significant economic benefits that are not fully captured in the financial returns to investment. For example, good business practices applied in one sector can lead to the adoption of good business practices in another sector.

Investments that include an element of aid will be closely related to the commercial operations of DFIs. This offers a significant (comparative) advantage but when done in a less transparent manner, could lead to the appropriation of benefits derived from subsidies, posing the question of whether subsidies to infrastructure are better channelled through other vehicles.

---

<sup>4</sup> Buiter, W. and Friers, S. (2002) 'What should the Multilateral Development Banks do?', Working Paper No. 74, June. European Bank for Reconstruction and Development.

## 2.4 Size of DFI commitments in infrastructure

Table 1 shows annual investment in the infrastructure sector for the main DFIs over the period 2003-2005. In the case of EBRD, EIB, ADB, IADB and AFDB, we have ensured that these data reflect private sector operations in infrastructure only.

**Table 1: Annual commitments by DFI to private sector infrastructure (USD(\$ millions))**

	2003	2004	2005
<b>EBRD</b>	1,329.70	1,643.00	1,747.30
<b>IFC</b>	1,298.80	1,082.80	1,696.40
<b>OPIC</b>		1598.6	989.3
<b>NIB</b>	553.04	521.09	771.74
<b>EIB (ALA)</b>	89.56	0	0
<b>MIGA</b>	276.4	341.1	468.8
<b>ADB</b>	106.01	238.6	398.5
<b>EIB (FEMIP)</b>	344.3	234.2	366.7
<b>IADB</b>	55.09	67.49	215.8
<b>EIB(ACP-IF)</b>	4.98	0	5.65
<b>FMO</b>	149.3	188	186.9
<b>CDC Group</b>	233.17	204.96	159
<b>PROPARCO</b>			124.1
<b>DEG</b>	74.4	133	100.9
<b>AFDB</b>	165.89	136.54	93
<b>TOTAL</b>	<b>4,680.64</b>	<b>6,389.38</b>	<b>7,324.09</b>

*Source:* based on own calculations from data in DFI financial reports.

Table 2 compares total DFI commitments in infrastructure with total commitments in all projects with private participation (PPI) which reached financial closure in 2003-2005.

**Table 2: Annual commitments in infrastructure (USD\$ millions, 2003-2005)**

	2003	2004	2005
Annual commitments in infrastructure by DFIs	4,680	6,389	7,324
Total investment in PPI projects	23,270	26,600	40,745
Approximate percentage contribution by DFIs	20.1%	24.0%	18.0%
<i>Memorandum:</i>			
Gross aid disbursements to infrastructure (OECD CRS)			8,792

Total investment in PPI projects includes all projects eligible for inclusion. The database covers infrastructure projects located in low and middle-income countries that directly or indirectly serve the public. Captive facilities (such as cogeneration power plants and private telecommunications networks) are excluded unless a significant share of its output is sold to serve the public under a contract with a utility.<sup>5</sup>

<sup>5</sup> Financing infrastructure normally involves a combination of project sponsors, lenders, DFIs, and export credit agencies. Of these different players, the greatest source of finance has traditionally been commercial banks, often in connection with officially backed export credit agencies and multilateral organizations. According to the WB Global Development Finance Report the international syndicated loan market has accounted for 62 percent of international investment in developing country infrastructure in the past decade.

Annual contributions to infrastructure by DFIs refer to commitments in infrastructure based on the definition used by each DFI. In most cases, efforts have been made to capture investments made in projects that fit define infrastructure narrowly in terms of transport, telecommunications, energy and water and sanitation projects.

The results are noteworthy. DFIs committed USD(\$) 7.5 billion to infrastructure in 2005, which amounted to around 20% of total investment of PPI investments in infrastructure. The amount committed in 2005 is equal to the amount granted as aid to infrastructure in 2005.

## **2.5 Sub-sectoral and regional overview of private financing in infrastructure**

Infrastructure has, relative to other capital-intensive industries, undergone sharp shifts in government policy, public attitude, and the intellectual environment. There has also been a shift in private sector involvement:

*Telecommunications:* In most countries, the private sector is now dominant. In 1991, telecommunications in 150 countries were state-owned, but by 2003 the number had fallen to 79.

*Power:* Worldwide reform in the electric power sector has been more uneven and contentious than in the telecommunications industry.

*Transport:* In transport, the movement to private ownership has been complicated by industry economics, with private finance feasible only to the extent that users can be appropriately charged.

*Water and sanitation:* Before 1990, the sector relied almost entirely on government financing to meet operating costs and investment needs. As late as the mid-1990s, 65-70 percent of water and sanitation projects were financed by the public sector; 5 percent by the domestic public sector; 10-15 percent by international donors; and 10-15 percent by international private companies. The predominance of the public sector is expected to continue for the foreseeable future

Private participation in infrastructure projects in developing countries dropped following the 1997 Asian crisis and continued along a broadly declining trajectory for several years afterward. However, in 2004 and 2005 investment in such projects increased sharply. Total investment commitments to private infrastructure projects in developing countries grew by 70 percent in 2004-05, to reach USD(\$) 95 billion. The increase was driven mainly by telecommunications.

The Private Participation in Infrastructure (PPI) database provides information on infrastructure projects with a component of private sector participation. In terms of regional distribution, East Asia and the Pacific account for 25% of PPI projects, Latin America for 27% and sub-Saharan Africa for just 7%. By contrast, DFI support in infrastructure projects with a private sector financing component is most notable in sub-Saharan Africa where 6 out of 10 major projects received DFI support.<sup>6</sup> On average, however, this funding represented less than 25% of the total project cost with the exception of the AES Sonel project where a USD(\$) 340 million financing package secured with DFIs represented more than 60% of the cost of the total investment programme. Other points include:

*Middle East and North Africa:* None of the top ten PPI projects in this region received development finance support.

*Latin America and the Caribbean:* According to the information publicly available in the PPI Database only the energy projects (three out of four) received DFI support.

*East Asia and the Pacific:* Only two energy projects (both in electricity) received DFI support with the remaining projects being entirely financed by commercial banks.

---

<sup>6</sup> In some cases, multilaterals such as IBRD provided part of the financing to the government where the facilities are partly government-owned.

Europe and Central Asia: Only one of the top ten projects in energy received DFI support.  
 South Asia: Only one of the top ten projects (in energy) received DFI support.

It seems that DFIs have a very important role to play in low-income regions such as Africa, while it makes sense to rely more heavily on the private sector in many other regions.

### **3 Methodology to examine subsidies used by DFIs**

A subsidy is an explicit or implicit transfer from the public sector (here: donor countries) to the private sector (here: developing country firms and funds) resulting in a different set of conditions and prospects for private sector projects than would normally be the case without such transfers. These transfers can be aimed at private sector beneficiaries directly (e.g. through interest rate subsidies) or indirectly through its effects on the conditions under which DFIs are allowed to operate (e.g. lower costs of capital through a triple A status on the basis of a state guarantee).

The methodology to examine the extent of subsidies by DFIs in infrastructure involves the construction of a (hypothetical) benchmark consisting of standard private sector activities, against which operations of the various development finance institutions (DFIs) can be compared so as to reveal the element of subsidy. This is not straightforward. In countries where the private sector is present, measuring the terms and costs of debt, equity and TA should be possible by examining real projects. However, in countries where credit ratings are not permissive for private sector exposure and the risk posed to investments high, the international private sector may not be present at all or in very different ways. In these cases it is possible that all DFI investment can be termed a subsidy. Alternatively, a measure of the value associated with the risk of default needs to be constructed – for example by estimating the costs of insuring against default.

The subsidies in DFI operations can be summarised in the following five categories:

- Cost of capital (through implicit sovereign guarantees)
- Exemptions – dividends and taxes
- Project level – structure and margins, e.g.
  - Interest rate subsidies
  - Different maturities
- Technical assistance
  - TA linked to specific project
  - General TA
- Grant co-financing – DFI or ODA

We discuss these below in sections 3.1-3.5. Section 3.6 discusses these and introduces the empirical work.

#### **3.1 Cost of capital**

Governments make available capital or guarantees to DFIs. Such capital or guarantees lead credit rating agencies to give DFIs triple A ratings. Triple A ratings for DFIs imply that DFIs can raise capital more cheaply than the private sector. The level of subsidy equals the opportunity costs for the government of providing the capital to DFIs. The value of the subsidy expresses itself in a far riskier spread of the overall portfolio compared to the private sector which does not need to be covered for political risk.

Commercial banks may still be engaged in infrastructure projects in below grade countries if this is the result of an adequate assessment of country, sector and project risk. BNP Paribas and ING are two

banks which are engaged in financing infrastructure in developing countries. However, their lending to developing countries represents a very small percentage of their overall portfolio, much less risky than portfolios of DFIs. Laos provides a recent example where DFIs and the national and international private sector were present in the same deal.

### **3.2 Exemptions: Dividends and taxes**

DFIs do not need to pay dividends (except Proparco and FMO) and almost all are exempt from paying corporate taxes (and the staff of some RDBs – but not EIB – are exempt from paying income tax). This is an implicit subsidy to the DFIs on behalf of shareholders as there is no expectation to receive dividends even when sufficient net income has been generated in a given year, and in most cases, undistributed earnings are allocated to fund additional technical assistance or future investments. This practice differs from the private sector.

### **3.3 Project level: Structure and margins**

Subsidies at the project level will be directly visible to the borrower. These can be very detailed and difficult to measure. Below we provide a non-exhaustive list. Subsidies administered at project level may include:

(a) *Debt*; examples of subsidies include:

- (i) direct interest rate subsidies;
- (ii) favourable maturities<sup>7</sup> (e.g. 12 years vs 5 years), grace period (e.g. 0% repayments during construction years);
- (iii) more risky borrowing currency (e.g. local currency vs foreign currency with any additional risks borne by the DFI);<sup>8</sup>
- (iv) structure
  - less security backing for loan (e.g. secured against asset or project contract, or unsecured);<sup>9</sup>
  - benign cofinancing requirements, such as less seniority (e.g. syndicated, senior, junior or mezzanine debt);
  - lower leverage ratio of underlying investment (DSCR;<sup>10</sup> LLCR,<sup>11</sup> debt/equity ratios);
  - less negative covenants (e.g. restrictions on working capital, more payment of dividends before loan is called, no requirement to keep fixed assets before loan is called, future borrowing).

(b) *Equity* which can be subsidised through:

- (i) a discounted (expected) rate of return;
- (ii) lower expectations of dividends (e.g. common stock vs preferred stock);<sup>12</sup>
- (iii) structure
  - accept more risky corporate finance structures;

<sup>7</sup> The length of the maturity per se is not a subsidy when borrowers pay for it; this would only be the case if such maturities are not available in the market.

<sup>8</sup> The willingness of DFIs to accept foreign currency debt repayments, when commercial banks would want foreign exchange guarantees.

<sup>9</sup> The willingness of DFIs to lend with no collateral (assets pledged by the borrower securing payment).

<sup>10</sup> A **target debt service cover ratio** ('DSCR') of 1.2 to 1.5, i.e. the cash flow available to meet the debt service against the actual amount of debt service (interest and principal) payable over the same period (on the assumption there no demand or market risk for the output of the project - higher ratios for higher risks).

<sup>11</sup> A **loan life cover ratio** ('LLCR') similar to the DSCR range, i.e. the net present value of future cash flow available for debt service against the total outstanding amount of debt for the duration of the debt.

<sup>12</sup> Equity interests which provide a specific dividend that is paid before any dividends are paid to common stock holders, and which takes precedence over common stock in the event of liquidation.

- accept more risky Joint Venture configurations;
- smaller equity stakes by the project sponsor;
- other (e.g. less non-TA fees, privileged arrangements with private/independent equity funds).
- (c) *Guarantees* and risk insurance / hedging which can be subsidised and includes political and other non-commercial, and commercial and economic risks, under the direct control of DFI.
- (d) *Fees* lower or fewer fees to meet transaction costs such as advisory, restructuring and commitment fees, due diligence and compliance costs.

### **3.4 Technical assistance**

Subsidies can be delivered through the provision of technical assistance in two ways – *Project specific* and *General* technical assistance. Project specific technical assistance helps clients to improve or develop the project or increase their capacity. Most DFIs have access to their own TA programmes, financed through their own resources or though donor grants. *General* technical assistance aimed at developing the financial market or sector more generally. This is technical assistance not tied to current clients. For instance, IFC trust funds or the EIB FEMIP donor trust fund.

### **3.5 Grant co-financing: DFI or ODA**

DFIs can have direct or indirect access to grant financing. Some DFIs will be managing ODA funds while other DFIs co-finance projects with ODA. It is unusual for DFIs to have direct control over this but they may be able to influence the way in which aid subsidies are channelled owing to their position.

### **3.6 Discussion and set-up for empirical work**

There are two types of subsidies:

1. those that are visible to the beneficiary company or fund and passed on directly (e.g. through lower interest rates, technical assistance, etc); and
2. those that are not visible or are passed on indirectly via the DFI (e.g. no requirement to pay out dividends increases the level of funds available for normal operations, which might ultimately benefit the project's investors).

Subsidies that work indirectly via the DFI form part of the *raison d'être* of the DFI – without such subsidies DFIs would not be able to operate in the way that they do and would almost certainly not be able to grow in the way they have done in recent years. Their portfolios would be markedly different without subsidies. We devoted some effort to evaluating the worth of these subsidies, using both interviews and official reports.

Much of our empirical work is based on examining subsidies that are directly visible to the project companies. We have been using four hypothetical project scenarios to inform our research on how each DFI goes about structuring certain deals in each of the four key infrastructure sectors.

#### **Scenario 1: Telecommunications**

**Country: Laos**

OECD country risk rating : 7

greenfield  
rural telecommunications to highly dispersed communities, many poor households  
45% subsidy for the winning project; total cost of USD(\$) 200 million anticipated

20 year BOT concession contract, with subsidy tied to output-based performance targets  
concession contract requires full telephony coverage at a density of 1 access point per 300 persons achieved in five years  
500,000 persons to be covered, across 100 districts  
revenue flow: subsidy and user fees  
project sponsor: domestic private telecoms operator

### **Scenario 2: Transport – *Toll Road***

**Country: Panama**

OECD country risk rating: 4

brown field and greenfield  
total project cost – USD(\$) 150 million bid for 30 year concession plus USD(\$) 200 million capital investment  
90km of upgrade to 2 lane toll road  
130km new build to 2 lane toll road  
revenue flow 100% vehicle demand – commuter traffic  
project sponsor: domestic private engineering firm  
year construction period

### **Scenario 3: Energy – *Power generation***

**Country: Angola**

OECD country risk rating: 7

greenfield  
total project cost USD(\$) 550 million  
captive off-shore gas-to-power supply  
3 x 300MW turbines; 10 km transmission line connected to existing 230kV Substation.  
revenue stream: local currency; 100% government purchase for national grid  
project sponsor: consortium of private, domestic companies

### **Scenario 4: Water supply and sanitation**

**Country: Indonesia**

OECD country risk rating: 5

brown field (urban and peri-urban)  
project sponsor: state-owned water company holds concessionaire for water supply and waste water treatment  
concession covers 400,000 households with 200,000 in very poor peri-urban communities  
prospects of floating company within five years  
total project cost: USD(\$) 50 million concession fee plus USD(\$) 250 million capital investment  
SPV with consortium of domestic and foreign shareholders  
revenue stream: commercial, household and public service users

These deals were used to construct a project sheet with information on key variables as detailed in section 3.3 and 3.4.

## 4 Discussion on the use and extent of subsidies

This section seeks to estimate the extent of subsidies according to the categories outlined below on the basis of the case studies presented in the appendices.

- Cost of capital (though implicit sovereign guarantees), section 4.1.1
- Exemptions – dividends and taxes, section 4.1.2
- Project level – structure and margins, section 4.1.3
- Technical assistance, section 4.1.4
- Grant co-financing – DFI or ODA, section 4.1.5

Section 4.2 discusses some preliminary findings about the effectiveness of subsidies.

### 4.1 The extent of subsidies

#### 4.1.1 Cost of capital

The treasury functions of DFIs can involve raising debt finance (if their mandate permits), investing surplus liquidity and managing the institution's foreign exchange and interest rate risks.

The paid-in share capital, and the sovereign guarantee of members to meet their subscribed stock commitments (if called upon to do so), combined with substantial liquidity, affords many DFIs AAA credit rating. This in turn supports DFIs capacity to raise funds on the capital markets at rates more competitive than the commercial financial sector, i.e. sub LIBOR. Not all DFIs are mandated to raise capital in this way, and the rates achieved are variable, both over time (as LIBOR rates and mark-ups vary) and between DFIs. Capital is raised most commonly through the issue of debt securities (bonds, debentures, notes) with life to maturity of between one and thirty years. Some DFIs also issue short term credits.

As a form of embedded subsidy, pricing this cheaper cost of capital can be done in two ways. First is to price the implicit 'commitment fee' foregone by the shareholders on the institution's callable stock. Callable stock for EBRD is 74% of subscribed capital. For IFC it is less than 1%. At a commitment fee of say 0.5% per annum for EBRD shareholders this would mean USD(\$) 98 million per annum foregone. The second means of pricing the cost of capital subsidy is to measure the difference between the rates that a commercial investment bank would be able to secure when borrowing and those commanded by the DFI; essentially the difference between the LIBOR rate and the realised rate. The FMO can borrow at EURIBOR/LIBOR minus 5 to 55 bp and this is cheaper than commercial banks which were estimated to borrow at EURIBOR/LIBOR plus 2 bp.

Some DFIs have emphasised the importance of ensuring sufficient liquidity to sustain an AAA credit rating, and thus being able to borrow at sub LIBOR rates (although this is also based on government guarantees). Capital adequacy ratios are well above the lower limits (see Table 4). The ratio for the EIB is for the EIB as a whole not the part responsible for operations in developing countries.

