Evaluation of the Infrastructure Development Fund

Final Report

Volume 1 - Main Report

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Study conducted by ADE

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ADE has been contracted to prepare this report by the Ministry of Foreign Affairs.

The views expressed are those of ADE, the consultant, and do not represent the official views of the Netherlands' Ministry of Foreign Affairs.

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List of acronyms and abbreviations

AEF	Access to Energy Fund
ARs	Annual Reports
CCR	Client Credit Review
CIP	Clearance in Principle
CSR	Corporate Social Responsibility
DFI	Development Finance Institution
DGIS	Directorate General for International Cooperation, Netherlands
DII	Development Impact Indicator
DP	Desk Phase
DR	Desk Report
DRIVE	Developmentally Relevant Infrastructure Vehicle
E&S	Environmental & Social
ECG	Evaluation Cooperation Group
EDF	European Development Fund
EDIS	Economic Development Impact Scores
EP	Equator Principles
EPFI	Equator Principles Financial Institution
EQ	Evaluation Question
ESAP	Environmental and Social Action Plan
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
ESM	European Stability Mechanism
ESMP	Environmental and Social Management Plan
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.
FP	Financial Proposal
FR	Final Report
FX	Foreign Exchange
GF	Government Funds
GHG	Greenhouses Gases
IBRD	International Bank for Reconstruction and Development
IDF	Infrastructure Development Fund
IFCP	IFC Performance Standards
IM	FMO Investment Management N.V.
IMF	International Monetary Fund
IMS	Infrastructure, Manufacturing & Services

IO	Investment Officer
IR	Inception Report
IRR	Internal Rate of Return
JC	Judgement Criteria
LA	Latin America
LDC	Least Developed Countries
LMIC	Low and Middle-Income Countries
LPG	Liquefied Petroleum Gas
MDB	Multi-Lateral Development Bank
MEL	Monitoring, evaluation and learning
MFA	Ministry of Foreign Affairs
OECD	Organization for Economic Co-operation and Development
PPP	Public Private Partnership
QI	Quantitative Indicator
RG	Reference Group
RR	Revolvability Rate
SDG	Sustainable Development Goals
SME	Small- and Medium-sized Enterprises
TA	Technical Assistance
ToC	Theory of change
WAPCo	West African Gas Pipeline Company

Executive summary

Evaluation's purpose and scope

This study evaluates the Infrastructure Development Fund (IDF), a Netherlands Government Fund (*"rijksfonds"*) established in 2002 and managed by the Development Bank FMO (*Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.*). FMO can be split into two components, namely FMO-A and Government funds (*rijksfondsen*) that it manages. IDF falls in the latter category. The evaluation was commissioned by the Dutch Ministry of Foreign Affairs.

The evaluation aimed at reviewing the performance of IDF in terms of investments made, outputs measured and their development impact; and at assessing IDF's business model, financial performance, governance and management.

The scope includes IDF worldwide operations from the inception of the Fund up until 2016.

Methodology

The evaluation was conducted in four phases – inception, desk, field and synthesis. Six evaluation questions (EQs) were formulated, with detailed evaluation matrixes for each of them, to guide data collection and analysis. The EQs were related to effectiveness; additionality and catalytic effects; revolvability; environmental, social and governance risk management; and the policy and efficiency of FMO in managing IDF. As part of the evaluation, a forward-looking revolvability model has been developed.

The main evaluation tools used were a detailed desk review of the activities of IDF; case studies of a sample of 15 IDF projects; field visits to eight of them; and a number of meetings with the Ministry of Foreign Affairs and FMO in The Hague, followed by written and oral exchanges. The Field Phase took place between November 2017 and January 2018 in Bangladesh, Mozambique, Nicaragua and Tanzania.

A challenge in the assessment of results was the absence of a comprehensive and stable monitoring and evaluation system on the side of FMO, including for IDF investments. ADE's methodological approach and tools aimed at overcoming this to the greatest possible extent, notably for the 15 case studies.

Main conclusions

Overall assessment

IDF was well conceived to meet a clear lack of finance for high- and higher-risk infrastructure projects, especially in low-income countries (LICs), the initial focus being on seven LICs (six

in Africa and Bangladesh). FMO was an appropriate implementing agency given its long track record as a Development Finance Institution operating in developing countries with a proven expertise in infrastructure. The focus of IDF was clearly complementary to that of FMO-A which had credit risk limitations on the countries and types of projects that it could finance.

After been established in 2002, the build-up in IDF project commitments and the portfolio was rapid, especially in Africa, reaching an annual level of commitments in 2006 of €140m before falling to much lower levels in subsequent years. As would be expected in a high-risk green field programme, there were mixed results in terms of the development performance of IDF projects and the financial performance of the portfolio. There have been significant project successes and the inevitable project failures. Some failures are to be expected given that IDF was supporting projects in LICs of which FMO-A had little or no experience as the country credit ratings were too high.

If MFA/DGIS is considering whether or not to provide further funding for IDF beyond the current mandate that terminates at the end of 2018, it may be helpful to take into account the finding of this evaluation that the performance of IDF overall has been generally satisfactory.

In terms of funding from DGIS, based on annual commitments of €60m a year, the ADE Revolvability Model shows a requirement for further funding totalling €115m over the five years 2019-2023, an average of €23m per year.

Development Effectiveness of IDF Portfolio

From IDF's launch in 2002 up until 2016, total contracted investments amounted to €752m. These operations were concentrated in Africa (59%) and Asia (28%). IDF portfolio mainly supported the energy sector (33.7% of contracted amounts), telecoms (15%) and agri-business (11.5%). IDF provided finance in the form of senior loans (35%), equity (34%), mezzanine (quasi-equity) 28% and grants (3%). The financial instruments used for IDF operations were senior loans (35%), equity (34%), and mezzanine financing (28%) of the IDF portfolio, while grants accounted for the remaining 3%. Specific conclusions were as follows:

- Establishing infrastructure projects that meet their development potential proved challenging. There were also limitations on the way in which development outcomes were articulated in financial proposals and subsequently tracked in FMO's systems. It should be noted that while significant cost overruns and implementation delays do not necessarily threaten the viability and development effectiveness of projects, in many instances they are linked with poor outcomes.
- The effectiveness (i.e. delivery of outputs) of the overall selected portfolio was generally satisfactory, with about 70% of the sample (10 projects) performing satisfactorily. Nevertheless, only about one-half of the sample performed satisfactorily in terms of providing outputs on time and within budget while the other half under performed.
- IDF has benefitted from FMO's long track record and expertise in developing countries. It is clear that successful IDF projects have strong, committed sponsors with the requisite

technical skills and experience, as well as sufficient financial resources to cover cost overruns. Moreover, projects undertaken jointly with FMO-A have generally performed better than stand-alone IDF projects.
- Measurement of results and of the development impact of IDF is an issue, notably because i) there were major changes in FMO's monitoring, evaluation and learning framework applicable to IDF projects, making it difficult to compare development outcomes in a consistent manner; ii) in finance proposals development outcomes and impacts are not well articulated; and iii) FMO does not use a comprehensive development evaluation system that allows tracking of the performance of the entire IDF portfolio based on key performance indicators.

IDF Additionality

Additionality, as defined by the catalytic effect of IDF financing (IDF taking on more risk than an FMO-A investment and IDF conditionality not being able to be matched by private sector sources), was generally satisfactory, especially in low-income countries. However, recent approvals indicate a higher focus on investments in higher-income countries, which might create challenges to maintaining this positive level of additionality.