**Table 3: Lower cost of borrowing**

DFI	Mandate allows borrowing on capital markets	Borrowing as taken place in last three years, in fully convertible currencies	Cost of borrowing, after effects of derivatives (estimates) - the USD and EUR markets are not strictly comparable	Weighted average maturities	Borrowing in local currency
IFC	Yes	Yes	LIBOR – 60 bp (June 2005) <sup>13</sup> LIBOR – 80 bp (June 2006)	10.7	Yes
EBRD	Yes	Yes	LIBOR – 40 bp (Dec 2006)	?	Yes
CDC Group	No	No	n/a	n/a	n/a
FMO	Yes		LIBOR/ EURIBOR – 5 to 55 bp		Yes, but not from own resources
Proparco	From AfD		LIBOR (or EURIBOR) from parent		No
EIB	Yes (except Investment Facility financed by EDF).	Yes	EIB reference rate is approximately EURIBOR – 20 bp (at the beginning of August it was EURIBOR - 10bp, and LIBOR – 15 bp)		Beginning to do so

**Table 4: Capital adequacy**

DFI	Capital adequacy <sup>14</sup> 2006	Capital adequacy 2003
IFC	29%	24%
EBRD	35%	25%
AsDB	23%	24%
AfDB	37%	34%
CDC Group	65%	100%
DEG	49%	56%
FMO	41%	42%
EIB <sup>15</sup>	10%	11%

#### 4.1.2 Exemptions: Dividends and taxes

Most DFIs under this study are exempt from domestic tax on accounting profit within the country of incorporation (although not necessarily foreign income tax). In addition, exceptions may apply to national income tax on staff salaries and on goods and services purchased for which members of the DFI would otherwise levy tax. With regard to corporation tax, FMO appears to be the principal exception.

<sup>13</sup> Based on a weighted average cost of market borrowings after currency and interest rate swap transactions of 4.9% at June 30, 2006 (3.3% at June 30, 2005), and then applying the relevant historic US 12 month LIBOR rate.

<sup>14</sup> Calculated as: shareholder's equity over total assets.

<sup>15</sup> EIB's low CAR is due to the exclusion from the accounts of capital that is not paid-in. Adjusting for this anomaly, and taking into account EU operations, the EIB's statutory loan:capital ratio of 2.5:1 is similar to that of IFC, AfDB and EBRD.

**Table 5: Implicit subsidy of exemption from corporation tax**

DFI	Exempt from domestic tax on accounting profit (corporation tax)	2006 equivalent net profit (after loss provisions, depreciation and amortisation) – USD(\$) billions	Corporation tax foregone @ illustrative 30% USD(\$) million
IFC	Yes	1.28	348
EBRD	Yes	2.06 (2005)	618
CDC Group	Yes	0.67	201
DEG	Not for loans; only for equity investments		
FMO	No		
Proparco	Yes		
EIB	Yes		

Further, DFIs are commonly exempted from paying dividends to shareholders. Most exercise this option, although FMO has been paying out dividends for the last 10 years, albeit a very minor share. Proparco is the main exception, and is expected to pay dividends on a regular basis.

**Table 6: Implicit subsidy of exemption from dividends**

DFI	Exempt from obligation to pay dividends to stock holders	Dividends paid out in last five years	Paid-in capital – USD(\$) billions	Opportunity cost to shareholders of dividends foregone (2005), based on RBS comparator of 5% per (paid-in) share – USD(\$) billions
IFC	Yes	No	2.36	0.12
EBRD	Yes	No	7.02	0.35
AsDB	Yes	No		
AfDB	Yes	No		
CDC Group	Yes	No	1.51	0.08
DEG	Yes	No		
FMO	Yes	Yes		(cash dividend of €3.25 per share proposed)
Proparco	No	Yes		
EIB	Yes	No		

In contrast to wholly commercial investment institutions, DFIs enjoy an implicit subsidy in the dividends forgone (and the absence of share repurchases). To illustrate, in 2005 (a particularly good year for corporate profits) the Royal Bank of Scotland paid out 5%<sup>16</sup> of its share price in cash dividends. If this type of payout were translated to EBRD, for example, the opportunity cost to shareholders with paid-in capital would be in the region of €0.25 billion, or 17% of the Bank's operational net profits after provisions, but this could differ depending on the assumptions made.

#### 4.1.3 Project level: Structure and margins

DFIs generally make greater commitments in loans than equity (the exception being CDC); although in recent years returns on equity have bettered those from loan interest payments due to favourable sales of equity stakes. In 2006, for example, 81% of total new commitments from IFC's account were in the

<sup>16</sup> RBS financial highlights 2006 and investor information <http://www.rbs.com/microsites/annual-review/profile/>; [http://www.investors.rbs.com/investor\\_relations/share\\_data/stock.cfm](http://www.investors.rbs.com/investor_relations/share_data/stock.cfm)

form of loans (USD(\$) 10.8 billion). The remaining 19% was equity and quasi-equity (USD(\$) 2.5 billion). In the same year, interest earned from loans plus fees was USD(\$) 0.81 billion, compared to capital gains from equity sales and dividends of USD(\$) 1.26 billion. Regional and multilateral DFIs are limited in their exposure to a single project finance or restructuring investment, ranging from the 25% limit at the IFC (based on total project costs) to 50% (of total loans) at EIB.<sup>17</sup>

Commitments to equity funds offer greater flexibility. For example, the CDC Group fully resources some funds, such as the higher risk Actis Africa Agribusiness Fund, and partially funds others, such as the Arctic China fund II (CDC USD(\$) 100 million, others USD(\$) 150 million). With limits on loan exposure, debt for project finance and restructuring invariably requires co-financing. Interviews with DFI investment staff suggest that DFIs are fully compensated for their services in arranging syndicated loan programmes, through a dedicated charge (e.g. 0.75% to 1.0% of syndicated loans at IFC, or 25 basis points in the case of bilateral DFIs).

All of the DFIs in this study either led, or participated in, syndicated loans. Over 150 commercial banks and non-bank financial institutions currently participate in IFC's B-loan program. The level of mobilisation varies greatly. For 2005, EBRD record mobilisation of €6.2 billion, as against €4.3 billion from its own account. The IFC record USD(\$) 2.2 billion mobilised, against USD(\$) 5.4 billion.<sup>18</sup>

The subsidy in DFI's mobilising third-party capital is implicit; linked in part to the elevated liquidity of DFIs which allows them to act as 'lenders of record', 'first movers' and the provider of prolonged technical assistance. Tables 7-9 show some of the available data on the key characteristics of DFI loans, equity, mezzanine finance, guarantees, private equity funds and grants.

#### **4.1.3.1 Interest rates**

Interviews with investment officers and senior managers in bilateral and multilateral DFIs found some limited evidence of a deliberate lowering of interest rates. In general, however, DFIs tend to provide loans on commercial terms, implying that they price loans at a mark-up over base rate (LIBOR or EURIBOR); this mark-up is based on perceptions of country and project risk as well as administration costs (and, in some cases, political risks). Commercial terms can be interpreted in different ways, in part reflecting the use of different risk models (each DFI will use its own model in the absence of risk ratings). Although they do differ it would nevertheless be desirable for DFIs risk modelling to be more transparent. DFIs also have to take into account what the market can bear. In some cases this implies adjusting the rates and bringing them into line with rates provided by other private sector investors. In other cases, DFIs try to equalise the rates amongst each other (including in subordinated loans). The only exception to this rule is the EIB which is mandated to use interest rate subsidies of 3% under certain circumstances, notably in the ACP region. While these tend to be used mainly for public sector operations, some have been used for private sector lending for industrial projects with clear economic and social benefits.

It has been a challenge to obtain commercially sensitive and confidential information on interest rates used by different DFIs in different deals or for DFIs in the same deal. As part of our methodology, some DFIs gave hypothetical project scenarios while others provided details of past projects. It is very difficult to compare across countries, projects and institutions; however, evidence emerging from interviews with a variety of sources suggests that the EIB sometimes prices below other DFIs either in existing deals or in bidding processes (and it is not obvious that this is because of the explicit interest rate subsidy).<sup>19</sup> The extent, reasons and effects of differential pricing require further examination to justify more detailed conclusions.

---

<sup>17</sup> Other portfolio limits applied by DFIs include: total exposure to a single risk sector, e.g. IFC may not exceed 12% of net worth plus general reserves on loans; trigger levels on loans set for each country's outstanding portfolio; exposure as lender of record in a country, less stringent for Heavily Indebted Poor; loan investments in a single obligor; and equity, and equity plus mezzanine, investments in a single obligor.

<sup>18</sup> IFC (2006) Highlights of IFC's 2006 Annual Report.

<sup>19</sup> We do not report this for confidentiality reasons. For one possible example in the mining sector, see p11 in [http://www.kenmareresources.com/pdf/Kenmare\\_Annual\\_Report\\_06.pdf](http://www.kenmareresources.com/pdf/Kenmare_Annual_Report_06.pdf)

**Table 7: Key characteristics of DFI senior loans**

DFI	Limit	Base rate	Lending margin	DSCR	Grace	Maturity	Front end fees	Syndication/mobilisation fee	Commitment fees
IFC	25% total project cost	6 month LIBOR or 3 month LIBID	1.5% financing risk + x% for country risk	1.2-1.5	1-5 years	3-12 years (up to 20) adds 10 to 15 bp if longer than junior debt	1.0%	0.75-1.0 bp – applies to junior debt only	0.5% of undisbursed loans
EBRD	35%	LIBOR	Market orientated		Less than three years	5-10 yrs (municipal investments)		Yes	0.5% to 1.0%
IADB	Yes		Set at board level, not strictly market driven			Up to 20 years, adds bp due to longer maturity		Yes	
AsDB	Yes	LIBOR	Market oriented		Up to five periods for infra during construction	Longer maturities, up to 25 yrs	1.0% to 1.5%	Yes	0.5% to 0.75%
AfDB	Yes		Market orientated			Up to 12 years		Yes	
DEG	Max loan Euro 25 to 35 million		Market orientated			4-15 yrs	1.0% to 1.25%	Yes	0.5% of undisbursed loans
FMO	25% (or up to 50% if LDC Infrastructure Fund)	EUIBOR or LIBOR	Market oriented	1.2-2.0		Up to 12 years (20 yrs for LDC Infrastructure Fund)	1% (up to 3% if complex project via LDC Infrastructure Funds)	Yes	0.5% to 1.0%
Proparco	Yes	EUIBOR or LIBOR	300 to 550 bp			7-17 years, not below 7 yrs	1%	Yes	0.5% - negotiated
EIB	Max loan 50% of total project costs	EIB reference rate + admin margin + market based risk pricing	Market based risk pricing minus up to 3% for eligible projects with interest rate subsidy		2 to 5 years	Up to 25 years (15-20 yrs for energy and infrastructure)	0.5-1.0%	yes	Not usually charged for standard operation

Source: Appendices (CDC, not applicable).

**Table 8: Key characteristics of DFI equity, mezzanine finance, guarantees, private equity funds and grants**

	Equity	Mezzanine	Private equity funds	Guarantees
DFI	Limit			Type
IFC	20% equity max	Yes – higher returns via favourable conversion to equity and ‘kickers’	Yes	Partial risk guarantees only
EBRD	Yes	Rarely	Yes	Yes – partial risk guarantees and sovereign guarantees
IADB	Yes	?	?	Partial risk guarantees
AsDB	Yes	?	?	Yes
AfDB	Yes	Yes	?	No sovereign guarantees
CDC Group	Legacy portfolio	Indirectly via funds	Yes	
DEG	Minority stakes only; 49% equity max	Yes	Yes	Yes – partial risk guarantees
FMO	Yes	Yes	?	Loans or guarantees, only one
Proparco	Yes		Yes	Yes
EIB	Yes	Yes	Yes	Yes

*Source:* Appendices.

**Table 9: Illustrative scenarios project sheet**

	<b>Telecommunications</b>	<b>Power Generation</b>	<b>Water Supply and Sanitation</b>
Scenario	<p>OECD country risk rating - 7 Greenfield Urban, many poor households 45% public subsidy for the winning total project cost bid of USD 200 million 20 year BOT concession contract, with subsidy tied to output-based performance targets concession contract requires full telephony coverage at a density of 1 access point per 300 persons achieved in five years 500,000 persons to be covered, across 100 districts revenue flow – subsidy and user fees project sponsor - domestic private telecoms operator</p>	<p>OECD country risk rating - 7 green field project total project cost USD 550 million captive off-shore gas-to-power supply 3 x 300MW turbines; 10 km transmission line connected to existing 230kV Substation. revenue stream - local currency; 100% government purchase for national grid project sponsor - consortium of private, domestic, companies</p>	<p>OECD country risk rating 5 brown field (urban/peri-urban) project sponsor - state-owned water company, holds concessionaire for water supply and waste water treatment concession covers 400,000 households, 200,000 in poor peri-urban communities prospects of floating company within five years good total project cost - USD 50 million concession fee (paid from operating income over time) plus USD 250 million capital investment revenue stream - commercial, household and public service users</p>
Structure	<p>200 mn project, 90 mn subsidy (assumed to be from WB, if it is local: no involvement), 40-50 mn equity <i>at least</i>, 60-70mn debt. DFI could go for USD 20mn (together with other DFIs)</p>	<p>550mn, 60-70% debt, 30% equity (possibly some junior debt/equity)</p>	<p>If balance sheet of company good, then could be full amount (US 250mn), but normally 40-60mn. Would go up to 2.5 debt to 1 equity ratio</p>
Base	Euribor / Libor	Euribor / Libor	Euribor / Libor
Lending margin	450-500bp (includes country risk, project risk and some 'administration fees') a calculation based on similar projects in Afghanistan	450-500 bp	300-350 bps (e.g. Indonesia, could be more)
DSCR	1.7-1.8 (minimum); 40-60% or 50-50%	1.4-1.5	1.6-1.7 - Less than in telecom
Grace	1 year; no grace period on interest, but yes on capital repayments	2 yrs	4 years (but this interacts with lending margin)
Maturity	7 yrs (could be more in rural area)	12 yrs	15 yrs – depends on DSCR etc
Front end fees	1%	1%	1%
Syndication fee	Don't do syndication – sometimes DFIs charge each other 25 bps	25 bps to other DFIs	Could ask 1- 1.25% (easier deals cross-subsidise tough deals), depends on other DFIs
Commitment fee	0.5%	0.5%	0.5%
Equity	3-5 mn US Exit strategy: 5-7 yrs (either in market, or buy out by project sponsor) Expect 15-20% rate of return	20-25%, but looking for an exit strategy	As before
Guarantees	Don't do loan <i>and</i> guarantees. Need to pay for guarantees on their own portfolio If guarantees, standard terms Positioned not to take first hit	Standard	As before, but here: difficult.
Processing fee	No	No	No

#### **4.1.3.2 Loan maturities**

Interviews with a number of investment officers working in infrastructure finance found little evidence of lower interest rates on loan repayment rates or fees, compared to market rates. Where rates did differ, this was due partly to variable calculation methods and partly to DFIs commonly accepting longer maturing, senior debt ('A' loans). Basis points may be added to compensate for this, examples ranging from 0 to 50 bp. A DFI is unlikely to be compensated against market norms for the elevated risk of taking on these longer maturities.

Despite the higher risks associated with subordinated debt, the willingness of the DFI to use this instrument may not imply a subsidy. For instance, 'IFC 'C' loans are not viewed as a subsidy, since they earn very good returns'. Overall, the combination of additional basis points for longer maturing senior loans, and higher returns on mezzanine to conventional debt, are viewed by some in the commercial financial sector as adequate compensation for any additional risks taken by the DFIs. Generally, the private sector will not be able to take out loans with such long maturities. Loan maturities differ amongst DFIs. Even within DFIs, maturities can differ, depending on the type of funds they are using.

#### **4.1.3.3 Fees**

There was little evidence that the front end or commitment fees of DFIs are consistently below commercial rates, although there may be some negotiations that balance fees with other terms. Several DFIs suggested that this is often up for negotiation, and if the borrower is not able to pay these costs, they are not charged. The EIB may not always charge a commitment fee for standard operations, although it does charge fees elsewhere – particularly in relation to the private sector. The private sector often eschews arranging loans, but levies high fees where it does do so. DFIs by comparison will occasionally waive such fees.

#### **4.1.3.4 Local currency loans and local bank participation**

Infrastructure projects may receive revenues in local currency over an extended period of time. Exchange rate risks together with conversion restrictions in the domestic banking system are obstacles to hard currency financing of such projects. Some DFIs (EBRD and IFC) have tackled this by exploiting emerging local interest rate and currency swap markets with the issue of bonds in local currency. The FMO will take this risk backed with resources provided mainly by the state, rather than rely on its own resources, although it has recently been committing USD(\$) 50 million, and has committed USD(\$) 70 million to The Currency Exchange (to which several DFIs contribute). Many frontier markets have no swap market, and it seems unlikely that a direct subsidy is involved in managing local currency risks.

#### **4.1.3.5 Equity**

A DFI equity investment is typically provided in the form of common or preferred stock and usually denominated in the currency of the country in which the investment is made. Equity acquired by a DFI generally accounts for between 5% and 15% of a company's total equity, and is commonly tied to minimum limits of equity participation by the project sponsor. In many cases, bilateral DFIs won't take more than a USD(\$) 5 million stake.

Given volatility in the sale of equity positions, it is impossible to gauge whether the realised returns on equity of DFIs encapsulates an implicit subsidy. Interviews with IFC and some bilateral DFI investment officers suggest that expected risk-adjusted returns on equity (including dividends) are around 15-20%. This excludes discounting of dividends for frontier markets and fees associated with taking equity positions as would be normal for market conditions, which do not appear to provide a subsidy.

#### **4.1.3.6 Private equity funds**

One exception to the above is in the area of private equity funds. For example, the CDC Group is 100% resourcing the Actis Africa Agribusiness Fund (USD(\$) 75 million), expecting that it will generate a lower return than some of its other Funds.

#### 4.1.3.7 Guarantees and partial credit guarantees

As with loans, full and partial risk guarantees for debt and trade obligations are generally provided at market rates and there seems little distortion of guarantee or commitment fees. Some DFIs, such as IFC, also provide local currency guarantees. When a guarantee is called, however, the client will generally be obliged to reimburse in US dollar terms.

The IFC and the African Development Bank are not permitted to exercise sovereign guarantees. They are, however, in a position of influence and may be able to persuade the likes of the World Bank and/or Export Credit Agencies to provide this type of cover, as well as attracting others to provide partial risk guarantees.

#### 4.1.4 Technical assistance

Technical assistance (TA) is a key element in the use of subsidies passed directly onto companies. DFI investments can complement technical assistance in order to support project implementation and preparation. Table 10 provides examples of TA funds available to DFI. There is a difference between specific TA funds for particular projects and clients, and general TA for broader investment climate or financial reform programmes. We can also distinguish between TA funds under the direct control of (or located in) DFIs, and those TA or grant funds that can be accessed or influenced by DFIs.

The total amount of TA funds floating inside or around DFIs is impressive. We estimate some USD(\$) 200 million is currently spent annually by or channelled through DFI on TA activities (e.g. rough calculations would include USD(\$) 55 million by IFC, USD(\$) 78million by EBRD, up to USD(\$) 50 million by the EIB's various funds in a given year and USD(\$) 8million by DEG and FMO respectively). This is a very rough estimate because it is difficult to collect data on an annual basis, and we were not in the position to verify the amount of TA provided by the IADB, AsDB or AfDB.