- In large infrastructure projects, for which IDF has provided relatively small proportions of the total financing, it can be difficult to identify and assess additionality.
- IDF's additionality is generally highest in low-income countries. In the period 2012-2016 more IDF projects were approved in higher-income countries than in LICs as compared to the period 2003-2011, and if this trend were to continue, additionality of IDF investments could decrease.
- As a rule, IDF's additionality is higher in sectors in which there is a shortage of commercial and development finance.
- More than a quarter of IDF investments are allocated through regional or globally-oriented intermediaries or funds. However, no data are readily available within FMO on the countries in which these intermediaries have funded projects, and consequently the development dimension of additionality cannot be adequately assessed.
- IDF's additionality was highest whenever it invested alongside FMO-A, providing equity or quasi-equity while FMO-A extended a senior loan.
- IDF has adequately invested in risky financing instruments, such as equity, mezzanine financing, and provision of grants that enhance IDF's additionality.
- Local-currency-denominated loans to projects that have local currency revenues have clearly enhanced IDF's additionality. However, IDF could have provided even more such financing.

Environmental, Social and Governance

FMO has a strong commitment to, and expertise in, ensuring that project it supports meet high environmental, social and governance (ESG) standards. It can be observed in IDF projects and is a major contribution to them which is valued by clients.

- IDF has accepted higher ESG risks than the FMO-A.
- Minimising of adverse environmental effects or site reinstatement in IDF projects have

been addressed satisfactorily.
- FMO's due diligence management of ESG risks was, on the whole, to a high standard despite some ESG problems noted during implementation including tardy reporting.
- There is limited identification of ESG lessons learned and there is little evidence of such lessons being systematically collated, disseminated or applied in subsequent projects.

Revolvability and Financial Sustainability

The financial performance and viability of IDF has fluctuated owing to high portfolio losses. These were in large part only recognised from 2012 onwards. Viability remains a challenge.

- The most important driver of IDF performance has been the high level of losses and impairments in the portfolio, especially in equity investments. Loans have been able to deliver a notional internal rate of return (IRR) of 5.2% compared with a negative IRR for equity of -6.6%.
- Revolvability has fluctuated considerably since IDF was established. The ratio reached a low of 78% in 2014 before recovering in 2016 to 95%, indicating that net assets are still 5% below the level that DGIS invested in IDF.
- The financial sustainability of the 15 projects reviewed was mixed, IDF having done best in those infrastructure sectors in which it has most experience, especially in energy.

Efficiency and FMO Management of IDF

FMO generally has good financial and portfolio management systems, but financial proposals and legal agreements put insufficient focus on development outcomes and effectiveness; and reporting on IDF is limited.

- FMO's management of IDF has generally been satisfactory and efficient, although the due diligence on a number of projects was below normal standards and monitoring was not always thorough.
- Historically the management fee paid to FMO has been low in comparison with what other comparable public and private funds pay. It is, though, being raised at the time that this evaluation was concluded in mid-2018
- IDF's reporting provides insufficient information on its overall performance and financial condition, especially when compared with what FMO provides to pension funds whose assets it manages.

Coherence with Dutch Development Policy and Involvement of Dutch Companies in IDF Projects

It was only in 2013 that IDF was requested to bring Dutch companies into its projects wherever possible. Although IDF's activities are consistent with Netherlands development policy objectives generally and infrastructure in particular, there have been IDF projects which made it difficult to compare development outcomes with other Dutch Government infrastructure programmes in a consistent manner.

Main recommendations

General

- IDF 2 should be able to support directly (and not just through funds) projects in the sectors that IDF 1 has supported, provided that there are very strong developmental reasons for doing so.
- Consideration should be given to the reestablishment of a small general infrastructure department or unit within FMO that would maintain its expertise in non-energy project finance.

Operational

Enhancing development effectiveness

The recommendations are focused on improving (i) the articulation of development outcomes when projects are being structured, and (ii) their post-investment monitoring and evaluation, *viz.*:

- Greater attention and effort should be directed to the methodology and systematic implementation of the IDF monitoring framework. For all IDF projects a logical framework or theory of change should be prepared as part of the financing proposal. Loan and investment agreements should also include reporting requirements to the effect that clients should report on developmental outcomes specified in log-frames or theories of change, including sector-specific indicators.
- A larger proportion of projects should be subject to *ex post* evaluation, although not necessarily following the pattern of an impact evaluation. Project monitoring frameworks should be established to inform and facilitate such evaluations and contribute to 'real time' project implementation; this implies better progress reporting and a comprehensive self-evaluation system as is used by the MDBs.
- There should be institutionalisation and application of lessons learned, especially when new projects are being assessed. The 'learning' component of the monitoring, evaluation and learning (MEL) framework should be a priority.

Maximising Additionality

- The MFA and FMO should review the policy of allocating IDF funding to private sector development interventions whereby the investments do not merely tick the necessary boxes concerning country income classification, region and sector, but rather focus on maximising the development value of IDF projects.
- The principle that IDF financing should not be provided in cases where adequate financing sources are available should be strictly followed. IDF should be a financier of last resort to maximise the role that it plays.
- By focusing even more on providing subordinated loans and other quasi-equity products that have a high likelihood of being catalytic, IDF's additionality could be further enhanced.

- Providing more loans in the form of local currency financing is essential.[1]
- Unless there is a strong developmental rationale, IDF financing should be avoided in those cases where IDF financing is one of few financing sources and where there are no prospects of being truly catalytic through attracting financing from other development and commercial sources.
- The trend towards IDF investments in non-LICs that was evident during the 2012-2016 period should be reversed with a renewed focus on LICs.

Strengthening Revolvability and Financial Sustainability

- To reduce investment losses to acceptable levels in IDF there should be more focus during due diligence on identifying and mitigating risk. Start-ups in the agri-business sector, for example, should only be financed in exceptional circumstances.
- FMO should ensure that promoters of IDF projects have significant financial commitments to projects ('skin-in-the-game') and that the risk-to-return ratio for IDF is appropriate.
- Where possible FMO-A and IDF should co-invest (ideally with IDF in subordinated loans and FMO in senior loans).[2]
- The IDF 1 portfolio should be liquidated more rapidly than is currently envisaged by FMO, especially direct equity stakes, so that more funding is available to IDF 2. The principle should be that IDF stays in a project only as long as necessary. More rapid recycling of the IDF 1 and IDF 2 portfolios should be the goal.
- The assumptions underpinning the ADE revolvability model need to be assessed by both FMO and MFA/DGIS for reasonableness and the necessary adjustments made. The revolvability model should be updated regularly, at least on an annual basis to retain its usefulness.

Environmental, Social and Governance Risk in Projects

- For reputational purposes, in IDF projects an independent consultant should be appointed to report to IDF/FMO on compliance with ESG requirements (e.g. Environmental and Social Management Plan) and other contractual obligations of the client (and peer review of ESG studies, e.g. Environmental and Social Impact Assessments).
- A system is required to capture and organise ESG experiences gained from IDF projects at project and strategic levels so that lessons learned can easily be taken into account in new projects.

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1 According to FMO: "*this recommendation though appreciated may be a bit too simplified. It does not sufficiently consider the fact that there needs to be a demand and that the pricing for LCY is higher. Therefore, LCY financing might not always be possible*". ADE consider however that this recommendation is appropriate since the underlying findings are based on the assumption that there is sufficient demand and that LCY financing would be appropriate.

2 According to FMO: "*when FMO-A and IDF are compared, it is not sufficiently recognised that by nature IDF investments have a higher risk profile than FMO-A investments and that performance of IDF portfolio is therefore more likely to be more fluctuating with more NPL's. There is also insufficient recognition for the fact that IDF is a (relatively) small fund with limited investment budget per year and that therefore, there is limited diversification in types of investments which could de-risk the investments at a portfolio-level; FMO-A portfolio is large and very much diversified*". ADE consider that the recommendation is relevant since the evaluators have noted that the risk appetite for IDF is higher than for FMO-A and is one of its key features.

- Reporting on Greenhouses Gases emissions (including Greenhouses Gases reduction) should be mandatory for all IDF projects.
- IDF should prepare time-bound plans showing how IDF programmes comply with Dutch development policies and demonstrate the degree of compliance in annual reports (together with proposed enhancement action if necessary).

Improving the Management of IDF

- The proposed €8m per year management fee for IDF 2, which was recently agreed by MFA, is an opportunity for *inter alia* better due diligence, project monitoring, and fund reporting to be undertaken. Specifically, it is recommended that additional dedicated staff for IDF should be recruited or assigned by FMO. As a minimum, IDF should have a full-time fund manager and portfolio officer or analyst who work exclusively on IDF 2.
- IDF's reporting to MFA, and through the IDF website, should provide more detailed information on its overall performance and financial condition. While the reporting requirements for what FMO has to provide to pension funds whose assets it manages are probably excessive for IDF, they nevertheless provide a useful model. Reporting on portfolio performance in particular should be expanded so that trends can be identified from the start of the IDF mandate.

1. Introduction

This (draft) Final Report (FR) concludes the evaluation of the Infrastructure Development Fund (IDF), a Netherlands Government Fund (*"rijksfonds"*) established in 2002 and managed by the Development Bank FMO (*Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.*). FMO can be split into two components, namely FMO-A and Government funds (*rijksfondsen*) that it manages. IDF falls in the latter category of "*rijksfondsen*". The main aims of IDF are as follows:

- Increase / improve availability of infrastructure in developing countries
- Catalyse private sector investments in infrastructure in developing countries;
- Enhance employment;
- Be a revolving[3] and self-sustaining fund, so as to support new infrastructure projects or expansions to existing projects;
- Where possible, involve Dutch companies in financing or construction of IDF projects (added in 2013).

1.1 Scope of the Evaluation

This evaluation covers the period 2002 – 2016. The evaluation has two key components. First, it reviews the performance of the Fund in terms of investments made, outputs measured and their development impact. The findings and analysis are in large part based on the detailed findings from 15 case studies, in particular for the evaluation questions on relevance, effectiveness and environmental and social compliance. It is important to note that information on projects approved in the early years of IDF mandate was in a number of instances incomplete, due to changes in the management information systems that have occurred within FMO.

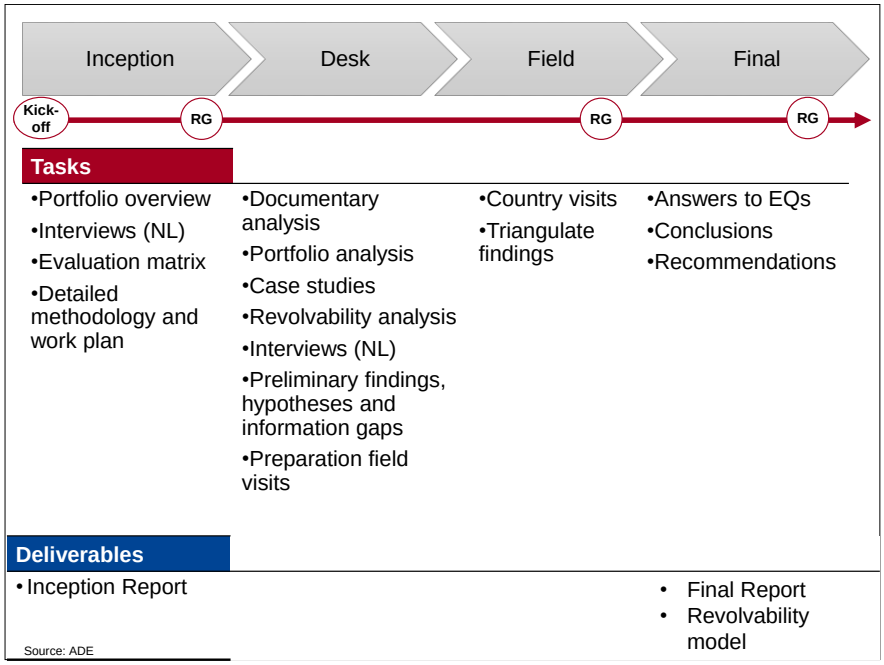
Second, the evaluation assesses IDF's business model, financial performance, governance and management. In particular, the FR looks at IDF's financial sustainability, or revolvability. This part of the evaluation mainly focuses on IDF portfolio and builds on the mid-term review done in 2012 which included a revolvability model. The ADE Team has substantially reviewed and developed further this model for a possible extension of the mandate as IDF 2 in 2019.

1.2 Evaluation process

The evaluation process followed the four phases as described in the ToR and as per the figure below, which also sets out the main activities, deliverables, and Reference Group (RG) meetings. The FR and the Revolvability Model developed for IDF 2 are the last deliverables of the evaluation. The evaluation methodology is discussed in section 2.3.

[3] The TOR define "revolving" as being when IDF can operate independently (no extra funds from the MFA) through the recycling of its portfolio, while maintaining an annual investment level of €50 million indefinitely.

Figure1 Evaluation process



1.3 Structure of Final Report

This report is in three volumes: the main report (Volume 1) and the annexes (Volumes 2 and 3).

The evaluation's main report (Volume 1) is organised around 5 chapters:

- Chapter 1 summarises the evaluation scope and process;
- Chapter 2 presents the Theory of Change and operational context for IDF, and the evaluation methodology that was followed;
- Chapter 3 presents the evaluation findings around the 6 evaluation questions (EQs);
- Chapter 4 provides the conclusions;
- Chapter 5 sets out practical, action oriented recommendations to improve and enhance the effectiveness and efficiency of IDF with a focus on IDF 2 should it be launched in 2019.

Volume 2 contains the 15 case studies examined through desk and field work.

Volume 3 provides the following five annexes:

- Annex 1: Terms of Reference
- Annex 2: List of IDF operations
- Annex 3: Overview of IDF project processing system
- Annex 4: List of people met
- Annex 5: Bibliography

2. Theory of Change and Methodology

2.1 Evolution of IDF

Before the theory of change can be discussed it is necessary to understand the evolution of IDF which is summarised in the following figure.

In 2002, the Minister for Development Cooperation in MFA established a new Fund providing untied development assistance: the Least Developed Countries (LDC) Infrastructure Fund[4], to be managed by FMO. The subsidy decision signed by the Netherlands Government in February 2002 amounted to a maximum of €182m for a four-year period (between November 1, 2001 and December 31, 2005[5]).

Initially, the Fund focused on the following six sectors[6]: (i) energy production and distribution; (ii) telecommunications; (iii) water provision and distribution; (iv) fixed and movable infrastructure; (v) environmental infrastructure; and (vi) social infrastructure. Moreover, IDF was to focus on just seven partner countries for Dutch development cooperation where FMO already had a long experience: Bangladesh, Mali, Burkina Faso, Mozambique, Tanzania, Uganda and Zambia[7].