Some TA services are provided for a fee (e.g. part of IFC's TA, but these are not included in the table) or on a cost-sharing basis (FMO's Capacity Building), while others are grants and/or DFI's own money (e.g. DEG's newly planned fund EUR 5 million). Some TA funds are meant for general upstream programmes (e.g. the EIB's FEMIP donor trust fund and to a lesser extent the EBRD's ETC) while others are meant for current or prospective clients only (FMO's Capacity Building).

**Table 10: Use of technical assistance funds by DFI – illustrative examples**

	Fund	Size	TA – Specific		TA – General (within DFI)	TA – Not under direct control of DFI
			Access / Aims	Funding		
IFC	TAAS	USD(\$) 55 million (in 2006)		Earmarked from IFC's retained earnings		The performance-based grants initiative (PBGI) establishes a pool of resources for funding performance-based grants to individual private-sector projects in developing markets.
EIB	FEMIP – Support Fund	EUR 105 million (of which around 70% have been allocated to public sector infrastructure projects so far)	To support project identification, preparation and implementation	EC aid	FEMIP Donor Trust Fund - EUR 33.5 million for upstream projects	EIB often co-finances with donor agencies such as AfD and KfW (for public investments)
	ACP IF – plans for TA	EUR 40 million	To support project identification, preparation and implementation	EDF		

		TA – Specific			TA – General (within DFI)	TA – Not under direct control of DFI
	Fund	Size	Access / Aims	Funding		
EBRD	TC funds	In 2005, EUR 78 million spend, EUR 90 million committed (90% for specific projects)	To help preparation and implementation of EBRD investments	Multi-donor and EIB, e.g.	ETC , Multi-donor pledges EUR 37.1 million by 2005; commitments EUR 18.2 million in 2005. EUR 2.1 million for infra projects	Links with other institutions, including aid, up to EUR 770 million with half for infrastructure
CDC Group	No			No	Not directly	
DEG	TA-Fund	EUR 5million	Bankable projects/Development effects	DEG – from profits	Can access PPP-Programme EUR 9,0 million (2007), Investment-tied and investment-preparing projects, funds from BMZ	
	TA-Fund	EUR 1,5 million (2007)	Bankable projects/Development effects	BMZ	Study-facility (EUR 1,4 million), funds from BMZ, to prepare infrastructure projects	
FMO	Capacity Development	EUR 5-7 million annually	Institution building Specific knowledge	Dutch state, 50-50% costs sharing	ORET technical assistance and links with ORET grants	
Proparco	No			No	FASEP and FFEM (EUR 21.3mn) – not used much in practice; Cofinancing possible in financial sector, but clear public/private separation with AfD in most infrastructure related projects	
AfDB						AfDB has access to non-lending arms
AsDB	ADB can also provide technical assistance	Preparation, financing and execution of projects			AsDB can use special fund financed by donors to offer more favourable structure and interest rates	

Source: Appendices.

#### 4.1.5 Grant co-financing

Grant co-financing is becoming more important in privately financed infrastructure projects, combining resources from donors with the capital from DFIs own accounts. For example, FMO used to manage the aid grants programme (ORET), but having recently passed on the management to Price Waterhouse Coopers, this is no longer the case. ORET, with funds from the Ministry, allowed FMO to finance projects with a mix of grant aid and finance, thus improving the commercial viability of investments in the private sector, particularly with respect to the infrastructure sectors including water and sanitation (this has happened in 3 out of 60 ORET projects). At present, it can also co-finance with sources made available by the state to the FMO for soft lending (LDC Infrastructure Fund).<sup>20</sup> By contrast, the IFC has designated resources from its own retained earnings, making these eligible as grants to IDA and to support its performance based grants initiative (PBGI) for the grant co-financing of individual private-sector projects under the Global Partnership for Output-Based Aid (GPOBA), see box below. The EBRD, using donor funds in part from the EU, also manages grant co-financing projects, although this is mostly technical assistance (see above).

<sup>20</sup> In order to prevent soft lending to the private sector, the fund is managed as a Venture Capital fund aimed at infrastructure in the LDCs. The fund has an Internal Rate of Return greater than 15%, and the soft element is due to ODA requirements (min 25% concessionality).

In terms of designations from retained earnings (not commitments or disbursements), the IFC seems to be leading the DFIs in grant co-financing, with USD(\$) 365 million set aside for this purpose, as at end 2006. As with the other uses of DFI's own resources – such as technical assistance and cooperation – there is presumably some optimum limit to grant co-financing from this source, a limit that if breached would undermine the high level of liquidity needed to maintain the DFIs low cost of borrowing and credibility. Whether, through these designations, the IFC is already near this optimum would need further investigation.

#### **Global Partnership on Output-Based Aid<sup>21</sup>**

The Global Partnership on Output-Based Aid (GPOBA) is a multi-donor trust facility designed to demonstrate and fund output-based aid (OBA) approaches – the use of explicit performance-based user fee subsidies in the delivery of basic services (water, sanitation, electricity, telecommunications, transportation, health and education). GPOBA resources are applied to the following activities:

- Window 1: Financing studies and other inputs to assist in the design, implementation and evaluation of particular schemes intended to pilot the application of OBA approaches;
- Window 2: Financing activities to help identify and disseminate emerging knowledge on OBA approaches;
- Window 3: Contributing to the financing of output-based payments for services under OBA schemes.

Window 3 is supported by a DFID Challenge Fund, the IFC Performance Based Grant Initiative Fund (IFC PBGI), and the Dutch GPOBA Water and Sanitation Fund. All funds are open to general applications from other IFIs, bilateral donors, NGOs, public (except PBGI) and private infrastructure providers, governments and the World Bank.

Eligibility criteria for funds under the GPOBA initiative include the following:<sup>22</sup>

- operating performance risk transferred under contract to the operator at a reasonable rate of return;
- subsidies designed at a minimum level to assure viable and sustainable project economics; and
- the subsidy term (for transition subsidies) not to exceed 7 years.

To date, there are 66 active projects under the GPOBA, with subsidies totalling USD(\$) 156 million. To illustrate the initiative, USD(\$) 2.35 million was recently granted to support the Government of Lao PDR in the provision of safe drinking water to 21,500 households in 21 district towns using local/regional private operators. The purpose of the output-based subsidy is to reduce the required investment costs that will need to be recovered directly from poor users through connection fees or through the tariff, thereby giving greater access to water services to the poor.<sup>23</sup>

## **4.2 Effects of subsidies**

This section discusses the possible effects of subsidies. We refer to them as ‘possible’ because we have not been able to verify the results in-country. Some would argue that the entire operation of DFIs is a subsidy, enabled by the guarantees and payments of governments. In this case we would seek to assess the development effectiveness of the whole DFI; section 4.2.1 briefly deals with this, but doing so in more than a cursory fashion would make the study complex and unwieldy. While there is little in DFI mandates which refers to the anticipated effects on development of DFI operations or the development impact of implicit and explicit subsidies, some (such as the FMO or the DEG) are known to have an innovative way of measuring (ex-ante) the development effectiveness of projects using a scorecard (for further details, see FMO’s annual report), or Corporate Policy Project rating (for more information, see DEG’s website). Sections 4.2.2 – 4.2.5 deal with specific subsidies.

### **4.2.1 Impact of high liquidity**

The evidence above suggests that it is not lending margins (interest rate spreads), fees or even technical assistance that provides the *principal* subsidy when negotiating a financing agreement, but

<sup>21</sup> Compiled from various documents sourced from GPOBA <http://www.gpoba.org/gpoba/index.asp>

<sup>22</sup> GPOBA Operating Principles (revised 2006) <http://www.gpoba.org/docs/OP121106.pdf>

<sup>23</sup> GPOBA project profiles <http://www.gpoba.org/activities/details.asp?id=55>

the exceptional risk-bearing capacity of the institution arising from its elevated liquidity and state backing. In general DFIs adhere to their mandates which state that financing should be conducted as close to commercial terms as possible. There are two arguments against using subsidised rates. Firstly, if DFIs undercut market returns, they would lose the demonstration effect on the private sector, and secondly, financing tends to work better if companies are viable and able to bear the full costs.

The proposition that carrying high liquidity might be inefficient with respect to investing in high risk infrastructure sectors and frontier areas, needs to be handled with care. The central question for those interested in the role of DFIs in catalysing private sector led economic growth in poorer countries is whether each DFI is operating at its optimum level of exposure. This optimum lies in an investment portfolio that balances the cost of managing elevated levels of investment risk (i.e. loss provisions on loans and guarantees, equity impairment revaluations, and retained earnings designated to technical assistance and grants), with the need to maintain levels of liquidity sufficient to ensure stable and high institutional credit ratings, thus ensuring access to lower costs of borrowing as well as confidence in the credibility of the institution. The new Basel II convention criteria for multi-lateral development banks are related to determining this optimum level.

Implicit subsidies arising from lower costs of capital and exemptions on dividends and taxes translate into higher levels of liquidity within DFIs. This liquidity enables the mitigation of investment risks through loan and guarantee loss provisions, the funding of technical assistance and retained earnings. The aim of the DFI is to achieve this without damaging its credit rating. For example, the IFC enjoys high liquidity, illustrated by a capital adequacy ratio of 54% and reserves for losses at 85% of development-related exposure (2006). The EBRD was urged to use its profits to take on riskier business in the future.

Such high liquidity affects the investment and development performance of DFIs in a number of ways. For example, it may enable:

- higher **provisions** against loan and guarantee losses and the revaluation of equity, thus facilitating investments in riskier ventures;
- more speculative risk taking when financing projects that generate revenues in **local currencies**, for example undertaking project-specific local currency hedging via interest and currency swaps (if such markets exist);
- the positioning of the DFI as '**first mover**' in a new country or sector;<sup>24</sup>
- higher levels of commitment to full or partial credit **risk guarantees** to help attract foreign and domestic long-term debt;
- commitments to **longer maturing senior loans** (long-term debt) than would otherwise be available;
- higher risk equity** to be accepted in an effort to enhance the attractiveness of the enterprise to other lenders and equity partners, and, in the longer-term to improve its attractiveness to future equity holders, e.g. via an IPO;
- provision of high risk/high return **quasi equity products**, e.g. subordinated or convertible debt, asset-backed securities, mortgage-backed securities, and certain common or preferred shares, designed to improve the attractiveness of the deal to other financiers;
- mobilisation of co-financing**, through the selling of participation in DFI loans, and acting as 'lender of record' for the syndication;
- designations to be made from retained earnings to fund **technical assistance** and project supporting grants, which in turn improve the quality of project development and can, for example, reduce demand risks; and finally,

---

<sup>24</sup> Dutch banks have at times suggested that they are in competition with FMO. There is however no clear evidence of this readily available. Other banks may have said this about other DFIs; Proparco has argued that because the private sector needs to approve projects, there is a reduced risk of crowding out the private sector. However, much depends on the power and actions of the private sector players on the board.

support for higher **administrative overheads**, particularly specialist staff, who provide project development expertise and who are more willing to ‘stay the distance’ on deals that can take many years to reach financial closure.

Maintenance of high liquidity over a period of years has also enabled some DFIs to carve out strong positions in certain emerging markets and countries. This ‘volume’ effect in itself provides an advantage over commercial investment institutions, affording the DFI preferred investor status. This in turn may provide project sponsors with enhanced capacity to raise foreign exchange from central/national banks to service the foreign loans. In the absence of a DFI, the sponsor may otherwise have faced prohibitive exchange rate controls and/or insurance costs for currency convertibility risk.

In short, implicit subsidies that are provided by the public sector to the DFI are rarely translated into subsidies visible at project level, but are essentially providing support for the rationale of DFIs (as discussed in section 2). These implicit subsidies allow the DFIs to hold large, risky investment portfolios, which means that, even though there is no direct subsidy element, projects which otherwise would not have gained support from the private sector can go ahead.

As noted above, high levels of liquidity can also lead to DFIs offering more favourable terms at the project level, e.g. debt with longer maturities (important for infrastructure), subordinated debt, credit guarantees (to support local currency lending), or acting as ‘lender of record’ for syndicated loans.

Offering these types of subsidies, but steering clear of explicitly lower loan repayment rates, allows DFIs to meet their multiple objectives of growing productive enterprises, mobilising third party private capital and improving the broader investment client.

Of course, it may be that trying to achieve these multiple objectives restricts DFIs ability to apply subsidies. The mobilisation of private capital into frontier markets requires commercial loan rates adjusted for higher levels of risk. With loan rates commonly harmonised across lenders, and pressure within DFIs to send the right signals to the private financial sector, the possibility of loan rate subsidies is generally precluded. This in turn may narrow the scope for investment in certain frontier markets - for example where project revenues are insufficient to meet high risk-adjusted loan rates, due to the combination of demand risks, political risks, exchange rate risks, an absence of a local currency swap market, and untested private operators.

However, the suggestion that DFIs could do more to invest in high risk infrastructure sectors and frontier areas needs to be handled with care. A central question is whether each DFI is operating at its optimum level of exposure given its liquidity. This optimum lies in an investment portfolio that balances the cost of managing elevated levels of investment risk (i.e. loss provisions on loans and guarantees, equity impairment revaluations, and retained earnings designated to technical assistance and grants), with the need to maintain levels of liquidity sufficient to ensure stable and high institutional credit ratings, and access to lower costs of borrowing and confidence in the credibility of the institution.

Whether DFIs are operating at this optimum could be informed by past experience, for example by looking at what happened during the Asian financial crisis of the late 1990s. During this period DFI portfolios were presumably far riskier, loan losses higher and returns lower. And yet this poorer financial performance does not seem to have adversely affected institutional credit ratings.

A joint review of DFI mandates and instruments by DFIs and their shareholders would be worthwhile. This could focus on the suitability of mandates in encouraging risk-taking in frontier and infrastructure markets; and on ways in which DFIs interpret their multiple, and possibly competing, aims around private capital mobilisation, productive enterprises, investment climate and economic growth; and on the metrics adopted to assure that financial performance is optimised to achieve the desired development outcomes.

### **Implicit political additionality: Stamp of approval**

From the perspective of commercial financing institutions it is difficult to separate the additionality that high liquidity within a DFI brings to a deal, from the political influence of the DFI as a sovereign-backed institution. The political influence of DFIs (real or perceived) might be linked in part to their positioning in relation to Official Development Assistance. For regional and multi-lateral development banks, it may also reflect the influence that comes with having their own stock holding membership, which may include governments in certain, specific investments.

For example, with reference to the IFC, one German commercial investment banker welcomed the IFC as a ‘first mover’ for investments in higher risk markets, due to its influence with government on the terms of the deal and its ability to influence necessary regulatory reform, for example on concessions. Commercial banks do not have the same power. The implicit political additionality of DFIs may include an ability to:

- influence the **regulatory environment**, to address barriers to commercial viability;
- influence (not control) the provision of **public subsidies** and grant-co-financing in the financial structure of an investment;
- act as an **honest broker** between foreign firms and domestic firms/public authorities;
- influence (not control) the provision of **sovereign credit risk guarantees** and export credit;
- engage in **shareholder activism** during the life of an equity investment.

#### **4.2.2 Impact of interest rate subsidies**

The EIB is the only DFI which is explicitly mandated to use interest rate subsidies, yet these forms of subsidies are seldom applied in the case of private sector infrastructure operations. The application of interest rate subsidies and the extent to which they are used is disclosed in the EIB’s annual report (in the case of the IF EIB, this is mainly public sector). The list of subsidised projects is available and provides contract name, country, loan amount, estimated worth of the subsidy, sector and justification. The justification includes social and environmental reasons. Loans to (the public sector) in HIPC countries can also be subsidised on concessional rates. The magnitude of these subsidies (mainly to public sector) varies between EUR 173,000 and EUR 18 million.

The link between interest rate subsidies and development remains contentious. The EIB can use interest rate subsidies of up to 3% based on development criteria but in practice has stuck to offering 3% or nothing. There are disadvantages to DFIs using interest rate subsidies in the private sector. The first is that by not using commercial rates, it will be more difficult to leverage additional private sector capital, i.e. there would be fewer catalytic effects. And secondly, variations on interest rates allow DFIs to compete on subsidies which might involve pricing that is not based on an underlying appreciation of the real risks. Elsewhere, we make the more general point that it is preferable to use output based aid rather than input (interest rates on capital) based aid.

#### **4.2.3 Impact of technical assistance**

Technical assistance is provided in a variety of different situations. Often TA (or capacity building) is used specifically to assist existing or prospective clients alone. If such TA is funded by grant aid then both the DFI and the client are expected to benefit. The client benefits in terms of the contents of the assistance, and the DFI in terms of project preparation and implementation (the private sector does not have access to similar funds). In this situation, it is likely that a particular DFI gains, rather than several.

In other cases, TA funds exist to provide general technical assistance for legal reform or financial sector development among other things and receiving countries are expected to be the main beneficiaries. This would benefit all DFIs to the extent that they can participate in a greater number of deals with better prospects of success. However, it may also be the case that some DFIs gain more than others from providing general TA. In one case, it was suggested that general TA provided by the DFI contributed to a monitoring exercise of existing deals - saving the DFI in question both time and money

in conducting the review independently and helping it generate future deals. Such TA funds are not easily appropriable by other DFIs or the private sector.

There are certain mechanisms in place to ensure that the subsidy is not a waste of public money. For instance, the Capacity Development programme of the FMO is a clear subsidy (financed by the state on an annual basis rather than from the FMO's own resources). In order to improve 'buy-in' from the recipient and ensure sustainability of the assistance in the long-term, the programme only finances 50% of the value of the assistance, and the recipient finances the remaining 50%.

There are questions about the best way to reach intended beneficiaries. If DFI subsidies wind up in the private sector, a comment was made on whether such financing is the best way to subsidise the private sector. Why not use instruments other than DFIs to achieve this? On the other hand, as section 2 pointed out, the unique characteristics of DFIs provide them with a comparative advantage in providing finance that is related to the design and implementation of structural reforms and institution-building programmes adopted by governments. Often, donor instruments are criticized for not taking private sector needs sufficiently into account, while direct subsidies to the private sector risk being appropriated by individual firms. DFIs might be able to bridge the gap.

While the criteria to access TA funds can to some extent be found online, not all DFIs provide a publicly available list of TA projects and information on which projects benefit. It is therefore difficult to see who gains what. It is however possible to get some idea (see Table 11). It is surprising that these data are not centrally collated, as for example, with the WTO/OECD trade related capacity building database.