Since its establishment, several amendments have been made to IDF (see Figure 2 below). Key changes relate to the following aspects:

- **Implementation period**: the subsidy was renewed twice: in 2006 to cover the period until end 2013, and in 2013 to cover the period until end 2018.
- **Increase in subsidy amounts**: the subsidy was first increased in 2010 from up to €182m to up to €252m (*Beschikking* 2010) and further raised in 2013 to €362m *(Beschikking* 2013), of which €100 million was to be used for the purpose of making the Fund self-sustaining from 2018 onwards.
- **Eligibility criteria**: the selection criteria for eligibility for financing were broadened in 2005 in order to provide greater flexibility and broaden the scope of opportunities: i) the maximum share of LDC Infrastructure Fund financing to an individual project was raised to 50% of the project value, and ii) the maximum transaction limit was raised to 10% of the total fund value.
- **Sectors targeted**: they have progressively been extended to social infrastructure and then agri-business and energy (particularly renewable energy). A diversification of the Fund with more emphasis on social infrastructure (namely healthcare, education and water) occurred especially during the period 2005-2008[8]. It reflected a request of the ministry to enhance the contribution of the fund to the Millennium Development Goals.

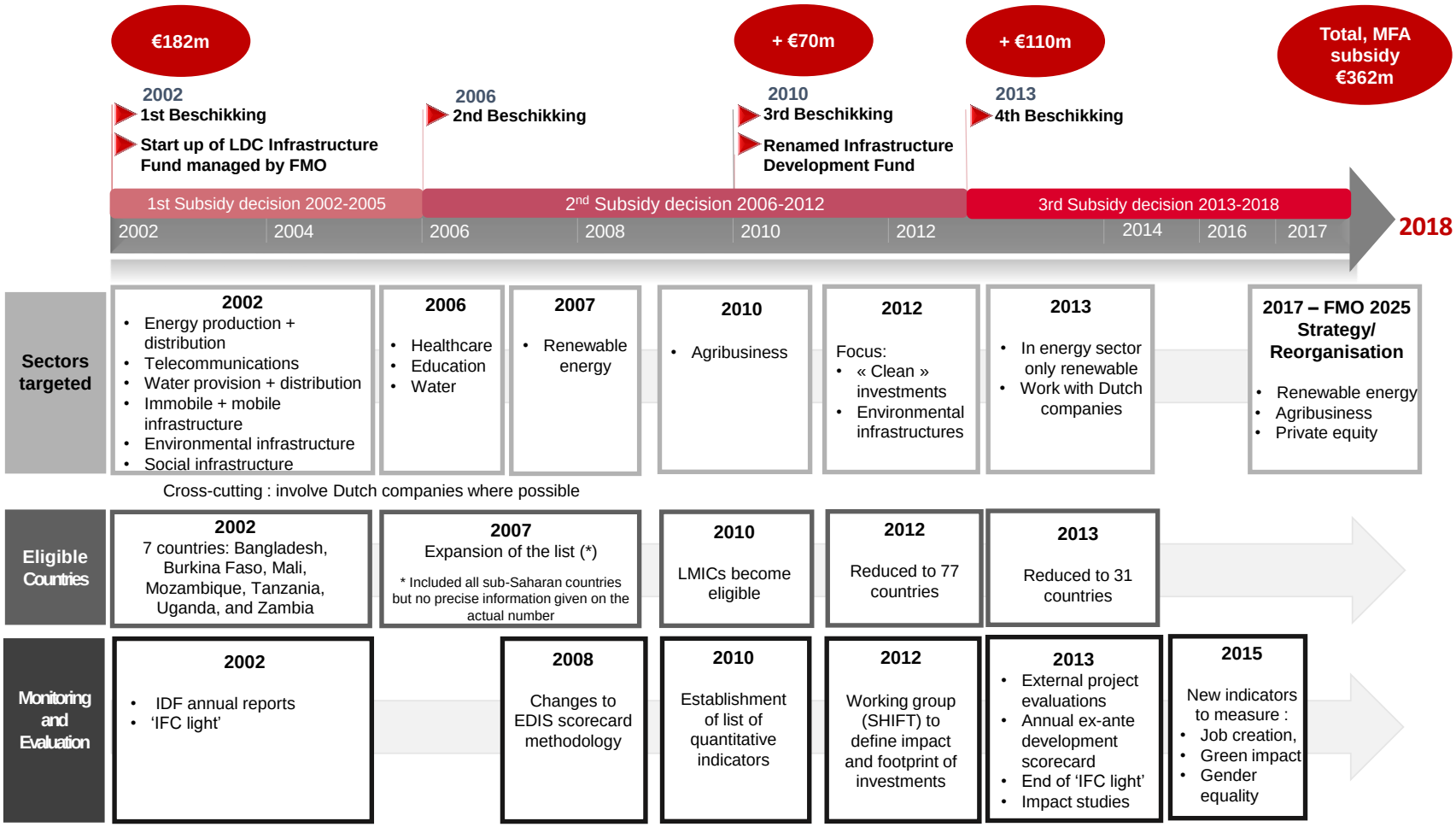
4 Later renamed as Infrastructure Development Fund (IDF)
5 *Beschikking* 2002
6 *Beschikking* 2002.
7 *Beschikking* 2002.
8 IDF Annual reports during the evaluation period.

Renewable energy was introduced as a new sub-sector in 2007[9]. The 2009 Activity Plan proposed to concentrate IDF on three specific sectors: financial, housing and energy. The 2010 subsidy decision introduces agrarian infrastructure as a new sector. In 2013, the Minister decided that all new investments in the energy sector should be in renewable energy[10].

- **Countries covered**: the list of eligible countries was broadened in 2007 before being reduced as of 2010. In 2008, a single country list for all FMO-managed funds was established[11]: it expanded the list of eligible countries for IDF[12]. This list included all sub-Saharan African countries (except South Africa)[13]. Emphasis was put on post-conflict/fragile countries[14]. The 2010 subsidy decision amended the list of beneficiary countries to be applied as of 2012 in reducing it from 146 to 77 countries. Also in 2012, IDF's mandate was amended to no longer be exclusively focused on investments in the LDCs: new low and middle-income countries (LMICs) became eligible[15]. A new list to be applied during the period 2013-2016 was then approved in 2011: it narrowed down eligible countries to 31[16].
- **Connection with Dutch companies**: since 2004 onwards, FMO has been expected to actively search for partnering up with Dutch companies in the financing or construction of IDF projects[17]. In 2013, MFA announced its intention to bring in Dutch companies into IDF investments[18] where possible. FMO established a new department in January 2015 focused on fund management and new project development with Dutch Business in order to promote Dutch investments[19].

9 IDF Activity Plan 2008.
10 ToR.
11 IDF Activity Plan, 2009
12 No precise information on the actual number in the official documents
13 IDF Activity Plan, 2008
14 IDF Activity Plans, 2007 and 2008
15 IDF Annual Report, 2011
16 The latest list of 68 eligible countries was issued by MFA on 19 February 2016. Nr. 205 Brief Van De Minister Voor Buitenlandse Handel En Ontwikkelingssamenwerking , Aan de Voorzitter van de Tweede Kamer der Staten-Generaal Den Haag, 19 februari 2016
17 IDF Annual Report, 2004 and 2005 and IDF Activity Plan, 2017
18 FMO *Beschikking,* 2013
19 IDF Annual Report, 2015

Figure 1 – IDF Timeline



Source: ADE based on IDF *Beschikkings*, Annual Reports from 2002 to 2016 and FMO 2025 Strategy.

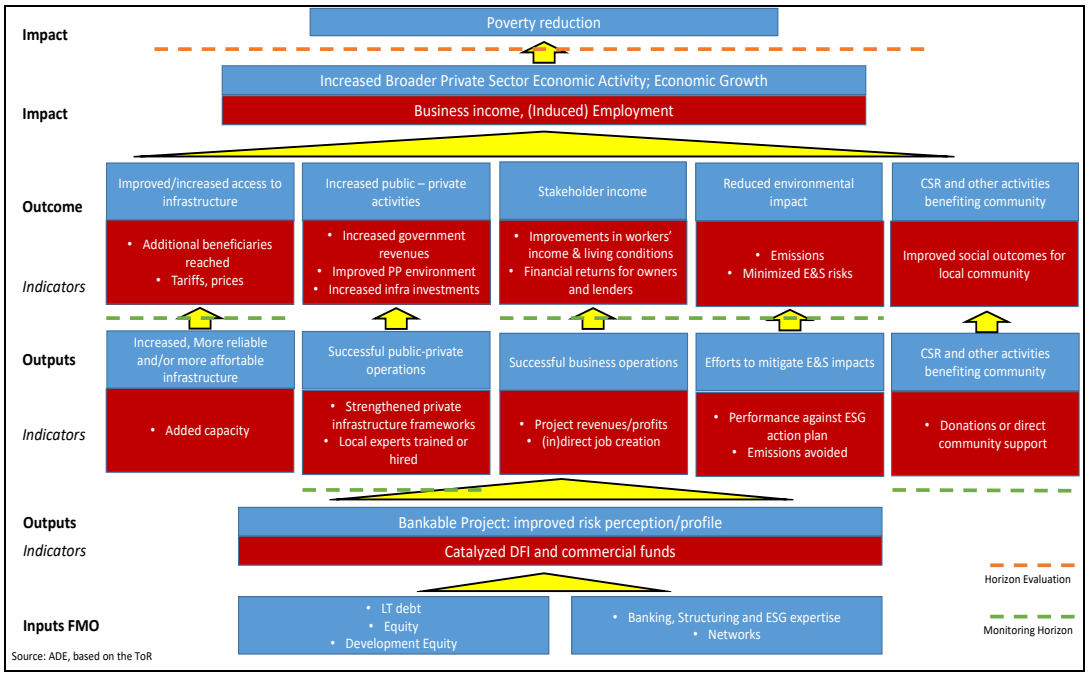
2.2 Theory of change

The methodological framework for the evaluation uses a theory-based approach. This approach involves a theory of change (ToC) that illustrates in a diagrammatic form the development logic of IDF. As set out in the figure below[20], the theory of change of IDF is described through a results chain starting at the bottom with inputs, passing through outputs/outcomes to impacts at the top that are the development goals and objectives for IDF operations. This ToC diagram provided a reference against which IDF has been evaluated for the period 2002-2016. It should however be mentioned that the indicators mentioned in the ToC have not been used by FMO for the monitoring and reporting of IDF operations. Furthermore, pproject documents (e.g. financial proposals, client credit reviews, etc.) of the selected projects did not provide a baseline for these indicators. To provide consistency in addressing the EQs, and in particular in assessing the sample of 15 projects, a rating scale which is widely used in evaluations was adopted (cf. section 2.3).

Looking forward, FMO's 2025 Strategy related to IDF includes agribusiness as one of the fund's key sectors. Also, the infrastructure priority of FMO is now renewable energy. IDF's strategic focus has therefore changed considerably from when it was started in 2002. Up until 2013 it could invest across the infrastructure spectrum. Thereafter MFA/DGIS insisted, inter alia, that in the Energy sector only renewable energy could be financed. Consequently, and following the FMO 2025 Strategy adopted in mid 2017, the focus of IDF is now narrower. It is primarily on renewable energy and agribusiness.

[20] Given the limited information available in subsidy decisions, it was not possible to reconstruct ex-post a ToC. We have therefore used the diagram provided in the ToR of the evaluation.

Figure 2 – 2018 Theory of Change



2.3 Evaluation methodology[21]

The evaluation is based on a theory-based approach (as per above) and a non-experimental design, as per the Terms of Reference (ToR) and the methodology and approach set out in ADE's Inception Report. The Figure 1 above sets out the sequence of phases and main activities in the evaluation. The main evaluation tools used are a detailed desk review of the activities of IDF, case studies of a sample of 15 IDF projects, field visits to eight of them, and a number of meetings with the Ministry of Foreign Affairs and FMO in The Hague, followed-up by written and oral exchanges. The Field Phase took place between November 2017 and January 2018 in Bangladesh, Mozambique, Nicaragua and Tanzania. A visit to one project in Mozambique could not be arranged with the promoter.

This report has been prepared with information at our disposal, i.e. data from IDF portfolio 2002-2016, documents provided for the 15 projects selected (in a few cases, the information was limited) and data extracted by ADE from Annual and Quarterly Reports

[21] According to FMO: "*it is insufficiently clear if the methodology has been used consistently by ADE. No scoring is made on the proposed indicators (definitions are also missing) of the Theory of Change. Therefore, it seems that indicators are randomly selected per case study. However, the ToC and indicators were approved by MFA and FMO for IDF. Judgement and scoring of projects is at occasions quite arbitrary; analysis at project level is recommended for more detailed info on the relevant indicators and data availability*". ADE does not agree with FMO's comment. The evaluation methodology that has been used by ADE and the ToC was discussed at length with the Reference Group and it was approved. Monitoring and evaluation indicators used by FMO during the evaluation period have changed several times and there was no consistency in the evaluation system use by FMO. For that reason the ADE Team had to develop a comprehensive evaluation system for this evaluation which was appreciated by the Reference Group.

A challenge in assessing results so far was the absence of a comprehensive and stable monitoring and evaluation system on the side of FMO, including for IDF investments. ADE's methodological approach and tools aimed at overcoming it to the extent possible, notably for the 15 case studies and in particular those eight of them for which field visits could be conducted. ADE also developed their own evaluation performance system (see below).

2.4 Evaluation Matrix and Evaluation Questions

Set out below are the six evaluation questions for each of which judgement criteria and indicator are specified, together with the expected sources of information.

The table below provides a summary of the six evaluation questions (EQs) covered by this evaluation. In section 4.2 below are set out the six EQs with detailed evaluation matrixes for each of them. The remaining sections in this chapter detail the proposed methodology which has been formulated to address and answer the EQs.

Table 1 – Evaluation questions

EQ1 – Results (outputs and outcomes)	How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?
EQ 2 - Additionality and catalytic effects	Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties and FMO-A (private and development finance) been respected?
EQ 3 - Revolvability	Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?
EQ4 – ESG Risk Management	What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)?
EQ 5 – Policy	To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?
EQ 6 – Efficiency	Has FMO efficiently and appropriately managed the Fund?

To provide consistency in addressing the EQs, and in particular in assessing the sample of 15 projects, the following rating scale which is widely used in evaluations was adopted.