Some technical advisory services are charged at market rates. Because payment takes place only when a deal is closed, the potential for competition with consultancy firms offering a similar service is marginal. IFC, for example, does not bid against project development consultancy firms or private banks if these services are put out to tender. In other circumstances, TA actually provides opportunities for consultancy firms.

Technical assistance is in practice related to interest rate subsidies. For instance, there is a direct financial link at the IF EIB because up to 10% of the amount reserved for interest rate subsidies has been earmarked for TA. In addition, interest rate subsidies are sometimes converted into up-front payments (net present value) and function as TA. One payment (as part of a loan to a bank in Chad, and hence going beyond private sector infrastructure operations alone) was provided up front for health facilities at a school.

**Table 11: Information provided by DFIs on TA projects, examples**

	Name	Level of disclosure	Types of projects	Evidence on impact
FMO	Capacity Development	Criteria on web-site, but no details of past projects (new programme)	e.g. Banking sector training, feasibility study, community projects	Not available
EBRD	ETC and other	Extensive (types of programmes, countries and funds) – donor report 2006	Small business finance, turn around management, banking, power, infrastructure , e.g. technical management support, environmental audits, feasibility study, etc	Donor report includes detailed descriptions of donor supported projects, but less on actual effects

	Name	Level of disclosure	Types of projects	Evidence on impact
DEG	PPP projects (by BMZ)	Criteria on website and general info	Investment-tied and investment preparing projects (not direct core business)	evidence of impact in DEG reports
	TA-Funds (by BMZ and DEG)	no	Investment-tied and accompanying measures (core business)	
IFC	TAAS	Report to the donor community, info by business line and region. PEP Africa for infrastructure	Varying such as investment climate studies, entrepreneurship training, project against AIDS	Reports on where subsidies are going: Value addition to firms, infrastructure, access to finance, business enabling environment.
EIB (TA funds)	FEMIP Upstream trust fund	List of TA projects, by country, operation, promoter, and amount	E.g. implementation of waste management plans, in, feasibility and pre-feasibility studies.	Internal evaluation suggest: fund tends to improve the quality of the EIB loan portfolio, but that the timing, substance and monitoring of TA needed more attention
EIB (ACP-IFTA)	IF Annual report	Contract name, country, loan amount, estimated worth of the subsidy, sector and justification	Both IF and OR resources, in energy, water and finance	Justification provided ex-ante, data on impact not easily accessible, and is typically qualitative.

#### 4.2.4 Impact of grant co-financing

Grant co-financing beyond technical assistance has been largely outside the scope of this paper, but we can comment on the general principles. An ongoing issue for grant co-financing is the role of DFIs in promoting transparency and accountability in the design and administration of these subsidies. To a large extent, the performance-driven structure of output based aid approaches provides adequate accountability, both to project beneficiaries and grant administrators. Furthermore, subsidy thresholds can be established to trigger additional inspections by donors of other aid programmes that may be in conflict with the proposal as is the case with the GPOBA programme,

Transparency is a major issue in combining aid grants with DFI finance. The GPOBA initiative discloses eligibility criteria for grants as follows: (i) a preference for frontier markets and infrastructure sectors; (ii) limitations on the size of the subsidy (either as a fixed amount or proportion of subsidy); and (iii) a maximum term for subsidies, where these are tied to infrastructure user fees and tariffs. There may be room for further transparency over the rules that govern competition between grant applications. Funds under the GPOBA are open to general applications from other IFIs, bilateral donors, NGOs, private (and for two of the funds - public) infrastructure providers, governments and the World Bank. This is of course better than aid funds limited to certain DFIs. However, as with other donor challenge funds, competitive tenders are not issued on a project-by-project basis. This contrasts with the 'least cost subsidy auction' approach to infrastructure financing promoted by the World Bank and applied to the roll-out of mobile phone base stations and tower infrastructure in parts of rural India. DFI subsidies are

designed to be the minimum necessary ‘to assure viable and sustainable project economics’. A key issue for transparency therefore lies around how DFIs rationalise their involvement in concurrently determining this minimum level of commercially viable subsidy, and their active participation in financing the non-subsidy (co-financing) share of the investment. With regard to the GPOBA, no information could be found on the non-subsidy co-financing share of particular deals, or whether the IFC were positioned as one of the project financiers.

In short, the issue is whether grant providers should invite DFIs to tender for combining DFI finance with grants in certain projects, or whether DFIs that intend to finance a project should be able to access aid grants under certain criteria. One advantage of a DFI being involved in aspects of financial design is that they have a solid understanding of private sector finance, and can ensure that the subsidy is set at a level sufficient to ensure the operator has the necessary cash flow to deliver on its output / service commitments. In contrast, in least-cost subsidy auctions, an operator (particularly if inexperienced) may underbid to win the contract, resulting in failure to deliver the required output / service. The presence of a DFI can also provide a counter balance to commercial financiers seeking to drive subsidies over and above the level warranted by the commercial and political risks at stake.

DFI involvement is not unproblematic. Institutional alignment between those advising on subsidy design and those negotiating with project sponsors to participate in financing is by no means guaranteed. This may result in the subsidy being held at a sufficiently low level to justify the continued involvement of the DFI when a slightly higher level of subsidy at the outset could have led to the deal being entirely privately financed (or possibly attractive to another DFI who did not have access to such grant co-financing). Whether DFIs need to be involved in grant-based subsidies at all is also open to question. The answer is likely to depend on the sector or type of operations. One DFI respondent argued that they would not finance operations that could not secure funds for a feasibility study; this was particularly the case for the telecommunications sector which is growing fast with high rates of return.<sup>25</sup>

#### **4.2.5 Impact of subsidies in equity investment**

There are no obvious explicit subsidies involved in DFIs’ equity investments. In fulfilling their mandate to grow sustainable and productive private enterprises, DFIs are predominantly long-term equity investors. Thus, as with debt, the implicit subsidy is a higher appetite for risk across the portfolio – a willingness to take equity in new markets and frontier areas, to stay the distance during project development, to commit to riskier subordinated debt and convertible loans, and to maintain an equity stake over the long term. A clear development advantage of equity (and subordinated debt) is that these instruments do not burden poor countries (including HIPC)s with more debt. Equity positions assume higher risks than loans

Further, depending on the scale and type of shareholding, and the enthusiasm with which a DFI exercises its rights at the board level, equity positions may afford DFIs scope to develop the governance and management capabilities of an enterprise, and build performance in quality, cost and timeliness. Greater transparency around whether the influence of equity positions is being optimised, and to what extent technical assistance funds and resources within DFIs are fully utilised to this end, would support proper assessment of the development benefits of equity versus debt.

---

<sup>25</sup> Donor-supported Universal Service Obligation Funds (USOFs) in the ICT sector, and other donor-supported public funds for subsidising public services infrastructure, offers the opportunity for competitive bidding on a project or geographic basis. Such auctions, especially where the subsidy is spread over time, carries the prospect of not only mobilising private capital without the need for DFI involvement, but also of growing, over time, fully commercially viable services with zero subsidy. Indeed, in the rural ICT infrastructure sector in India, recent USOF auctions have resulted in ‘zero’ bids from the outset (clearly, in the water and road sectors, zero bidding is unlikely). The central question is which approach to grant co-financing best supports private sector participation in infrastructure development: DFI-supported challenge funds or donor-supported subsidies. This choice is, of course, also influenced by non-financial considerations: the extent of public sector good governance and institutional capability (e.g. to manage subsidy auctions), and the importance of assisting private sector project sponsors willing to take risks in frontier markets where there is no obvious competition to enable a subsidy auction

DFIs will exit by selling shares, either in a trade sale or, if liquidity permits, in a capital market following a public offering. The principal motivation for a decision to sell is similar to that governing commercial investors, namely maximising the value of equity realisation or meeting some predetermined sales trigger. The extent to which sale decisions are taken in response to the optimal completion of the DFI's 'developmental role' is unclear, be that for growing productive enterprises (for example, taking an enterprise 'through' a public offering, rather than selling at the time of the offering), or ensuring that the services or goods produced by the enterprise contributes to meeting more poverty-focused development targets, such as Proparco's mandate to contribute to the Millennium Development Goals.

#### **4.2.6 Crowding out and conflicts of interest**

Interviews suggested that one of the biggest hurdles to DFIs undertaking a greater number of investments in poorer countries is that there are no longer sufficient bankable projects, and if there are no bankable projects, some argued that there is no role for DFIs.

Our research identified a number of areas for possible crowding out and conflicts of interest. IFC suggested that they rarely co-finance with private equity funds, scaling down their exposure in this area due to the excess liquidity. Some argue there are probably more [private equity] funds in sub Saharan Africa than there are viable deals, and absorption rate is a problem; the opposite is true for Latin America where few private funds remain interested on account of the continent's political problems

Project specific technical advisory (in particular project development) services by DFIs are increasingly charged at market rates. However, because payment of fees takes place only when a deal is closed, the potential for competition with consultancy firms, (PwC, KPMG etc) offering a similar service is marginal. IFC elects not to bid against project development consultancy firms or private banks if these services are put out to tender.

As DFIs move into grant co-financing, whether from donor funds or from their own account, there is, as previously noted, a need for transparency in how decisions on the level of subsidy are negotiated vis a vis decisions on DFI participation in financing that share of the project not eligible for subsidy.

Some argue that because of the share capital and votes of international banks and institutions and national private banks on the board of DFIs, there are fewer risks that the DFI crowds out the commercial sector. Whether this is indeed the case depends on the power and actions of private sector players at the board level. There have been accounts of Dutch banks (who are also private shareholders in the FMO) suggesting that FMO and IFC were operating in the area normally occupied by the private sector.

Views from commercial investment banks on whether or not DFIs are crowding them out are inconclusive. There are a few examples of direct competition between DFIs and commercial institutions. One example was given of a case where a multi-lateral development bank initiated negotiations with a project sponsor, and invited commercial participation. Subsequently the invited party considered that it could enter the deal on its own. An informal competition took place. The commercial institution won.

In a selective number of cases, commercial investment institutions may not be averse to taking subordinated debt, due to the higher potential returns. But, some commercial investors find that project sponsors are unwilling to take on additional investors when DFIs are already in the frame. There is also a possibility that ECAs are crowding out institutions in the commercial insurance and guarantees market. However, it has also been suggested that DFIs need to expand their use of, or access, to risk guarantees if commercial investors are to join them in high risk markets. DFIs in general can be seen as 'bureaucratic', taking far longer to reach financial closure. They certainly have stricter social and environmental policies, although with the advent of the Equator Principles this situation is changing.

## 5 Conclusions, implications and where next?

Development finance institutions (DFIs) have the potential to contribute to growth and poverty reduction by supporting the development of a vibrant private sector in developing countries. DFIs operate in sectors such as infrastructure where they help to overcome the considerable risks posed by private sector projects with large sunk costs. This paper focuses on the use of subsidies by DFIs in the private infrastructure sector, comprising water and sanitation, transport, telecoms, and energy. Well-targeted and transparent subsidies have the potential to deliver development. At the same time, however, they can distort competition among DFIs or with private companies, particularly when there is a lack of transparency about how such subsidies are being used.

We examine the operations of 10 bilateral, regional and multilateral DFIs. Together they account for some USD(\$) 7.5 billion a year (2005) in contributions to private sector infrastructure operations – equal to around a fifth of all investments with a private sector component and on a par with grant aid to the industry.

This paper examines the nature and extent of subsidisation to private sector infrastructure in developing countries. We use the following definition:

*A subsidy is an explicit or implicit transfer from the public sector (here: donor countries) to the private sector (here: developing country firms and funds) resulting in a different set of conditions and prospects for private sector projects than would normally be the case without such transfers. These transfers can be aimed at private sector beneficiaries directly (e.g. through interest rate subsidies) or indirectly through its effects on the conditions under which DFIs are allowed to operate (e.g. lower costs of capital through a triple A status on the basis of a state guarantee).*

This report does three things. First, it seeks to provide a better understanding of the types and sources of DFI funding; second, it suggests that there may be a lack of risk taking by DFIs relative to their high liquidity; last, but not least, it argues that there is a lack of transparency in DFI operations generally and in the use of technical assistance specifically. This is discussed below.

### 5.1 Understanding DFI Subsidies

There are three main forms or categories of subsidies in the operations of DFIs:

#### 1. High levels of DFI liquidity

There are a number of benefits associated with high levels of liquidity including DFI's ability to hold portfolios with a higher risk profile than private investors. High levels of liquidity arise from (i) large levels of paid-in stock; (ii) additional callable capital; (iii) exemptions on dividends and corporation tax; (iv) cost of borrowing at sub LIBOR due to AAA credit ratings and state guarantee; (iv) income from trading in borrowings; and (iv) retained earnings from returns on debt and equity investments.

#### 2. Ability to access or manage TA funds

The total amount of TA funds available to DFIs is impressive. We estimate that some USD(\$) 200 million is currently spent annually by DFI on TA activities. Some TA services are provided for a fee or on a costs sharing basis, while others are grants and / or DFI's own money. Some TA funds are meant for general upstream programmes while others are intended for current or prospective clients only.

#### 3. Longer maturities and interest rate subsidies

The main way in which DFIs subsidise operations at project level is through the provision of longer maturities on loans than those offered by private banks. This is undoubtedly a good thing and ensures additionality of finance. Beyond this, there is limited evidence of a deliberate lowering of interest rates by some DFIs, i.e. subsidies passed on directly to the beneficiary companies. There is, however, no

evidence, of a widespread lowing of rates among DFIs when compared with market norms. In general, DFIs tend to provide loans on commercial terms, implying that they price loans at a mark-up over base rate (LIBOR or EURIBOR); this mark-up is based on perceptions of country and project risk as well as administration costs (and, in some cases, political risks). Commercial terms are interpreted in different ways, in part reflecting the use of different risk models (each DFI will use its own model in the absence of risk ratings). Although they do differ it would nevertheless be desirable for DFIs risk modelling to be more transparent. DFIs also have take into account what the market can bear. In some cases this implies adjusting the rates and bringing them into line with rates provided by other private sector investors. In other cases, DFIs try to equalise the rates amongst each other (including in subordinated loans). The only major and consistent exception to this rule is the EIB which is mandated to use interest rate subsidies of 3% under certain circumstances. It has been a challenge to obtain commercially sensitive and confidential information on interest rates used in different deals or by different DFIs in the same deal. Information gathered during this research suggests that a DFI can sometimes price below other DFIs either in existing deals or in bidding processes.

## 5.2 Lack of risk taking by DFIs

At present, liquidity is increasing in many DFIs, due in part to high earnings from the sale of equity positions as well as the types of subsidies offered by DFIs. A high level of liquidity enables DFIs to maintain a portfolio of investments in riskier countries and sectors than a commercial institution, whilst maintaining its high credit rating and low cost of borrowing. High liquidity can also lead to DFIs offering more favourable terms at the project level, e.g. debt with longer maturities (important for infrastructure), subordinated debt, credit guarantees (to support local currency lending), or acting as 'lender of record' for the purposes of syndicated loans.

Given a high level of liquidity, it seems logical to suggest that DFIs can take higher risks without jeopardising their core business. However, any proposition that DFIs could do more to invest in high risk infrastructure sectors and frontier areas needs to be handled with care. The central question is whether each DFI is operating at its optimum level of exposure given its liquidity. This optimum lies in an investment portfolio that balances the cost of managing elevated levels of investment risk (i.e. loss provisions on loans and guarantees, equity impairment revaluations, and retained earnings designated to technical assistance and grants), with the need to maintain levels of liquidity sufficient to ensure stable and high institutional credit ratings, in turn securing access to lower costs of borrowing and ongoing confidence in the credibility of the institution.

We have not performed such an analysis. Whether DFIs are operating at this optimum might be informed by past experience, for example by looking at what happened during the Asian financial crisis of the late 1990s. During this period DFI portfolios were presumably far riskier, loan losses higher and returns lower. And yet this poorer financial performance does not seem to have adversely affected the institutional credit ratings.

## 5.3 Lack of transparency in DFI operations

There are four areas where increased transparency will benefit the DFI sector and its direct beneficiaries.

### *1. Technical assistance used by DFIs*

While it is possible to obtain a quick overview of the TA funds, it is striking that a data collection exercise (similar to that which fed into the WTO/OECD trade capacity building database) has yet to be conducted on DFI support for private sector. Obtaining an overview of *all* the TA funds available, what they are for, how they can be accessed, whether they are tied, and what effects they have is not at all straightforward. A data collection exercise would be helpful, providing more transparency in such operations helping to avoid the impression that such funds may be used to incentivise future

borrowers. It would also be in the interests of the DFIs, strengthening their ability to manage TA funds effectively, including a better marketing of TA. Transparency could also act as an incentive for reform in the DFI sector, including the untying of TA.

### *2. Interface between DFIs and ODA generally*

Given the need for finance in frontier markets where the returns are lower or riskier, coupled with the fact that DFIs need to price at commercial rates of return, suggests there might be a case for combining aid and DFI finance. There is, however, a lack of transparency in how DFIs manage grants for infrastructure co-financing, particularly in terms of their involvement in simultaneously determining the level of subsidy and participating as a financier in the non-subsidy portion of the investment.

### *3. Terms of deals*

More transparency is also required in disclosing the terms of past deals. We experienced considerable difficulties in collecting this information, and a greater degree of transparency in this area would help to dispel the myth that all DFIs are engaged in using subsidised interest rates, or that they are competing with each other on interest rates. We have uncovered some limited evidence of differences in interest rates offered by DFIs in the same deals, so the hypothesis is that it can happen. It is now up to the DFI sector to provide evidence of the scale of this practice.

### *4. Overall size and importance of DFIs*

Little is known in the development community about the extent of DFI operations. Few will know for example that the main DFIs provide at least USD(\$) 45 billion a year and that this is not reported separately in development finance publications or shared among development fora.

## **5.4 Other implications**

A number of other issues were covered by our research. First, are DFIs using an optimal risk strategy? It is not straightforward to assess this, or whether and how their current levels of cash and capital could be better spent or leveraged to support more projects in low-income countries. A joint review of DFI mandates and instruments by DFIs and their shareholders would be worthwhile. This could focus on the suitability of mandates in encouraging risk-taking in frontier and infrastructure markets; and on ways in which DFIs interpret their multiple, and possibly competing, aims around private capital mobilisation, productive enterprises, investment climate and economic growth.

Second, what are the constraints to more deals in frontier markets? It is not clear *a priori* whether the main constraint to further deals in high risk countries is the lack of bankable projects, the lack of TA and grant co-financing, or simply the lack of staff time to assess risk (it is not unusual for staff to secure less than one deal a year). It may be worth examining whether support for more investment officers aimed at frontier markets in combination with TA would go some way towards resolving this problem (and it need not go against DFI mandates).

Finally, as DFI and ODA resources are increasingly pooled and combined, it is important to draw up transparent operational guidelines on how they work together, and to emphasise the comparative advantages of each. Should DFIs be both managers and implementers of grants and / or technical assistance projects?

## Where next?

We suggest a number of possible ways forward:

### *For shareholders*

First of all it seems appropriate for each DFIs' shareholders to discuss the optimal level of exposure to risk they would be willing to countenance and indeed, endorse. Such a discussion is fairly fundamental to DFI operations, and may have implications for their mandates.

Shareholders will also want to ensure that new transparency initiatives take place, and that relevant studies (e.g. the OECD DAC for a survey of TA) are funded where needed.

### *For the DFIs*

There need to be discussions on the transparency issues outlined above, within and among DFIs initially which may then be thrown open for wider debate and consultation. This should cover TA and interest rate setting

### *For researchers*

There is a need for a closer examination of the effects of DFI subsidies specifically and the effects of DFIs generally on development outcomes. This may involve examining projects in-country together with the use of econometric studies.

## Appendices

### Appendix 1: Methodology for assessing the use and extent of subsidies by DFIs in infrastructure

This note presents the methodology to assess the use and extent of subsidies by DFIs in infrastructure. This will be supplemented by qualitative accounts and literature surveys.

The main methodology to examine the extent of subsidies by DFIs in infrastructure will involve the construction of a benchmark consisting of standard private sector activities, against which operations of the various development finance institutions (DFIs) can be compared so as to reveal the subsidy element.

This study distinguishes between two ways through which subsidies can be administered:

**1. Subsidies administered through financial instruments including:**

a) Debt; examples of subsidies include:

- i) subsided interest rate;
- ii) favourable maturities (e.g. 12 years vs 5 years), grace period (e.g. 0% interest during first 2 years);
- iii) more risky borrowing currency (e.g. local currency vs foreign currency)<sup>26</sup>;
- iv) structure;
  - less security backing for loan (e.g. secured against asset or project contract, or unsecured);<sup>27</sup>
  - less benign co-financing requirements, such as less seniority (e.g. syndicated, senior, junior or mezzanine debt);
  - lower leverage ratio of underlying investment (DSCR;<sup>28</sup> LLCR,<sup>29</sup> debt/ equity ratios);
  - less negative covenants (e.g. restrictions on working capital, more payment of dividends before loan is called, no requirement to keep fixed assets before loan is called, future borrowing).

b) Equity which can be subsidised through:

- i) a discounted rate of return;
- ii) lower expectations of dividends (common stock vs preferred stock);<sup>30</sup>
- iii) structure
  - accept more risky corporate finance structures;
  - accept more risky Joint Venture configurations;
  - smaller equity stakes by the project sponsor;
  - other (e.g. less non-TA fees, privileged arrangements with private/ independent equity funds).

c) *Guarantees* and risk insurance / hedging which can be subsidised and includes political and other non-commercial, and commercial and economic risks, under the direct control of DFI.

d) *Grants* in the form of Overseas Development Assistance (ODA) including capital and operational grants to the private or public sector, under the direct control of DFI.

---

<sup>26</sup> The willingness of DFIs to accept foreign currency debt repayments, when commercial banks would want foreign exchange guarantees.

<sup>27</sup> The willingness of DFIs to lend with no collateral (assets pledged by the borrower securing payment).

<sup>28</sup> A **target debt service cover ratio** ('DSCR') of 1.2 to 1.5, i.e. the cash flow available to meet the debt service against the actual amount of debt service (interest and principal) payable over the same period (on the assumption there no demand or market risk for the output of the project - higher ratios for higher risks).

<sup>29</sup> A **loan life cover ratio** ('LLCR') similar to the DSCR range, i.e. the net present value of future cash flow available for debt service against the total outstanding amount of debt for the duration of the debt.

<sup>30</sup> Equity interests which provide a specific dividend that is paid before any dividends are paid to common stock holders, and which takes precedence over common stock in the event of liquidation.

## 2. Subsidies delivered through the provision of technical assistance

- a) *Project specific* technical assistance to meet transaction costs such as advisory, restructuring and commitment fees, due diligence and compliance. This is technical assistance tied to the project which can be financed on the basis of the investment project or via other resources.
- b) *General/technical* assistance to develop the financial market. This is technical assistance not tied to the project and can be financed by investment project or by other resources.

The methodology will require a definition of the benchmark (the counterfactual), which we suggest should be defined in terms of an upper and a lower bound estimate.

In countries where the private sector is present, measuring the terms and costs of debt, equity and TA should be possible by examining real projects.

However, in countries where ratings may not be permissive, the international private sector is not present at all or in very different ways, and it is possible that all DFI investment can be termed a subsidy (or alternatively, a measure of the value associated with the risk of default needs to be constructed – this might be constructed by estimating the costs of insuring again default).

The benchmark depends on a good overview of private sector activities; if this proves difficult for certain aspects, it may still be possible to benchmark DFIs against each other.

We propose to analyse the extent of subsidies for each DFI at three levels:

Macro and where possible at the level of the overall infrastructure portfolio

Meso estimates using scenarios (using actual and/or hypothetical but similar projects in the infrastructure sector)

Micro level (using actual individual projects only).

It may not be possible to obtain relevant data for each DFI at each level. In some cases we can construct the macro picture only by aggregating micro level data (e.g. by knowing the value of TA subsidy in a particular project), or conversely, in some cases we may be able to say something about the subsidies only by taking data from annual reports using aggregate numbers (e.g. by knowing how the number of staff looking into risk analysis issues and which the private sector is not doing).

We will examine the subsidy element by comparing headline rates that apply to the investee company and funds. However, this may not be a reasonable way of estimating the implicit subsidy element if a DFI argues it has a comparative advantage in managing project and political risk which allows it to charge a lower risk premium, or if its cost of raising capital is lower due to its AAA status. One could take the view that there would be no subsidy involved here, but there could still be crowding-out of the private sector. This has implications for whether we can assume that the origin of the differences between the DFIs and the private sector is due only to a public subsidy. To meet the shortcomings of the approach, we will examine the costs of capital of DFIs.

### **1.1 Macro level**

This will discuss macro estimates relevant for the calculation of the subsidy:

Average ROA (return on asset) for DFI, split by loans and equity (RoE)

Overall administration costs

Discussion of overall portfolio

Total value of subsidy used in the DFI, i.e. total salaries plus benefits as proportion of total salaries

The table below provides an illustration – it includes examples on subsidies implicit in e.g. lending policies (e.g. differences in spread or fees applied ex-ante) as well as examples on actual subsidies (using calculations ex-post).

### Construct aggregate table for each DFI: Illustration

Financial Instruments	Private sector practice (market benchmark) Policy and/or actual	Development Finance Institution Policy and/or actual	Implicit subsidy
Debt	Own fixed or LIBOR + X; Ratio interest payments to loans	Own fixed or LIBOR + Y; Ratio interest payments to loans	Y-X; Difference in rates of return on loans
Equity	ROE=at least X% in infrastructure (and what is actual)	ROE=at least X% in infrastructure (and what is actual)	None (difference in actuals)
Guarantees	Premium	Premium	Difference in premia
Grants	Limited	Reimbursement / grants for managing grants on behalf of governments	Value of grants and reimbursements
Technical Assistance	Total costs of monitoring and evaluating deals	Total costs of monitoring and evaluating deals (e.g. salaries of staff)	Difference

This matrix will provide a macro picture and will focus on actual aggregated past data. For example, the FMO annual reports reveal that net profits / total assets has been hovering between 0.3 and 3.1 per cent over 2000-2005 and seems below what the private will have required and realised (but might still be considered good given the risk profile – see the Standard and Poor report on FMO. The CDC group reported total returns after tax of £435.7 which is 35% of net assets – the gross portfolio performance was 42% (up from 22% in 2004) which was 12% above the MSCI emerging markets index for the year. We will aim to provide a more detailed picture for the infrastructure portfolio.

#### Sources of information:

- annual reports and financial accounts
- credit market reports (Moody's, Standard and Poor)
- interviews with infrastructure investment officers
- general interviews with stakeholders
- literature review

#### **1.2 Detailed macro/meso**

For each DFI we aim to identify macro or qualitative estimates. We propose to complete the table below for each DFI for a number of examples (hypothetical or actual where possible) of infrastructure projects. We need to be specific about the scenario (which sub-sector, which country, etc) and provide four scenarios to each DFI (and where possible the private sector), e.g. what is the required interest rate for a typical loan of USD 50 mn in the power sector with structure X, and what are the cost components of this: cost of capital, administration costs, risk factors (e.g. LIBOR plus X – an allowance of country and project risk; and Y – to account e.g. for an annual commitment fees).

We deal with four scenarios (in the four infrastructure sector) for different types of countries with different ratings. The details of the scenarios might be developed further by the DFIs in the case of the hypothetical examples below (some illustrative examples below so that we can compare the terms of the debt/equity/guarantee in similar scenarios across different DFIs and private sector) or DFIs might be able to provide their own projects from the infrastructure portfolio.

#### **Scenario 1: Telecommunications**

- Laos (OECD country risk rating – 7)
- Greenfield
- Rural telecommunications to highly disbursed communities, many poor households
- 45% subsidy for the winning total project cost bid of \$200 million
- 20 year BOT concession contract, with subsidy tied to output-based performance targets

concession contract requires full telephony coverage at a density of 1 access point per 300 persons achieved in five years  
 500,000 persons to be covered, across 100 districts  
 revenue flow – subsidy and user fees  
 project sponsor – domestic private telecoms operator

#### **Scenario 2: Transport: Toll Road**

Panama (OECD country risk rating – 4)  
 brown field and greenfield  
 total project cost – \$150 million bid for 30 year concession plus \$200 million capital investment  
 90km of upgrade to 2 lane toll road  
 130km new build to 2 lane toll road  
 revenue flow 100% vehicle demand - commuter traffic  
 project sponsor – domestic private engineering firm  
 year construction period

#### **Scenario 3: Energy: Power generation**

Angola (OECD country risk rating – 7)  
 green field project  
 total project cost \$550 million  
 captive off-shore gas-to-power supply  
 3 x 300MW turbines; high rock filled dam; 10 km transmission line connected to existing 230kV Substation.  
 revenue steam – local currency; 100% government purchase for national grid  
 project sponsor – consortium of private, domestic, companies

#### **Scenario 4: Water supply and sanitation**

Indonesia (OECD country risk rating 5)  
 brown field (urban and peri-urban)  
 project sponsor – state-owned water company holds concessionaire for water supply and waste water treatment  
 concession covers 400,000 households, 200,000 in very poor peri-urban communities  
 prospects of floating company within five years  
 total project cost – \$50 million concession fee plus \$250 million capital investment  
 SPV with consortium of domestic and foreign shareholders  
 revenue stream – commercial, household and public service users

Construct table for a DFI in sector X and country Y (i.e. with a certain country risk rating/): Illustrative Example

Financial Instruments	Private sector practice (market benchmark) Policy and/or actual	Development Finance Institution Policy and/or actual	Implicit subsidy
Debt			
Equity			
Guarantees			
Grants			
Technical Assistance			

An example would be to ask how much it costs the private sector to arrange a deal of say USD 5 mn in energy (e.g. USD 60,000K per month), and what a DFI would charge (e.g. USD 30,000). An alternative is to assess the mark-up on interest rates for commitment fees.

### Sources of information:

- scenarios to be discussed with infrastructure investment officers in DFIs
- scenarios to be discussed with infrastructure investment officers in private sector
- literature review

### **1.3 Micro level**

Review past or actual individual company / project examples which have revealed specific elements of the subsidy not covered by our analysis above.

This can involve projects in the World Bank's PPI database (PPIAF) that have both private and DFI involvement so that we might be able to compare terms of involvement, or it might involve asking DFIs for specific example projects which we can take to other DFIs or private sector.

The answers to levels 2 and 3 will converge if the answers to the hypothetical examples (level 2) are based on actual examples (level 3).

### Sources of information:

- Lists of project in the infrastructure portfolio of DFIs (from annual report or from discussions)
- Private Participation In Infrastructure (PPI) database

## **Appendix 2: Credit ratings**

A credit rating is a current opinion, based on detailed financial analysis, of the creditworthiness of an obligor to meet its debt obligations. It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated. The issue rating definitions are expressed in terms of default risk. The highest rating (in Standard & Poor's classifications) is AAA (triple A), and the lowest is D (default).

Ratings play a critical role in determining how much entities that issue debt have to pay to access credit markets – i.e. the amount of interest they pay on their issued debt. The threshold between investment-grade and speculative-grade ratings has important market implications for issuers' borrowing costs. Indeed, the cost of capital decreases sharply when an issuer moves towards investment grade. For instance, according to S&P as of the end of October, 2005, there was an average reduction in borrowing costs of 44% when an issuer moves from the BB to the BBB rating category.

Ratings by Moody's and Standard & Poor's are given below:

	Moody's	S&P
Investment Grade Ratings	Aaa	AAA
	Aa	AA
	A	A
	Baa	BBB
	Ba	BB
	B	B
Below Investment Grade ('Junk Bond')	Caa	CCC
	Ca	CC
	C	C
In Default		D

BB, B, CCC, CC, and C

Obligations rated 'BB', 'B', 'CCC', 'CC', and 'C' are regarded as having significant speculative characteristics. 'BB' indicates the least degree of speculation and 'C' the highest.

Table A overleaf illustrates Standard and Poor's sovereign ratings for those countries that have issued sovereign debt either in local or foreign currency.<sup>31</sup>

**Table A**

Country	Investment Grade	
	Foreign Currency Rating	Local Currency Rating
Barbados	BBB+/Stable/A-2	A-/Stable/A-2
Botswana (Republic of)	A/Stable/A-1	A+/Stable/A-1
Bulgaria (Republic of)	BBB+/Stable/A-2	BBB+/Stable/A-2
Chile (Republic of)	A/Positive/A-1	AA/Stable/A-1+
China (People's Republic of)	A/Stable/A-1	A/Stable/A-1
Croatia (Republic of)	BBB/Stable/A-3	BBB+/Stable/A-2
Estonia (Republic of)	A/Stable/A-1	A/Stable/A-1
Hungary (Republic of)	BBB+/Stable/A-2	BBB+/Stable/A-2
India (Republic of)	BBB-/Stable/A-3	BBB-/Stable/A-3
Kazakhstan (Republic of)	BBB/Stable/A-3	BBB+/Stable/A-2
Latvia (Republic of)	A-/Negative/A-2	A-/Negative/A-2
Lithuania (Republic of)	A/Stable/A-1	A/Stable/A-1
Malaysia	A-/Stable/A-2	A+/Stable/A-1
Oman (Sultanate of)	A/Stable/A-1	A/Stable/A-1
Poland (Republic of)	BBB+/Stable/A-2	A-/Stable/A-2
Romania (Republic of)	BBB-/Positive/A-3	BBB/Positive/A-3
Russian Federation (The)	BBB+/Stable/A-2	A-/Stable/A-2
South Africa (Republic of)	BBB+/Stable/A-2	A+/Stable/A-1
Thailand (Kingdom of)	BBB+/Stable/A-2	A/Stable/A-1
Trinidad and Tobago (Republic of)	A-/Stable/A-2	A+/Stable/A-1
Tunisia (Republic of)	BBB/Stable/A-3	A/Stable/A-1
United Mexican States	BBB/Stable/A-3	A/Stable/A-1

<sup>31</sup> Ratings available in [www.standardandpoors.com](http://www.standardandpoors.com). April 2007. Only developing countries are included, according to The World Bank classification of economies, those classified as Upper Middle Income, Lower Middle Income and Low Income are included.

Country	Below Investment Grade	
	Foreign Currency Rating	Local Currency Rating
Argentina (Republic of)	B+/Stable/B	B+/Stable/B
Belize	SD/-/SD	B/Stable/B
Benin (Republic of)	B/Stable/B	B/Stable/B
Bolivia (Republic of)	--/-/B	B-/Negative/C
Brazil (Federative Republic of)	BB/Positive/B	BB+/Positive/B
Burkina Faso	B/Positive/B	B/Positive/B
Cambodia (Kingdom of)	B+/Stable/B	B+/Stable/B
Cameroon (Republic of)	B/Stable/B	B/Stable/B
Cameroon (Republic of)	B-/Stable/C	B-/Stable/C
Colombia (Republic of)	BB/Positive/B	BBB/Positive/A-3
Costa Rica (Republic of)	BB/Stable/B	BB+/Stable/B
Dominican Republic	B/Positive/B	B/Positive/B
Ecuador (Republic of)	CCC/Negative/C	CCC/Negative/C
Egypt (Arab Republic of)	BB+/Stable/B	BBB-/Stable/A-3
El Salvador (Republic of)	BB+/Stable/B	BB+/Stable/B
Ghana (Republic of)	B+/Stable/B	B+/Stable/B
Grenada	B-/Stable/C	B-/Stable/C
Guatemala (Republic of)	BB/Stable/B	BB+/Stable/B
Indonesia (Republic of)	BB-/Stable/B	BB+/Stable/B
Jamaica	B/Stable/B	B/Stable/B
Jordan (Hashemite Kingdom of)	BB/Stable/B	BBB/Stable/A-3
Kenya (Republic of)	B+/Stable/B	BB-/Stable/B
Lebanon (Republic of)	B-/Negative/C	B-/Negative/C
Macedonia (Republic of)	BB+/Stable/B	BBB-/Stable/A-3
Madagascar (Republic of)	B/Stable/B	B/Stable/B
Mali (Republic of)	B/Stable/B	B/Stable/B
Mongolia	B+/Positive/B	B+/Positive/B
Montenegro (Republic of)	BB+/Stable/B	BB+/Stable/B
Morocco (Kingdom of)	BB+/Stable/B	BBB/Stable/A-3
Mozambique (Republic of)	B/Positive/B	B/Positive/B
Nigeria (Federal Republic of)	BB-/Stable/B	BB/Stable/B
Pakistan (Islamic Republic of)	B+/Positive/B	BB/Positive/B
Panama (Republic of)	BB/Stable/B	BB/Stable/--
Paraguay (Republic of)	B-/Positive/C	B-/Positive/C
Peru (Republic of)	BB+/Stable/B	BBB-/Stable/A-3
Philippines (Republic of)	BB-/Stable/B	BB+/Stable/B
Senegal (Republic of)	B+/Negative/B	B+/Negative/B
Serbia (Republic of)	BB-/Positive/B	BB-/Positive/B
Seychelles (Republic of)	B/Stable/B	B+/Stable/B
Sri Lanka (Democratic Socialist Republic of)	B+/Negative/B	BB-/Negative/B
Suriname (The Republic of)	B/Positive/B	B+/Positive/B
Turkey (Republic of)	BB-/Stable/B	BB/Stable/B
Ukraine	BB-/Negative/B	BB/Negative/B
Uruguay (Oriental Republic of)	B+/Stable/B	B+/Stable/B
Venezuela (Bolivarian Republic of)	BB-/Stable/B	BB-/Stable/B
Vietnam (Socialist Republic)	BB/Stable/B	BB+/Stable/B

## Appendix 3: Private involvement in infrastructure financing: background note<sup>32</sup>

Infrastructure has, relative to other capital-intensive industries, undergone sharp shifts in government policy and public attitude. Twenty-five years ago, infrastructure services were controlled by the state, through ownership of vertically integrated utilities and other infrastructure entities, in virtually all developing countries and in most developed ones.