Table 2 – Rating Scale for evaluation scores

Rating	Explanation
4	Highly satisfactory: Evaluation criteria have been exceeded and there are no shortcomings with them
3	Satisfactory: Evaluation criteria have been substantially met with only minor shortcomings with them.
2	Partly Satisfactory: Evaluation criteria have been partially met but there are significant shortcomings with them.
1	Unsatisfactory: Evaluation criteria have not been met.

Source: ADE

It should be noted that while as far as possible quantitative data is used to make ratings, evaluator judgements were often required. In particular, assessing whether shortcomings are 'minor' (satisfactory) or 'significant' (partly satisfactory) is particularly difficult.

2.5 Selection of projects for case studies and field visits

In making the actual selection ADE has used a combination of quasi random selection[22] and judgement to arrive at the proposed sample which is presented below.

Table 3 – Selection of IDF projects for the Desk Phase

						Financial Instrument						
	Year 1	Customer	Region	Country	SECTOR	EQ	ME	CL	GR	Total	Amount €	Field visit
1	2012	PAN AFRICAN HOUSING	AFRICA	AFRICA	Housing	1				1	5,7	
2	2009	ROBI AXIATA (BANGLADESH) LIMI	ASIA	BANGLADESH	Telecom			1		1	19,3	Visited
3	2008	DUTCH-BANGLA BANK LT	ASIA	BANGLADESH	Financial			1		1	10,0	Visited
4	2014	OMERA PETROLEUM LIMI	ASIA	BANGLADESH	Energy	1		1		2	12,1	Visited
5	2005	Bengaz	AFRICA	BENIN	Oil & Gas		1	1	1	3	29,4	
6	2006	Digicel, Unigestion	LATIN AMERICA & THE CARIBBEAN	HAITI	Telecom			1		1	20,5	
7	2006	GUARANTCO LTD.	AFRICA	MAURITIUS	Financial	1				1	25,6	
8	2006	Grown Energy Project	AFRICA	MOZAMBIQUE	Energy				1	1	1,2	
9	2004	Moma Titanium Minerals Project	AFRICA	MOZAMBIQUE	Mining	1	1	1		3	22,1	Visited
10	2014	ESSEL-CLEAN SOLU HYD	ASIA	NEPAL	Energy		1			1	10,3	
11	2012	EOLO DE NICARAGUA S.	LATIN AMERICA & THE CARIBBEAN	NICARAGUA	Energy		1			1	9,1	Visited
12	2011	KIVU WATT LIMITED	AFRICA	RWANDA	Energy			1		1	13,9	
13	2004	MTWARA GAS TO POWER PROJECT	AFRICA	TANZANIA	Energy	1			1	2	22,6	Visited
14	2003	Songas	AFRICA	TANZANIA	Energy	1				1	13,5	Visited
15	2015	ZANZIBAR SUGAR FACTO	AFRICA	TANZANIA	Agribusiness			1		1	10,5	Visited
						6	**4**	**8**	**3**	**21**	**225,6**	**8**

EQ: Equity; ME: Mezzanine; CL: Commercial loan; GR: Grant

Source: ADE

The sample, chosen in agreement with the RG, was judged to be reasonably representative of the portfolio taking account of the sector, geographical and financial instrument characteristics of IDF portfolio. It represented 16% by number of the 95

[22] The sample selection of projects was not completely random neither was it based on a complete judgment sampling approach. Indeed, several criteria (e.g. geography, sectors, and success of projects) have been used for representative sampling of the portfolio. At project level, however, characteristics between different projects become very similar to the extent that either one can be selected. The reference group was involved in the final approval of the sampling process.

projects in the portfolio and 30% by value. Moreover, there was a mix of projects deemed successful and unsuccessful[23].
The following table provides a brief description of the 15 projects selected.

Table 4 – Brief project description

# Project	Brief description
Bengaz (Benin)	• Shareholder of WAPCo, the company building and managing the West African Gas Pipeline (an offshore fuel gas pipeline transporting gas from Nigeria to Benin, Togo and Ghana). • IDF contribution: USD 31.2M senior loan to purchase a 2% equity stake in WAPCo. • Achievements: construction of the pipeline (3 years of delay – USD 1bn actual cost vs USD 560M planned cost). Very low pipeline utilization.
Digicel (Haiti)	• Expansion of Unigestion Holding S.A. in Haiti. no 1 mobile operator • IDF contribution: USD 12M senior loan for the expansion. • Achievements: improved telecom infrastructure and services, prices drop.
Dutch Banglabank (Bangladesh)	• Medium-sized bank (no 8 in market) financing SME, high growth manufacturing industries and individual. IDF was founding shareholder and has provided several lines of credit • IDF contribution: USD 10M loan for water treatments plants, hospitals and schools. • Achievements: unclear (no information on the actual use of IDF funds).
Eolo de Nicaragua (Nicaragua)	• A wind farm generating renewable energy in Nicaragua. • IDF contribution: USD 12M subordinated loan for the construction. • Achievements: construction of a 44MW capacity wind farm which is operational.
Essel Clean Solu (Nepal)	• A run-of-river hydropower plant in the Solu River. • IDF contribution: USD 12.5M subordinated debt for the construction. • Achievements: 82MW power plant construction on-going. Scheduled to be completed by December 2019.
Grown Energy (Mozambique)	• Bio-fuel development company planning to build bio-ethanol plant and feed stock plantation in the Zambezi Valley. • IDF contribution: USD 1.2 M grant for feasibility, ESIA studies and project development • Achievements: the project never entered the operational phase of expected activities.

[23] In addition, the proportion of sample projects in LIC countries is 62%, which is similar to the 63% of the overall IDF portfolio over the period 2003-2011 (cf. EQ 2). FMO notes nevertheless that the sample is focused on LICs. Therefore, according to FMO, there is a selection bias which can affect the results, especially in terms of effectiveness and relevance of the selected cases. LICs are riskier thus performance is most likely lower than in MICs. ADE does not accept that there has been a selection bias. In the earlier years of IDF there was a greater focus on LICs. Moreover, the sample was approved by the RG.

# Project	Brief description
Guarantco (Regional)	• A multilateral financial intermediary sponsored by Austria, Ireland, Netherlands, Sweden, Switzerland, UK and World Bank. • Provide local currency guarantees to companies and infrastructure projects. • IDF contribution: USD 34M equity • Achievements: AA-rating, expected to result in higher deal flow.
Kenmare (Mozambique)	• Titanium oxide mine - 10% of global production. • IDF contribution: USD 20.9 M loan + USD 0.3M grant • Achievement: the mine is working (delays and major cost overruns during implantation).
Kivu Watt (Rwanda)	• Construction of a methane gas extraction facility from floor of Lake Kivu and 25MW independent power plant, to generate electricity. • IDF contribution: USD 13.9M loan • Achievements: the plant is operational (delays and cost overruns during implantation).and planning expansion
Mtwara (Tanzania)	• Gas extraction from southern coast of Tanzania to power 18MW station. • IDF contribution: USD 28.1M equity • Achievements: power plant and pipeline operational, but not the T&D component.
Omera Petroleum (Bangladesh)	• Construct & operate 4 LPG bottling plants and 3 satellite stations (to store, bottle & distribute). • IDF contribution: EUR 4.5M equity + EUR 8.6M senior loan • Achievements: infrastructure delivered, expansion underway
Pan African Housing (Regional)	• A sector-specific fund focusing on the housing sector in Africa. • IDF contribution: USD 7.5M in equity participation • Achievements: since its inception, PAHF financed six housing developments.
Robi Axiata (Bangladesh)	• Second largest mobile network operator of Bangladesh. • IDF contribution: USD 18M loan, for investments in technologically advanced equipment. • Achievements: improved quality of the network.
Songas (Tanzania)	• 180MW IPP in Dar es Salaam using gas extracted offshore 225km to the south • IDF contribution: USD 17M loan • Achievements: gas processing plant, pipeline and power plant performing well.
Zanzibar Sugar (Tanzania)	• Rehabilitation and modernization of the sugar plantation and mill refinery factory, including outgrowers. • IDF contribution: USD 11.5M loan • Achievements: factory modernized but underutilized (limited sugarcane production).

Source: ADE

3. Findings per Evaluation Question

3.1 EQ 1 – Results (outputs and outcomes)

How relevant and effective have IDF-funded activities and their (expected) results been to the Results Chain of the Fund?

This EQ addresses effectiveness, i.e. "the extent to which interventions' objectives were achieved, or are expected to be achieved, taking into account their relative importance" (OECD/DAC definition). The focus is on development outcomes. Starting with a portfolio analysis which provides a picture of the evolution of the IDF portfolio, the EQ examines (i) whether the projects have delivered expected outputs as planned, (ii) whether the projects have delivered (or are likely to deliver) expected outcomes, (iii) the contribution of IDF-financed projects to green and inclusive development, and (iv) results in terms of private sector development (impact level in the ToC). Finally, the EQ examines the monitoring and reporting frameworks and the extent to which portfolio progress and results are consistently identified and analysed to provide feedback for continuing portfolio management.

The structure of the EQ is articulated around the three steps of the results chain (output, outcomes, impacts[24]). Six judgment criteria were used to assess overall effectiveness, the first being related to the entire IDF portfolio and the remainder around the sample of 15 selected projects (cf. Table 4) that was chosen in consultation with the RG as being broadly representative of the whole portfolio. About private sector development, the EQ focuses on employment, in particular on long-term employment opportunities beyond the project itself. Job creation is indeed typically limited for infrastructure projects during their implementation and, depending on the sector, also during operationalisation. Employment aspects (from direct to indirect and induced employment) are examined under the same JC 1.5 relating to private sector development.

EQ1 – Summary Response[25]

The overall portfolio analysis has revealed that i) IDF operations have remained concentrated respectively in energy and Africa over the years, with equity and senior

[24] It should be noted that in most projects insufficient time has passed to identify impacts that are long-term in nature.

[25] According to FMO: "*cases are judged on issues on which FMO and MFA did not make any agreement on (i.e. not part of administrative decision) and thus were not an element to evaluate 'good performance'. Example: focus on LICs, focus on most vulnerable, MEL framework, project delays and cost overruns. ADE makes recommendations on these elements but cannot use them to score performance. Effects (output, outcome, impact) are still achieved despite delays and cost overruns*". However, ADE's evaluation was conducted in accordance with the ToR and its methodology that was set out in its Inception Report which was approved by the RG.

loans being the financial instruments mostly used; ii) about 25% of IDF projects (by number) have been co-financed by FMO-A and other facilities managed by FMO, most of them energy projects; and iii) on average, the IDF contribution amounted to 12% of the overall project cost.

On effectiveness, the in-depth analysis of 15 selected projects conducted through documentary review, interviews (desk and field) and field observations has highlighted that:

- In 71% of cases (10 of the 14 operational projects), IDF-funded projects have been successful in achieving their expected outputs. The proportion falls to 50% when considering the achievement of outputs in time and within budget. Indeed, although efficiency strictly refers to delivering outputs, delays and cost overruns (and the overall financial sustainability of the projects) should also be considered when assessing development effectiveness. Most of the successful projects are telecoms and energy projects. The least successful have been agri-business projects in Africa, due notably to land acquisition issues and to production being too limited for the project to attain viability. However, several unsuccessful projects are also in the energy sector.
- About half of the projects, mostly in telecoms and energy, have delivered expected development outcomes which consisted mainly in improving access to electricity and telecoms services for the overall population, subsequently increasing opportunities for private sector development.
- IDF projects' contribution to PSD is evident in most cases, especially in telecoms and to some extent in energy projects. It has been more limited in mining projects, a sector in which IDF invested only once in its early years. Most expected development results (including indirect job creation) have not been achieved in agri-business projects, owing notably to limited or non-delivery of outputs.
- On IDF-financed projects' contribution to green and inclusive development the following appeared to be the case:
  - overall the contribution of IDF-financed projects to green and inclusive development has been satisfactory. There is evidence of GHG reduction objectives having been largely achieved by completed projects although there is also some evidence of over-optimistic targets. Only one of the case study projects (Kenmare, Mozambique – mining) has no GHG reduction aspirations. 'Green' and 'Inclusive' investments comprised 44% and 28% respectively of IDF's portfolio (2015). Greenhouse gas avoidance was estimated at 2.9 million tonnes of CO_2.
  - Even though estimates of (and targets for) indirect employment generation estimates may be high, direct employment creation arising from IDF investment (from employment during construction and subsequent operation of the project facilities and infrastructure including, in some cases, distribution) is likely in most cases to be modest. Direct employment creation

in 2016 was estimated *ex ante* at 40,000 jobs (of which 24% were women). Indirect employment creation was estimated *ex ante* at about 1.2 million jobs (of which 45% women). Further, additional beneficiaries and end-users of the products of IDF projects have been estimated *ex ante* at 34.1 million (albeit against a target of 105 million) including populations in the immediate vicinity of projects which have benefitted from social and infrastructure investments, although an unexpected result of the 'development island' has been a major influx of persons from outside the area seeking work and other benefits). However no social friction was reported.

- Regarding IDF projects' contribution to PSD it should be noted that:
  - Overall there is very limited *ex post* information, particularly on indirect job creation as this is not something that clients report on. This is notably because FMO monitoring and reporting systems were not generating information on development impacts as they were not initially requested by MFA until 2013. Since 2013 an evaluation plan (i.e. *Evaluation Plan for FMO – Managed Government Funds)*, which entails the conduct of *ex post* impact studies, is being implemented and is generating information on development impacts.
  - IDF has not provided direct support for formulation and implementation of policies in beneficiary countries and there is no indication that clients have benefited from IDF support, e.g. for the development of new markets or the expansion of existing markets.
- Monitoring and reporting has been rather uneven among the projects. In general, the available information on achievement of the development objectives of IDF funded projects has been limited. For about 50% of the selected projects, monitoring and reporting provided timely and accurate information for management of the results. In the remaining 50% there have been significant shortcomings in reporting, notably due to difficult relationships between FMO and the project managers. For instance, in the case of Bengaz, information-sharing worsened from 2009/2010 with the replacement of the Shell Managing Director by someone who was not willing to cooperate with outside entities. As a result, FMO was not given access to up-to-date information (cf. Bengaz case study).

The table below summarises our effectiveness analysis. This analysis is based on the methodology described above for assessing the sample of 15 projects selected for case studies. For each judgment criterion (JC) a rating has been attributed to each project. The overall rating of the sample on effectiveness was 2.5 (partly satisfactory to satisfactory), with telecoms and energy projects performing above this average and agri-business projects far below. The overall analysis is detailed under the JCs.