Financing for infrastructure reflected the stability of both the public ownership model and the reliance on regulated utilities. Under the first model, investors and creditors could count on the explicit backing of governments. State-owned utilities depended on the fiscal budget for new investments and often for meeting shortfalls in operating revenues. In the case of the vertically regulated monopoly model, stability came from the utilities' income stream – which was predictable because charges were regulated.

Over the past three decades, the global infrastructure markets have undergone unprecedented change and institutional reorganisation. Rapid technological advances, particularly in the telecommunications sector, and deliberate changes in public policy led to deregulation and competition in mature markets and liberalisation in the developing world.

The shift to private sector involvement has taken different forms in the various sectors:

*Telecommunications:* In most countries, the private sector is now dominant. In 1991, telecommunications in some 150 countries were state-owned, but by 2003 the number had fallen to 79.

*Power:* Worldwide reform in the electric power sector has been more uneven and contentious than in the telecommunications industry. In a survey of 52 developing countries having a generating capacity of between 29 megawatts (The Gambia) and 318 gigawatts (China) 31 percent had completed, or were near completing, the privatization of state-owned power utilities (figure 6.3). A further 18 percent had begun the privatization process, either by enacting reform legislation or by partially divesting state ownership. In 67 percent of the countries reviewed, independent power providers (IPPs) had been established, with another 21 percent planning to open electricity markets to them.

*Transport:* In transport, the movement to private ownership has been complicated by the economics of the industry, with private finance feasible only to the extent that users can be appropriately charged. Because infrastructure operators typically are able to charge only direct users, most private projects must be self-contained and have no close alternatives.

*Water and sanitation:* Before 1990, the sector relied almost entirely on government financing to meet operating costs and investment needs. As late as the mid-1990s, 65-70 percent of water and sanitation projects were still financed by the public sector; 5 percent by the domestic public sector; 10-15 percent by international donors; and 10-15 percent by international private companies. The dominance of the public sector is expected to continue for the foreseeable future.

In many developing countries, market liberalisation, regulatory reform, and the restructuring of state-owned monopoly utilities remain unfinished. Furthermore, given the characteristics of infrastructure industries, including the huge sunk costs involved, elements of natural monopoly, and their political saliency, there remains a strong rationale for state intervention, even in cases where privatization has been completed.

### 3.1 Recent trends<sup>33</sup>

Private participation in infrastructure projects in developing countries fell sharply after the 1997 Asian crisis and followed a broadly declining trend for several years afterward. However, in 2004 and 2005 investment in such projects increased sharply.

Total investment commitments to private infrastructure projects in developing countries grew by 70 percent in 2004-05, and reached US\$95 billion.

<sup>32</sup> Global Development Finance 2004. Chapter 6. The World Bank.

<sup>33</sup> 'Revival of Private Participation in developing country infrastructure' Michel Kerf and Ada Karina Izaguirre PPIAF. Gridlines. January 2007. Unless otherwise stated, the investment data in this note are in real terms (2005 US dollars).

The increase was driven mainly by one sector: telecommunications; the sector had dominated investment since 1998 and in 2005 telecommunications claimed 63 percent (US\$60 billion) of the total investment in infrastructure projects with private participation. While investment increased in 2004-05, the number of projects reaching financial closure fell. In 2005, 163 transactions were concluded – among the smallest numbers since the early 1990s.

Two main factors explain the diverging trends in investment levels and transaction numbers. First, recent investments were driven more by existing projects than by new ones. Since 2002 projects reaching financial closure each year had accounted for around 40 percent of that year's investment, while 'old' projects accounted for the other 60 percent. By contrast, until 1998 new projects had accounted for 70 percent, and old ones for 30 percent. Second, projects grew in size, with the median rising from a range of US\$20-36 million in 2002-04 to US\$60 million in 2005.

The distribution of investment across developing regions was increasingly balanced compared with previous years. In 1990-2000 Latin America was recipient of the largest share of investment, with almost 50 percent. East Asia followed with 27 percent. Each of the other regions accounted for only a small share. In 2001-05, by contrast, investment was much more equally distributed. Latin America remained in the lead, but with only 31 percent. Eastern Europe and Central Asia followed with 27 percent, East Asia with 18 percent, and the other three regions doubled their shares.

Investment also became more evenly distributed across country income groups. Low-income countries raised their share of investment from 7 percent in 1990-2000 to 17 percent in 2001-05, reaching new peaks in the last two years of that period. Lower-middle-income countries saw their share decline from 51 to 42 percent, with investment in 2005 at about 40 percent of the peak. Upper-middle-income countries had their share drop from 42 to 40 percent, with investment in 2005 (about US\$40 billion) close to the peak.

### **3.2 Financing structures: PPI database**

Financing infrastructure normally involves a combination of project sponsors, lenders, DFIs, and export credit agencies. Of these different players, the greatest source of finance has traditionally been commercial banks, often in connection with officially backed export credit agencies and multilateral organizations. According to the Global Development Finance Report the international syndicated loan market has accounted for 62 percent of international investment in developing country infrastructure in the past decade.<sup>34</sup>

The Private Participation in Infrastructure Database provides information on infrastructure projects with a component of private sector participation. Table B below illustrates investment commitments in projects with private participation in each region from 2000 to 2005.

Looking at the projects that reached financial closure between 2000 and 2005 and in particular the top 10 largest projects in each region, it is observed that:

In sub-Saharan Africa: Telecommunications attracted the largest commitments with more than US\$6 billion followed by Energy with US\$2.4 billion in commitments and finally transport with US\$1.7. None of the projects in water and sanitation are large enough to rank in the top 10 list. In 6 out of the 10 largest projects there was some kind of development finance support<sup>35</sup> which on average did not represent more than 25% of total project cost, with the exception of AES Sonel project where the US\$340 million financing package secured with DFIs represented more than 60% of the cost of the total investment programme.

In Middle East and North Africa: Investment commitments in the ten largest projects involved the telecommunications and energy sectors, with 2 projects being mixed energy and water. Telecommunications led with commitments for US\$10.6 billion and energy/water attracted US\$1.5 billion. According to the information available, none of the ten projects received development finance support.

---

<sup>34</sup> World Bank. Global Development Finance Report. 2004. Chapter 6.

<sup>35</sup> In some cases, multilaterals such as IBRD provided part of the financing to the government where the facilities are partly government-owned.

**Table B: Total investment in PPI projects in US\$ millions**

Region	2000	2001	2002	2003	2004	2005	Total 2000-2005	Percent
East Asia and Pacific	16971	8568	5659	9963	6749	9540	57451	25%
Europe and Central Asia	13088	6355	8252	1402	4435	18681	52213	22%
Latin America and the Caribbean	17508	20461	7405	6511	5723	4980	62589	27%
Middle East and North Africa	7432	5112	1031	1513	3388	3750	22226	9%
South Asia	2544	10030	1480	1450	5608	2440	23552	10%
Sub-Saharan Africa	1480	7795	2484	2430	696	1354	16239	7%
Total	59025	58320	26312	23270	26600	40745	234271	100%

In Latin America and the Caribbean: The ten projects which attracted the largest investment commitments included four projects in the energy sector, three in telecommunications and three in transport. In terms of investment commitment amounts, telecommunications attracted the largest share amounting to US\$7.4 billion followed by the projects in energy with US\$3.2 billion and transport projects with US\$2.4 billion. According to the information publicly available in the PPI Database only the energy projects (three of the four) received DFI support.

In East Asia and the Pacific: Total investment commitments in the ten largest infrastructure projects totalled US\$22.5 billion. All four sectors were represented with energy projects attracting commitments for US\$7.5 billion, followed by telecommunications with US\$7 billion, Water and Sanitation with US\$5.9 and transport last with US\$2 billion. Only two energy projects (both in electricity) received DFI support with the remaining projects being entirely financed with commercial banks.

In Europe and Central Asia: The ten largest projects in the region attracted almost US\$28.3 billion with commitments distributed among the sectors as follows: energy projects lead with US\$13.1 billion, telecommunications with US\$10 billion and finally transport with US\$5.1 billion. Only one of the projects in energy received DFI support.

In South Asia: Of the ten largest infrastructure projects in the region, eight are in India and two in Pakistan. Telecommunications once again attracted most of the investment commitments totalling US\$8.2 billion, followed by the projects in the energy sector attracting US\$3.9 and finally projects in transport US\$454 million. Only one of the projects (in energy) received DFI support.

In summary, DFI support in infrastructure projects with private sector financing is most notably in sub-Saharan Africa where the majority of the largest projects received DFI financing.

### 3.3 Development Finance Institutions: Involvement in infrastructure

Table C below shows annual commitments in infrastructure sector by each DFI. In the case of EBRD, EIB (FEMIP), ADB, IADB and AFDB, amounts reflect operations in infrastructure with the private sector only.<sup>36</sup>

<sup>36</sup> For details on calculations see DFI Financial accounts Excel file.

**Table C: Annual commitments in infrastructure USD millions**

	2003	2004	2005
EBRD	1,329.70	1,643.00	1,747.30
IFC	1,298.80	1,082.80	1,696.40
OPIC		1598.6	989.3
NIB	553.04	521.09	771.74
EIB (ALA)	89.56	0	0
MIGA	276.4	341.1	468.8
ADB	106.01	238.6	398.5
EIB (FEMIP)	344.3	234.2	366.7
IADB	55.09	67.49	215.8
EIB(ACP-IF)	4.98	0	5.65
FMO	149.3	188	186.9
CDC Group	233.17	204.96	159
PROPARCO			124.1
DEG	74.4	133	100.9
AFDB	165.89	136.54	93
<b>TOTAL</b>	<b>4,680.64</b>	<b>6,389.38</b>	<b>7,324.09</b>

*Source:* based on own calculations from data in the DFI financial reports.

Table D below relates the total annual commitments of all DFIs part of our study with total commitments in projects with private participation that reached financial closure in a given year.

**Table D**

	2005	2004	2003
Annual commitments in infrastructure by DFIs (US\$ mn)	4,680	6,476.54	7,516.02
Total Investment in PPI projects (US\$ mn)	23,270	26,600	40,745
Approximate percentage contribution by DFIs	20.1%	24.3%	18.4%

Total investment in PPI projects (numerator) only includes projects that meet the criteria to be included in the PPI database. As per the methodology, the database covers infrastructure projects located in low and middle-income countries that directly or indirectly serve the public – captive facilities (such as cogeneration power plants and private telecommunications networks) are excluded unless a significant share of its output is sold to serve the public under a contract with a utility.

Annual commitments in infrastructure by DFI (numerator) refer to commitments in infrastructure as per each DFI definition. In most cases, efforts have been made to only capture investments made in projects that fit with a narrow definition of infrastructure to include only transport, telecommunications, water and sanitation and energy projects.

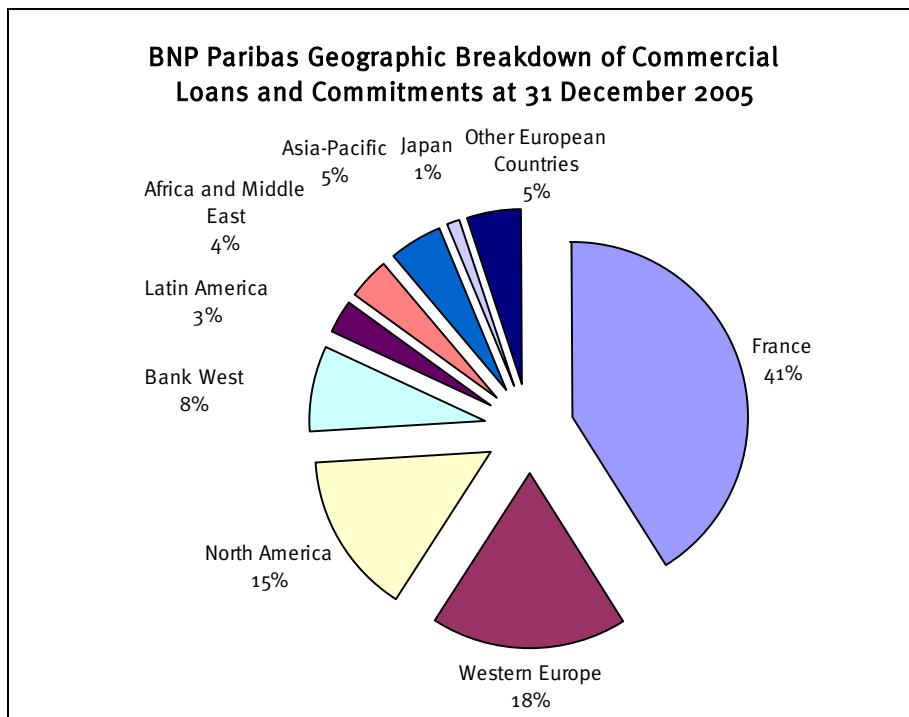
### 3.4 Commercial banks

Commercial banks' engagement in infrastructure projects is the result of the adequate assessment of country, sector and project risk. Due to the fact that certain infrastructure sectors entail huge sunk costs and local currency revenue stream, certain industries carry higher risks and as a result, become less likely to attract financing (or

require such a high return making the project financially unviable). The experience of the last 10 years show that commercial banks are active participants in telecommunications (specially mobile technology) and power projects whereas water and sanitation projects rely more heavily on official or multilateral financial resources.

BNP Paribas and ING are two banks which have engaged in financing infrastructure in developing countries. However, the lending to developing countries represents a very small percentage of their overall portfolio. Figure 1 below illustrates the geographical breakdown of BNP Paribas portfolio.

**Figure 1**



*Source:* BNP Annual Report 2005.

With regards to the portfolio quality according to BNP's annual report, the majority of commitments are towards investment grade borrowers. In the case of commitments to borrowers with lower credit ratings a significant proportion of them are secured by high quality guarantees from international agencies. In 2005 over two-thirds of the portfolio consisted of commitments to borrowers rated 'investment grade' under BNP's internal rating system.

Like BNP, ING also aims to maintain an internationally diversified loan, bond and investment portfolio and to avoid large credit risk concentrations. According to ING's annual report, this is supported by a system of risk limits which correspond to the risk appetite of the Executive Board. Limits are set for countries, individual borrowers, issuers, counterparties, borrower groups and re-insurers which cascade down to all levels of the organisation. The breakdown of the portfolio in terms of credit risk ratings, expressed in S&P rating equivalents is given in the table below.

**Table E: ING risk class bank portfolio**

% of total Bank portfolio	2006	2005
1 AAA	13.6%	13.8%
2-4 (AA)	20.6%	22.1%
4-7 (A)	10.9%	9.5%
8-10 (BBB)	21.3%	21.6%
11-13 (BB)	27.6%	27.6%
14-17 (B)	4.1%	4.0%
18-22 (Watch/ problem grade)	1.9%	1.4%
	100%	100%

*Source:* ING Annual Report 2006

**Table F: Total investment commitments in PPI projects which reached financial closure 2000 to 2005 by region and sector**

Region	Primary Sector	Total investment (US\$ millions)	Percentage
East Asia and Pacific	Energy	24,098	10%
	Telecom	9,474	4%
	Transport	13,809	6%
	Water and sewerage	10,070	4%
Total EAP		57,451	25%
Europe and Central Asia	Energy	22,903	10%
	Telecom	16,525	7%
	Transport	10,140	4%
	Water and sewerage	2,645	1%
Total ECA		52,213	22%
Latin America and the Caribbean	Energy	27,848	12%
	Telecom	14,215	6%
	Transport	15,558	7%
	Water and sewerage	4,969	2%
Total Latin America and the Caribbean		62,589	27%
Middle East and North Africa	Energy	4,883	2%
	Telecom	15,200	6%
	Transport	1,465	1%
	Water and sewerage	679	0.3%
Total Middle East and North Africa		22,226	9%
South Asia	Energy	9,258	4%
	Telecom	10,523	4%
	Transport	3,769	2%
	Water and sewerage	2	0.001%
Total South Asia		23,552	10%
Sub-Saharan Africa	Energy	4,031	2%
	Telecom	10,371	4%
	Transport	1,794	1%
	Water and sewerage	43	0.02%
Total Sub-Saharan Africa		16,239	7%
Grand Total		234,271	100%

## Appendix 4: DFI's cost of raising capital

### 4.1 International Financial Corporation (IFC)

IFC funds its lending activities by issuing bonds in international capital markets and has been the first multilateral, or among the first, to issue bonds in the local currencies. IFC diversifies its borrowings by currency, country, source, and maturity to provide flexibility and cost effectiveness.

The weighted average cost of market borrowings after currency and interest rate swap transactions was 4.9% at June 30, 2006 (3.3% at June 30, 2005).<sup>37</sup>

Outstanding market borrowings have remaining maturities ranging from less than one year to almost 30 years, with a weighted average remaining maturity of 10.7 years at June 30, 2006 (11.6 years at June 30, 2005).

#### Investment Products – Loans

Loans account for the major part of the financing provided by IFC, representing 79% of the Corporation's disbursed investment portfolio as of June 30, 2006, compared with 80% at June 30, 2005.

Loans will generally have the following characteristics:

Term: typically amortizing with final maturities of up to 12 years

Currency: primarily in major convertible currencies, principally US dollar, and to a lesser extent, Euro, Swiss franc and Japanese yen

Interest rate: fixed or variable

Pricing: reflects such factors as market conditions and country and project risks; variable rate loans are generally tied to the 6-month LIBOR index in the relevant currency.

#### Investment products – Equity

Equity investments accounted for 21% of the Corporation's disbursed investment portfolio at June 30, 2006, compared with 20% at June 30, 2005. IFC's equity investments are typically in the form of common or preferred stock and are usually denominated in the currency of the country in which the investment is made.

### 4.2 FMO

FMO is an AAA financial institution. The Dutch Government holds 51 percent and major Dutch banks owning 42 percent of the shares. Trade unions, private companies and individuals hold the remaining 7 percent.

In its Annual Accounts 2005 FMO reports the effective interest rates on interest-yielding assets and liabilities as follows:<sup>38</sup>

December 31, 2005	EUR %	USD %	JPY %
<b>Assets</b>			
Banks	1.60%	3.10%	-
Short-term deposits	2.42%	4.56%	-
Loans to the private sector	5.57%	7.56%	-
Loans guaranteed by the State	6.51%	--	
Interest-bearing securities	3.31%	--	
<b>Liabilities</b>			
Short term credits	2.08%	4.41%	-
Debt securities	5.70%	-	1.85%
Debentures and notes	2.07%	4.30%	1.77%

<sup>37</sup> IFC Annual Report 2006 Volume 2 accounts. Page 13.

<sup>38</sup> FMO. Annual Accounts 2005. Pages 105-106.

The second table below includes the effective interest rates for debt securities and debentures and notes after accounting for the effective interest rate effects of derivative financial instruments eligible for hedge accounting.

December 31, 2005	EUR %	USD %	JPY %
Liabilities			
Debt securities	2.67%	-	0.08%
Debentures and notes	1.90%	4.07%	1.77%

#### 4.3 European Bank for Reconstruction and Development (EBRD)

The EBRD's borrowing policy is governed by two key principles. First, it seeks to match the average maturity of the Bank's assets and liabilities to minimise refinancing risk.

Secondly, it seeks to ensure the availability of long-term funds at optimum cost effectiveness for the Bank.

During the first nine months, to 30 September 2006, €1.08 billion was issued under the Bank's authorised medium to long-term borrowing programme at an average cost of LIBOR less 37 basis points, with an average life of 3.5 years.<sup>39</sup>

During the Period	Quarter to September 2006			YTD 2006			Quarter to September 2005			YTD 2005		
	€ million	Basis Points below LIBOR	Avg. Life to Maturity	€ million	Basis Points below LIBOR	Avg. Life to Maturity	€ million	Basis Points below LIBOR	Avg. Life to Maturity	€ million	Basis Points below LIBOR	Avg. Life to Maturity
Outstanding at period	11,359	35	8.2	12,509	34	7.8	12,671	34	7.9	12,237	34	8.8
Issued	509	38	2.7	1,075	37	3.5	412	38	7.8	1,598	40	5.2
Redemptions	(501)	49		(2,128)	32		(328)	39		(1,057)	39	
Buybacks	0	0		(89)	42		(14)	37		(37)	38	
Outstanding at period end	11,367	35	8.0	11,367	35	8.0	12,741	34	7.9	12,741	34	7.9
Outstanding during period	11,297	35		12,005	34		12,699	34		12,465	34	

#### 4.4 Inter-American Development Bank

The Bank raises funds in the international capital markets primarily through the issuance of debt securities. To diversify its sources of funding, the Bank issues its debt securities in various currencies, maturities, formats, and structures to meet the needs of global institutional and retail investors.<sup>40</sup>

**Asset/Liability Portfolios and Returns/Costs**  
*(Amounts expressed in millions of United States dollars)*

	2005 Average Balance	Return/Cost (%)	2004 Average Balance	Return/Cost (%)	2003 Average Balance	Return/Cost (%)
Loans <sup>(1)</sup> .....	\$47,837	4.95	\$49,721	4.92	\$49,193	5.29
Liquid Investments .....	12,341	3.29	13,415	2.17	15,014	2.00
Total earning assets .....	60,178	4.61	63,136	4.34	64,207	4.52
Borrowings .....	42,609	4.07	46,200	3.40	48,590	3.37
Interest rate spread .....		0.54		0.94		1.15
Net interest margin <sup>(2)</sup> .....		1.72		1.84		1.97

(1) Excludes loan fees  
(2) Represents net interest income as a percentage of average earning assets

<sup>39</sup> BRD. Interim Financial Report at 30 September 2006, Page 9.

<sup>40</sup> ADB. Annual Report 2005, Page 98.

### Lending policy

Private Sector Program loans are denominated in United States dollars and borrowers have the option of either LIBOR based fixed interest rate loans or floating rate loans. For fixed rate loans, the interest rate is fixed upon signature or for each disbursement, at a rate based on a LIBOR funding cost plus the lending spread. For floating rate loans, the interest rate resets every one, three or six months based on a LIBOR rate plus the lending spread. Lending spreads and fees are set on a case-by-case basis.

## Appendix 5: Discussion of the literature on subsidies by DFIs

The literature focuses on the sources of subsidies provided to the DFIs due to their special nature and not on subsidies that DFIs provide (since technically their operations are supposed to be on commercial terms).

As an example: Section 2.2 ‘Subsidies received by MDBs and their allocation’ in ‘What should multilateral developments bank do?’<sup>41</sup> mentions in summary:

1. The first element of subsidy arises from the fact that the MDBs have neither paid dividends nor made any share repurchases. If this state of affair was to persist indefinitely (and is expected to do so) some part of the opportunity cost of the shareholders’ paid-in capital and accumulated reserves (the equity of the MDBs) can be viewed as a subsidy to the MDBs.
2. The second element of subsidy is the ‘commitment fee’ foregone by the shareholders on the callable capital of the MDBs, that is, the subscribed capital that has not (yet) been paid in. The shareholders guarantee that additional capital will be available (up to the limit of the subscribed capital) should specific contingencies arise. This guarantee is valuable to the MDB and serves as a guarantee of MDB borrowing in international capital markets. As with commercial banks, the bulk of funds mobilised by the MDBs are borrowed. The average ratio of paid-in capital and accumulated reserves to total assets is about 9 per cent over the period 1996-2000. With this structure of capital and guaranteed liabilities, the marginal cost of MDB borrowed funds approaches that of their most creditor-worthy shareholders even though their portfolio of assets is of lower credit quality. This involves a cost to MDB shareholders. However, neither is a charge made for the guarantee nor has the guarantee been invoked up to now.
3. Third, the preferred creditor status is granted to MDBs at no cost. This status provides the MDBs with a senior claim to the reserves of the central bank.
4. The fourth element of subsidy arises from the fact that employees of MDBs are exempt from income tax on their MDB salaries and that the MDBs are exempt from indirect taxes on the goods and services that they procure.
5. Fifth, the MDBs are able to mobilise grants, such as technical cooperation funds, from donor governments. Donors provide these funds as explicit grants for the MDBs to administer and allocate among competing projects.

Sections 2.2.2 and sections 2.2.3 are dedicated to the pricing of the subsidies mentioned above.

Use of subsidies in EBRD. The one paper that discusses the appropriate use of subsidies (with a focus in EBRD) does so from the perspective of applied welfare economics. The paper is titled ‘Blended Finance and Subsidies: An Analytical Framework for Operational Policy’.<sup>42</sup>

In Section 3, the authors expand on the subsidies most relevant to the EBRD’s Mandate – those prompted by transition impact and environmental considerations. In particular, they analyze whether project related subsidies, including grants such as Technical Cooperation funds from external sources that are channelled through or brought to the project by the Bank, are consistent with the principles of sound banking and additionality. An

---

<sup>41</sup> ‘What should the Multilateral Development Banks do? Willem Buiter and Steven Friers, European Bank for Reconstruction and Development. Working Paper No. 74. June 2002.

<sup>42</sup> Willem H. Buiter (EBRD) and Mark Schankerman (EBRD and London School of Economics). 12 March 2002.

analysis on how blended finance (involving both project finance and TC funds or other grants or subsidies) should be treated in order to comply with sound banking principles and transition impact objectives.

Bailey, Robert (2005) 'Basel II and Developing countries: Understanding the Implications'. LSE Working Paper Series. London: Development Studies Institute, December.

Brook, Penelope J. (ed.) and Irwin, Timothy C. (2003) *Infrastructure for Poor People: Public Policy for Private Provision*. Washington, DC: World Bank Publications, March.

Buiter, Willem and Friers, Steven (2002) 'What should the Multilateral Development Banks do?', Working Paper No. 74. London: European Bank for Reconstruction and Development, June.

Dellacha and Te Velde (2007) *Analysis of Development Finance Institutions Financial Accounts*.

Dixit, A. K. and Pindyck, R. (1994) *Investment Under Uncertainty*. Princeton, NJ: Princeton University Press.

Jansen, Irene; van Koesveld, Ernst; Rot, Karen and Spijkerma, Emile (2006) 'Adding Value to the IFI-System'. Report on the Role of International Financial Institutions in Middle Income Countries. The Working Group on the Role of the IFIs in MICs. The Hague: Netherlands Ministry of Finance, June.

Mavrotas, George (2002) 'Multilateral Development Banks and Private Sector Financing: The Case of the IFC'. Helsinki: United Nations University, World Institute for Development Economics Research, December.

Musasike, Lewis;<sup>43</sup> Stilwell, Ted; Makhura, Moraka; Jackson, Barry and Kirsten, Marie<sup>44</sup> (2004) 'The role of Development Finance Institutions: Lessons from southern Africa of best practices for their effective management'. Washington, DC: World Bank.

Schreiner, Mark and Yaron, Jacob (1999) 'Development Finance Institutions: Measuring Their Subsidy'. Microfinance Risk Management and Center for Social Development Washington University in St. Louis.

Sharan, Diwesh; Lohani, Bindu N.; Kawai, Masahiro and Nag, Rajat (2007) 'ADB's Infrastructure Operations: Responding to clients' needs'. Manila: Asian Development Bank, March.

Wezel, Torsten (2004) 'Does Co-Financing by Multilateral Development Banks Increase 'Risky' Direct Investment in Emerging Markets? – Evidence for German Banking FDI'. Deutsche Bundesbank Discussion Paper Series 1: Studies of the Economic Research Centre No 02/2004.

Yaron, Jacob (2004) 'State-Owned Development Finance Institutions (SDFI): Background, Political Economy and Performance Assessment', 30 November (<http://www.iadb.org/res/publications/pubS-492.pdf>).

World Bank (2004) *Global Development Finance*. Washington, DC: World Bank.

---

<sup>43</sup> Executive Manager Treasury, Development Bank of Southern Africa Contact details; DBSA, P O Box 1234, Halfway House, 1685, South Africa (<http://www.dbsa.org>).

<sup>44</sup> Policy Analysts, Policy Business Unit, DBSA.

## Appendix 6: Discussion of mandates of DFIs

DFI	Mandate	Where could the subsidy be present?	Shareholders	Other
	(1) investing in profitable/sustainable companies (2) economic and social development (3) financial sector development	Project level: (1) Are funds being provided under market terms? (2) Is there any technical assistance available?  Portfolio level: allocation of portfolio in certain countries/regions	Who are the owners? Do they get a return? (distribution of dividends)	
ADB	(1) to foster economic growth and co-operation in the region of Asia and the Far East (2) to contribute to the acceleration of the process of economic development of the developing member countries in the region, collectively and individually. <sup>45</sup> (3) promote investment in the region of public and private capital for development purposes; <sup>46</sup>	Project level: The main instruments are loans, technical assistance (TA), <sup>47</sup> grants, guarantees, and equity investments.  Private sector loans are priced based on market practice; <sup>48</sup> for private sector loans, the lending spread is determined on a case-by-case basis to cover ADB's risk exposure to specific borrowers and projects. <sup>49</sup>  ADB also normally charges a front-end fee and commitment fees. <sup>50</sup> For private sector loans, commitment fees are 0.50% – 0.75% on progressive amounts of undisbursed loan balance; front-end fees (to cover administrative costs incurred in loan origination) are typically 1.0% – 1.5% on the loan amount, or less if overall project return justifies it. <sup>51</sup>  ADB can provide technical assistance for the preparation, financing and execution of development projects and programmes. <sup>52</sup>  Portfolio level:  Limits on portfolio: The total amount of ADB assistance to a single project, including equity investments, loans, and guarantees, must not exceed 25% of the total project cost or \$75 million, whichever is lower <sup>53,54</sup> .  Special Funds: The Bank may set aside resources to establish SF which may be used to guarantee or make loans of high developmental priority, with longer maturities, longer deferred commencement of repayment and lower interest rates than those established by the Bank for its ordinary operations. <sup>55</sup>	Shareholders are member countries (both regional and non-regional members)  The Board of Governors shall determine annually what part of the net income of the Bank, if any, shall be distributed to the members. <sup>56</sup> In the history of the ADB, never has a distribution of dividends been approved by the BoG.  If a member withdraws its membership, the Bank must arrange for the repurchase of its shares, the same applies if the Bank ceases operations, assets will be distributed among members after liabilities have been paid. <sup>57</sup>  At the time a country ceases to be a member, the Bank shall arrange for the repurchase of such country's shares by the Bank as a part of the settlement of accounts with such country.	In considering an application for a loan or guarantee, the Bank shall pay due regard to the ability of the borrower to obtain financing or facilities elsewhere on terms and conditions that the Bank considers reasonable for the recipient, taking into account all pertinent factors; <sup>58</sup>  The Bank, its assets, property, income and its operations and transactions, shall be exempt from all taxation and from all customs duties.

<sup>45</sup> Asian Development Bank. Charter. Article 1.

<sup>46</sup> Asian Development Bank. Charter. Article 2.

<sup>47</sup> Technical assistance provision: (1) to provide technical assistance for the preparation, financing and execution of development projects and programmes, including the formulation of specific project proposals; ADB Charter. Article 2. (iv).

DFI	Mandate	Where could the subsidy be present?	Shareholders	Other
AfDB	<p>The purpose of the Bank shall be to contribute to the sustainable economic development and social progress of its regional members.<sup>59</sup></p> <p>To implement its purpose, the Bank shall:</p> <ul style="list-style-type: none"> <li>(1) ... participate in, the selection, study and preparation of projects, enterprises and activities contributing to such development;</li> <li>(2) use the resources at its disposal for the financing of investment projects and programmes relating to the economic and social development of its regional members;<sup>60</sup></li> <li>(3) mobilize and increase in Africa, and outside Africa, resources for the financing of such investment projects and programmes.<sup>61</sup></li> </ul>	<p>Project level: The Bank lends at market rates, pricing its loans at a spread above an appropriate market indicator (e.g. Libor or Euribor). Spreads are set according to the credit worthiness of the borrower and after applying appropriate margins for country and project risks, as well as a reasonable rate of return.<sup>62</sup></p> <p>Technical assistance: AfDB can provide technical assistance for the study, preparation, financing and execution of development projects or programmes.<sup>63</sup></p> <p>Portfolio level: Because of its African geographical focus, the Bank has developed its own internal 10-point rating scale to reflect the risk profile of its potential borrowers. At the lowest risk end of the spectrum is a project rating of 1. Projects rated 1 are considered excellent credit risks. The Bank normally considers new projects from risk rating 1 up to risk rating 5 (acceptable).<sup>64</sup></p> <p>Bank equity investments may take a variety of forms,</p>	<p>Shareholders are member countries (both regional and non-regional members)</p> <p>The Board of Governors shall determine annually what part of the net income of the Bank shall be allocated – after making provision for reserves – to surplus and what part, if any, shall be distributed.<sup>65</sup> In the history of the AfDB, never has a distribution of dividends been approved by the BoG.</p>	

<sup>48</sup> ‘In making or guaranteeing a loan, the rate of interest, other charges and the schedule for repayment of principal shall be such: as are, in the opinion of the Bank, appropriate for the loan concerned’ ADB Charter. Article 14. Operating Principles (vii). See also ADB Annual Report- Financial Report 2005 page 4.

<sup>49</sup> ‘The pricing of non-sovereign loans and guarantees varies depending on the needs and risks of the project concerned. Interest rates, guarantee fees, and other charges are market determined and factor in the country risk and project risk’. ADB Operations Manual. Private Sector operations. Page 12

<sup>50</sup> Commission and Fees: ‘The Bank shall charge, in addition to interest, a commission on direct loans made or participated in as part of its ordinary operations. This commission, payable periodically, shall be computed on the amount out. standing on each loan or participation and shall be at the rate of not less than one (1) per cent per annum, unless the Bank, after the first five (5) years of its operations, decides to reduce this minimum rate’ ADB Charter. Article 16. See Also ADB Annual –Financial Report 2005. Page 9.

<sup>51</sup> ADB Operations Manual Bank Policies Page 3.

<sup>52</sup> ADB Charter Article 2 paragraph (iv).

<sup>53</sup> ADB Annual Financial Report 2005. Page 15.

<sup>54</sup> Guarantees: For private sector projects, ADB can issue a Political Risk Guarantee (PRG) without a counter guarantee from the host government; however, PRG exposure to such a project is currently subject to a maximum of \$150 million or 50% of the project cost, whichever is lower. Fees are market-based composed of guarantee fees, front-end fees, and standby fees. In the case of Partial Credit Guarantees (PCG) private sector transactions not supported by a counter guarantee from the host government, the exposure limit currently stands at \$75 million or 25% of the project cost ,whichever is less. Guarantee fees for private sector transactions are market based.

<sup>55</sup> Asian Development Bank. Charter. Article 19. Special Funds.

<sup>56</sup> ADB Charter Article 40 (1).

<sup>57</sup> ADB Charter Article 43 (2) and Article 47.

<sup>58</sup> Asian Development Bank Charter Article 14. Operating Principles (v).

<sup>59</sup> Agreement Establishing The African Development Bank. Article 1 & 2.

<sup>60</sup> Agreement Establishing The African Development Bank. Article 2 paragraph 1 a).

<sup>61</sup> Agreement Establishing the AfDB. Article 2 paragraph 1 c).

<sup>62</sup> AfDB. Private Sector Brochure.

DFI	Mandate	Where could the subsidy be present?	Shareholders	Other
		<p>including common shares and preferred stock, with or without participating features. The Bank will not assume responsibility for managing an enterprise in which it invests. Under normal circumstances, the Bank would divest its equity holding once the project has reached the envisaged performance level and its operations are stable, and when a reasonable return can be achieved.</p> <p>The Bank, its property, other assets, income and its operations and transactions shall be exempt from all taxation and from all customs duties</p>		
CDC	<p>CDC aims to achieve:</p> <p>A direct economic impact by providing funding for successful companies</p> <p>An indirect impact by demonstrating the benefits of successful investment to other capital providers (financial sector development)</p> <p>All investments are focused to be in companies which are for the immediate or prospective economic benefit of countries which are classified as low and middle income countries by the World Bank and which are within Africa.<sup>66</sup></p>	<p>Project level: Not applicable since CDC does not make direct investments. Instead, CDC invests its capital with fund managers in private equity funds focused on emerging markets. CDC requires all fund managers to follow their business principles. CDC does not provide Technical Assistance.</p> <p>Portfolio level: CDC has two investment targets: 50% of new investments in sub-Saharan Africa and South Asia; and 70% in the poorest countries of the world (defined as countries with an annual Gross National Income (GNI) per capita below US\$1,750 in 2001). Both tests are measured over a five-year rolling period. CDC does not invest in countries which have a GNI per capita of over US\$9,075 or EU accession countries.<sup>67</sup></p> <p>CDC became UK corporation tax exempt in May 2003.</p>	<p>CDC is a plc whose sole shareholder is the Department for International Development (DfID). DfID, does not require a dividend from CDC. Instead, all profits are re-invested in funds.</p>	<p>CDC is required to operate commercially according to the highest standards of corporate governance.<sup>68</sup> Achieving an appropriate financial return on investments by respecting their business principles of international best practice in corporate governance, environmental, health and safety, and social issues.</p>

<sup>63</sup> Agreement Establishing AfDB. Article 2 Paragraph (e).

<sup>64</sup> For more information on this, see document ‘Non-sovereign credit risk review 2006’ in the AfDB folder in the intranet. The implicit subsidy behind the AfDB ranking classification might be the fact that certain projects would not be eligible under commercial banks standards (would be ranked too risky) but will be considered eligible under AfDB risk assessment policies.

<sup>65</sup> Agreement establishing AfDB. Art 42.

<sup>66</sup> CDC Business Principles and Prohibited Activities. Part I (a).

<sup>67</sup> CDC Annual Report 2005 Page 21.

<sup>68</sup> CDC Annual Report 2005 Page 20.

DFI	Mandate	Where could the subsidy be present?	Shareholders	Other
DEG	<p>(1) DEG invests in profitable and long-term viable private enterprises that contribute to sustainable development in all sectors of the economy.</p> <p>(2) DEG only takes on commitments in projects that make an effective development policy impact, meet environmental standards and comply with social principles. DEG is particularly committed to its developmental mandate and its guidelines for social and environmental compatibility form the decisive frame of their work</p> <p>(3) as part of financial sector development, DEG seeks to strengthen local capital markets so they can provide localized finance for investment projects, in particular for small and medium enterprises</p>	<p>Project level: DEG offers the following financial products.</p> <p>Long-term loans</p> <p>Currency: euros or US dollars</p> <p>Term: usually between four and ten years</p> <p>Interest rate: fixed or variable; market oriented according to project and country risks</p> <p>Collateral security: as fixed assets in the country of investment; project-specific arrangement</p> <p>max. 25 million EUR</p> <p>Equity capital</p> <p>Equity participation in the project usually about 5-25%</p> <p>Variable arrangement of the risk components</p> <p>In certain cases, voting rights and seat on the board of directors of the company</p> <p>Clearly defined exit strategies</p> <p>Mezzanine finance</p> <p>Project-specific arrangement</p> <p>Risk-oriented yield</p> <p><u>Subordinated security</u></p>	DEG is a subsidiary of KfW Bankengruppe its sole shareholder.	
EBRD	<p>In contributing to economic progress and reconstruction of Central and European countries, the purpose of the EBRD shall be to:<sup>69</sup></p> <p>(1) promote the establishment, improvement and expansion of productive, competitive and private sector activity</p> <p>(2) to stimulate and encourage the development of capital markets</p>	<p>Project level: The Bank shall operate in accordance with the following principles<sup>70</sup>:</p> <p>apply sound banking principles to all its operations;</p> <p>shall not undertake any financing, or provide any facilities, when the applicant is able to obtain sufficient financing or facilities elsewhere on terms and conditions that the Bank considers reasonable;</p> <p>in its investments in individual enterprises, the Bank shall undertake its financing on terms and conditions which it considers appropriate, taking into account the requirements of the enterprise, the risks being undertaken by the Bank, and the terms and conditions normally obtained by private investors for similar financing</p> <p>Technical Assistance: EBRD can provide technical assistance for the preparation, financing and implementation of relevant projects<sup>71</sup></p> <p>Commission and fees<sup>72</sup></p>	<p>Shareholders are member countries (both regional and non-regional members)</p> <p>The Board of Governors shall determine at least annually what part of the Bank's net income, after making provisions for reserves and, if necessary, against possible losses shall be allocated to surplus or other purposes and what part, if any, shall be distributed (in proportion to shares held by each member)<sup>74</sup></p> <p>In the history of the EBRD, never has a distribution of dividends been approved by the BoG.</p>	

<sup>69</sup> Agreement Establishing the European Bank for Reconstruction and Development. Article 1 & 2.

<sup>70</sup> Only relevant paragraphs have been highlighted. Agreement Establishing the European Bank for Reconstruction and Development. Article 13. Operating Principles.

<sup>71</sup> Agreement Establishing EBRD Article 2 paragraph (iv).

DFI	Mandate	Where could the subsidy be present?	Shareholders	Other
EIB (ACP Investment Facility)	<p>The Investment Facility shall operate in all economic sectors and support investments of private and commercially run public sector entities, including revenue generating economic and technological infrastructure critical for the private sector.</p> <p>The Facility shall:</p> <ul style="list-style-type: none"> <li>be managed as a revolving fund and aim at being financially sustainable. Its operations shall be on market-related terms and conditions and shall avoid creating distortions on local markets and displacing private sources of finance;</li> <li>support the ACP financial sector and have a catalytic effect by encouraging the mobilisation of long-term local resources.</li> </ul>	<p>The Bank shall charge, in addition to interest, a commission on loans made or participated in as part of its ordinary operations. The terms and conditions of this commission shall be determined by the Board of Directors.</p> <p>Within the scope of its Official Activities the Bank, its property, assets, income and profits shall be exempt from all present and future direct taxes including income tax, capital gains tax and corporation tax.<sup>73</sup></p> <p>Project level: The essential difference between loans from the EIB's own resources and financing from the Investment Facility is that with its own resources the Bank takes only a very low level of credit risk, mitigated by the guarantee/ security arrangements, whereas with the Investment Facility it accepts credit risks and sets pricing accordingly.</p> <ul style="list-style-type: none"> <li>• The EIB reference rate is the Bank's market-driven standard rate for lending to projects with first-class borrowers/guarantors outside the EU, and is a function of the Bank's borrowing costs in the capital markets (given the Bank's AAA rating) plus a small administrative margin.</li> <li>• A mark-up for risk will be applied to financing from the IF, as foreseen in Cotonou (Annexe II, Article 2.6), reflecting the fact that the riskiness of a loan increases as its quality declines. The mark-up will be determined by reference to (a) the economic/operational environment of the borrower or guarantor, the financial and managerial standing of the borrower/guarantor and the robustness of the project's cash flow projections together, the project risk), and (b) the structuring of the financing and the status/ranking of the security package proposed (the loan structure).</li> </ul> <p>Pricing of IF lending will be market-compatible, will encourage the mobilisation of co-financing from other sources (both public and private), and will be conducive to long-term sustainability of the IF.</p> <p>Cotonou provides for two cases where the interest</p>	<p>It is funded by the European Union's Member States' contributions and is managed under mandate by the European Investment Bank (EIB).</p> <p>As a revolving fund, income generated is reinvested in the fund.</p>	

<sup>72</sup> Agreement Establishing the European Bank for Reconstruction and Development. Article 15.

<sup>73</sup> Agreement Establishing the European Bank for Reconstruction and Development. Article 12.

<sup>74</sup> Agreement Establishing EBRD Article 36.

DFI	Mandate	Where could the subsidy be present?	Shareholders	Other
		<p>rate on loans from the Bank's own resources or the Investment Facility may be subsidised (in principle by up to 3% pa, within certain limits -Cotonou provides that the subsidised rate may not be lower than 50% of the unsubsidised rate-):</p> <ul style="list-style-type: none"> <li>• infrastructure projects in least-developed or post-conflict ACP countries, to assist with restructuring and/or to facilitate private-sector input into the sector;</li> <li>• projects (in the public or private sector) with substantial social or environmental benefits</li> </ul>		
FMO	FMO shall contribute to the advancement of productive enterprises in developing countries to the benefit of their economic and social development. <sup>75</sup>	<p>Project level: FMO shall contribute to the advancement of productive enterprises in developing countries by ...</p> <p>(1) taking equity interests; advancing loans, furnishing guarantees; providing subsidies and appropriate forms of finance for technical assistance, training, investment promotion activities and other activities which may be conducive to the advancement of productive enterprises;</p> <p>(2) with a view to safeguarding FMO's continuity, the finance which FMO provides pursuant to Article 1.1, under a) (equity interests) and b) (loans and guarantees), shall be provided on normal terms and conditions as applied in the financial sector.<sup>76</sup></p> <p>Portfolio level:<sup>77</sup> FMO attempts to ensure that low-income and lower middle-income economies account for approximately 70% of investments, approximately half (35%) of which being accounted for by low-income economies.</p>	<p>The State of The Netherlands contributed to the funding of FMO up until 2005. Today FMO is a public-private partnership with the Dutch Government holding 51 percent and major Dutch banks owning 42 percent of the shares. Private companies, trade unions and individuals hold the remaining 7 percent. Under Article 8 of the agreement, the state is legally required to enable FMO to meet its obligations on time. The State of The Netherlands' long-term commitment and support of FMO is also demonstrated by the sovereign's obligation in most circumstances to safeguard the company's solvency.<sup>78</sup></p> <p>FMO pays a moderate dividend to shareholders.<sup>79</sup></p>	<p>The operational policy is based on the following principles:</p> <ol style="list-style-type: none"> <li>catalysis: maximizing the flow of finance to FMO's target group. This requires FMO to maximize the growth in and utilization of its equity and the leverage provided by its financing activities;</li> <li>additionality: only providing financial services which the market does not provide, or does not provide on an adequate scale or on reasonable terms;</li> <li>good governance: adherence to the principles of good governance in the widest sense. FMO sets the standard in several areas of its operations, including social policy and environmental policy.</li> </ol>

<sup>75</sup> FMO-State of Netherlands Agreement November 16, 1998. Article 1.

<sup>76</sup> FMO-State of Netherlands Agreement November 16, 1998. Article 2.

<sup>77</sup> FMO-State of Netherlands Agreement November 16, 1998. Appendix.

<sup>78</sup> FMO-State of Netherlands Agreement November 16, 1998. Article 7.

<sup>79</sup> Standard and Poor's Credit Research Report on FMO. October 2006 Page 2.

<b>DFI</b>	<b>Mandate</b>	<b>Where could the subsidy be present?</b>	<b>Shareholders</b>	<b>Other</b>
IADB	The purpose of the Bank shall be to contribute to the acceleration of the process of economic and social development of the regional developing member countries, individually and collectively. <sup>80</sup> To implement its purpose, the Bank shall: (1) to encourage private investment in projects, enterprises, and activities contributing to economic development	<p>Project level: Relevant Rules and Conditions for Making or Guaranteeing Loans<sup>81</sup></p> <p>in considering a request for a loan or a guarantee, the Bank shall take into account the ability of the borrower to obtain the loan from private sources of financing on terms which, in the opinion of the Bank, are reasonable for the borrower, taking into account all pertinent factors;</p> <p>in the opinion of the Bank, the rate of interest, other charges and the schedule for repayment of principal are appropriate for the project in question;</p> <p>in guaranteeing a loan made by other investors, the Bank shall receive suitable compensation for its risk;</p> <p>On all loans, participations, or guarantees made out of or by commitment of the ordinary capital resources of the Bank, the latter shall charge a special commission. The special commission, payable periodically, shall be computed on the amount outstanding on each loan, participation, or guarantee and shall be at the rate of one per cent per annum, unless the Bank, by a three-fourths majority of the total voting power of the member countries, decides to reduce the rate of commission.<sup>82</sup></p> <p>Technical assistance:<sup>83</sup> The Bank may, at the request of any member or members, or of private firms that may obtain loans from it, provide technical advice and assistance in its field of activity. The Bank may arrange with member countries or firms receiving technical assistance, for reimbursement of the expenses of furnishing such assistance on terms which the Bank deems appropriate. The expenses of providing technical assistance not paid by the recipients shall be met from the net income of the ordinary capital resources or of the Fund.</p>	<p>Shareholders are member countries (both regional and non-regional members)</p> <p>The Board of Governors may determine periodically what part of the net profits and of the surplus of the ordinary capital resources shall be distributed. Such distributions may be made only when the reserves have reached a level which the Board of Governors considers adequate.<sup>84</sup> In the history of the IaDB, never has a distribution of dividends been approved by the BoG.</p>	

<sup>80</sup> Agreement Establishing the Inter-American Development Bank. Article I. Section 1.

<sup>81</sup> Agreement Establishing the Inter-American Development Bank. Article III. Section 7.

<sup>82</sup> Agreement Establishing the Inter-American Development Bank. Article III. Section 12.

<sup>83</sup> Agreement Establishing the Inter-American Development Bank. Article III. Sections 1 and 3.

<sup>84</sup> Agreement Establishing the Inter-American Development Bank. Article VII Section 4 (a).

<b>DFI</b>	<b>Mandate</b>	<b>Where could the subsidy be present?</b>	<b>Shareholders</b>	<b>Other</b>
IFC	<p>The Purpose of the IFC is to further economic development by encouraging the growth of productive private enterprise in member countries, particularly in the less developed areas.<sup>85</sup> In carrying out this purpose, the Corporation shall:</p> <ul style="list-style-type: none"> <li>(1) assist in financing the establishment, improvement and expansion of productive private enterprises which would contribute to the development of its member countries</li> <li>(2) seek to bring together investment opportunities, domestic and foreign private capital, and experienced management; and</li> <li>(3) seek to stimulate, and to help create conditions conducive to, the flow of private capital, domestic and foreign, into productive investment in member countries.</li> </ul>	<p>Project level: The operations of the IFC shall be conducted in accordance with the following principles<sup>86</sup> (relevant paragraphs selected):</p> <ul style="list-style-type: none"> <li>(1) the Corporation shall undertake its financing on terms and conditions which it considers appropriate, taking into account the requirements of the enterprise, the risks being undertaken by the Corporation and the terms and conditions normally obtained by private investors for similar financing;</li> <li>(2) the Corporation shall not assume responsibility for managing any enterprise in which it has invested and shall not exercise voting rights for such purpose or for any other purpose which, in its opinion, properly is within the scope of managerial control;</li> <li>(3) the Corporation shall seek to revolve its funds by selling its investments to private investors whenever it can appropriately do so on satisfactory terms;</li> </ul> <p>Technical assistance: IFC provides technical assistance and advisory services (TAAS) to address obstacles to private investment and assist private companies. In FY04, IFC established a funding mechanism for technical assistance and advisory services, funded by designations of IFC's retained earnings. About \$55 million of FY06 disbursements for technical assistance and advisory services was expensed from IFC's retained earnings.</p> <p>Performance based grants: The performance-based grants initiative (PBGI) establishes a pool of resources for funding performance-based grants to individual private-sector projects in developing markets.</p> <p>The Corporation, its property, other assets, income and its operations and transactions shall be exempt from all taxation and from all customs duties.</p>	<p>Shareholders are member countries.</p> <p>The Board of Governors may determine from time to time what part of the Corporation's net income and surplus, after making appropriate provisions for reserves, shall be distributed as dividends. Dividends shall be distributed in proportion to capital stock held by members.</p>	

<sup>85</sup> IFC. Articles of Agreement. (As amended through April 28, 1993) Art. I. Purpose.

<sup>86</sup> IFC. Articles of Agreement. (As amended through April 28, 1993) Art. III. Operations. Section 3. Operational Principles.

<b>DFI</b>	<b>Mandate</b>	<b>Where could the subsidy be present?</b>	<b>Shareholders</b>	<b>Other</b>
PROPARCO	<p>The core activity of the company is oriented towards Sustainable Development and achieving the Millennium Development Goals (MDGs).</p> <p>PROPARCO's operating principles are:</p> <ul style="list-style-type: none"> <li>To promote projects with a particular focus on sustainable development including those putting emphasis on compliance or having a significant 'social and environmental responsibility' (SER) component,</li> <li>To seek to share risks with other regional/multilateral agencies and/or local banks to harmonise approaches and benefit from experiences in order to minimise exposure on markets or sectors in which the Company currently has less experience, whilst prioritising leveraged transactions,</li> <li>To optimise the resources at the Company's disposal by selecting high-leverage transactions,</li> </ul>	<p>Project level: Overall lending policy.<sup>87</sup></p> <p>PROPARCO usually provides funding between 2 and 100 million euros.</p> <p>The project's promoters must provide a minimum capital of approximately:</p> <ul style="list-style-type: none"> <li>-30% of the cost of the project in the case of an expansion program,</li> <li>-40% of the cost of the project in the case of a new project (Greenfield).</li> </ul> <p>Portfolio level: The company seeks to invest in a geographical area encompassing the major emerging countries and the poorest countries, especially in Africa.</p> <p>Proparco is not exempted of taxes.</p>	<p>PROPARCO is a subsidiary of the Agence Française de Développement (AFD holds 67% of capital) dedicated to financing the private sector. A third of its shareholders are French and international financial institutions and private French companies (BNP Paribas holds 1.83%, Societe Generale holds 1.65%, DEG holds 1%).</p>	<p>Product specific lending policy:</p> <p>Conditions relative to medium and long-term loans:</p> <p>Financial structure:</p> <ul style="list-style-type: none"> <li>-currency: USD or euros;</li> <li>-interest rate: fixed or variable, LIBOR or EURIBOR + the margin according to the collateral risk;</li> <li>-term: three to 15 years with a possible grace period;</li> <li>-appraisal fee: 1% of the amount to be provided by PROPARCO: half due before the beginning of the service (non-refundable) and the balance due once the authorization from PROPARCO's decision-making bodies has been obtained</li> </ul> <p>Conditions relative to participation in quasi-equity funds:</p> <p>minority shareholdings destined to be deeded to other shareholders, to third parties or to the financial market after four to eight years.</p> <p>Eligibility criteria:</p> <ul style="list-style-type: none"> <li>- profitability: minimum profitability rate of approximately 15%;</li> <li>- solvency: exit on the capital markets or a put option on the shareholding.</li> </ul> <p>Financial structure: ordinary or preferential shares, convertible bonds, participatory loans, subordinated loans;</p> <ul style="list-style-type: none"> <li>- appraisal fee: 2% of the amount provided by PROPARCO: half due before the beginning of the appraisal (non-refundable), and the balance due once the authorization of PROPARCO's decision-making bodies has been obtained.</li> </ul>

<sup>87</sup> <http://www.proparco.fr/jahia/Jahia/Accueil/site/proparco/lang/en/pid/2392>