Table 5 – Effectiveness analysis - Rating per project

EQ 1 – Results (outputs and outcomes)																	
Project	**Average**	**Artumas Mtwara**	**Axiata**	**Bengaz**	**Digicel**	**Dutch Bangla Bank**	**Eolo**	**Essel Clean Solns**	**Grown Energy**	**Guarantco**	**Kenmare**	**Kivu Watt**	**Omera Petroleum**	**Pan African Housing**	**Songas**	**Zanzibar Sugar**
Country		Tanzania	Bangladesh	Benin	Haiti	Bangla-desh	Nicaragua	Nepal	Mozambique	Global	Mozambique	Rwanda	Bangladesh	Africa	Tanzania	Tanzania
Sector		Energy	Telecoms	Energy	Telecoms	Financial	Energy	Energy	Agri-business	Financial	Mining	Energy	Energy	Housing	Energy	Agri-business
Region		Africa	Asia	Africa	Latin America	Asia	Latin America	Asia	Africa	Global	Africa	Africa	Asia	Africa	Africa	Africa
JC 1.2 - Outputs	2.5	1	4	1	4	2	4		1	3	2	2	3	3	4	1
JC 1.3 - Outcomes	2.4	1	3	1	4	2	3		1	3	3	3	2	2	4	1
JC 1.4 - Green and inclusive	2.8	3	3	1	3	3	4	3	1	3	3	3	3	3	4	2
JC 1.5 - Private sector devel't	2.3	1	3	1	4	2	3		1	3	2	3	2	3	3	1
JC 1.6 - Monitoring & reporting	2.5	3	2	2		2	4	2	1	3	3	3	3	2	3	2
Overall	2.5	1.8	3	1.2	3.8	2.2	3.6		1	3	2.6	2.8	2.6	2.6	3.6	1.4
JC 1.2	IDF-financed projects have delivered expected infrastructure outputs on time and within budget															
JC 1.3	IDF financed projects contribute to the development of the private sector (by means of increased longer-term employment opportunities, improved business environment and demonstration effects).															
JC 1.4	IDF-financed projects have delivered expected impacts (in targeted beneficiary populations or more widely)															
JC 1.5	IDF-financed projects contributed to green and inclusive development															
JC 1.6	IDF monitoring and reporting frameworks effectively and consistently provide accurate and timely information for management of results of the IDF-financed portfolio															

Rating scale: 4- Highly satisfactory; 3- Satisfactory; 2- Partly Satisfactory; 1- Unsatisfactory

Source: ADE

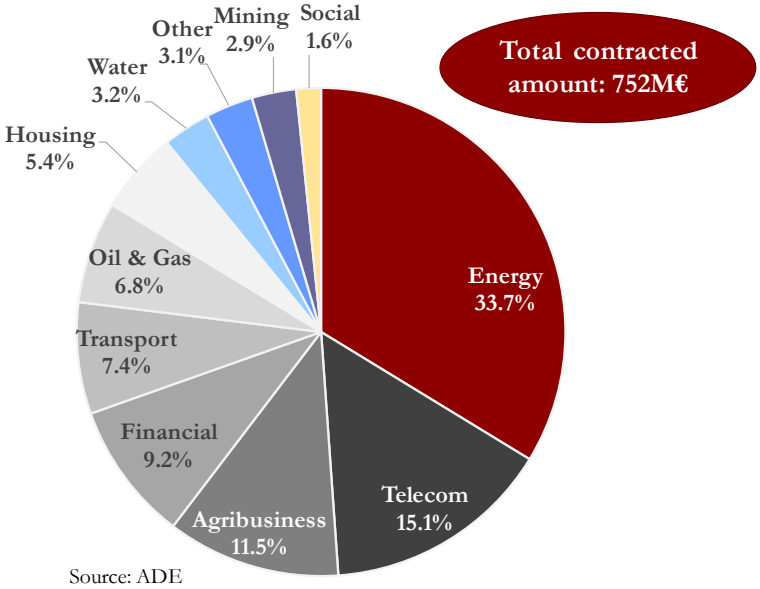
JC 1.1 Trends in the nature and component balance of IDF portfolio

The analysis below provides i) a breakdown of the entire portfolio of IDF respectively by sector, region and instrument; ii) an overview of co-funded operations and iii) an overview of investment leverage.

- **Sector**

IDF portfolio mainly supported the energy sector (33.7% of contracted amounts), telecoms (15%) and agri-business (11.5%). Energy sector is composed of renewable energy, clean energy, hydro power, solar power, and wind power. Financial, transport and oil & gas accounted for 24% of the portfolio in total. Housing, water, mining and social accounted for a minor share of the portfolio, with respectively 5.4%, 3.2%, 2.9% and 1.6% of the overall portfolio.

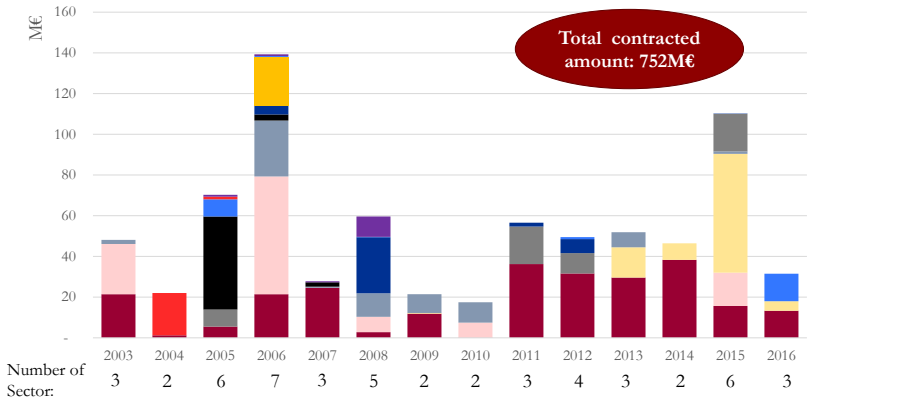
Figure 3 – Total amount contracted per sector (2002-2016)



Source: ADE

The graph below indicates the breakdown of the amount contracted over the period 2002-2016, by sector. Annual contracted amounts have significantly varied over the period, with 2006 and 2015 having the highest amounts (respectively 139M€ and 110M€) - which coincide with investments in up to 7 different sectors per year - and 2010 the lowest (17M€). On average IDF investments were not highly concentrated: IDF has invested in about 4 sectors each year, with the exceptions of 2015 and of the period 2005-2008 during which investments have been made in 5 to 6 sectors each year despite limited annual contracted amounts, in particular in 2007. Nevertheless, in the last 5 years IDF investments have focused mainly on energy, agri-business and transport (e.g. railways and off-dock services) projects. In the coming years, relative to the current portfolio, IDF investments are expected to show an increase in its sector concentration and focus on investments in renewable energy and in agri-business, as suggested in FMO 2025 strategy which applies to IDF.

Figure 4 – Contracted amounts per sector per year (2002-2016)



Source: ADE

With a few exceptions (2004, 2005, 2008 and 2010), energy projects have represented on average one third of IDF contracted amounts each year over the period 2002-2016.

The relative importance of telecoms in the overall portfolio resulted first from the participation to MSI/Celtel in 2003. The share of sector dropped in 2005 when FMO sold its participation in MSI/Celtel. The sector became significant again in 2006 when FMO provided IDF loans to Digicel in Haiti and Axiata in Bangladesh. In 2007, Digicel Haiti unexpectedly repaid its loan from IDF.

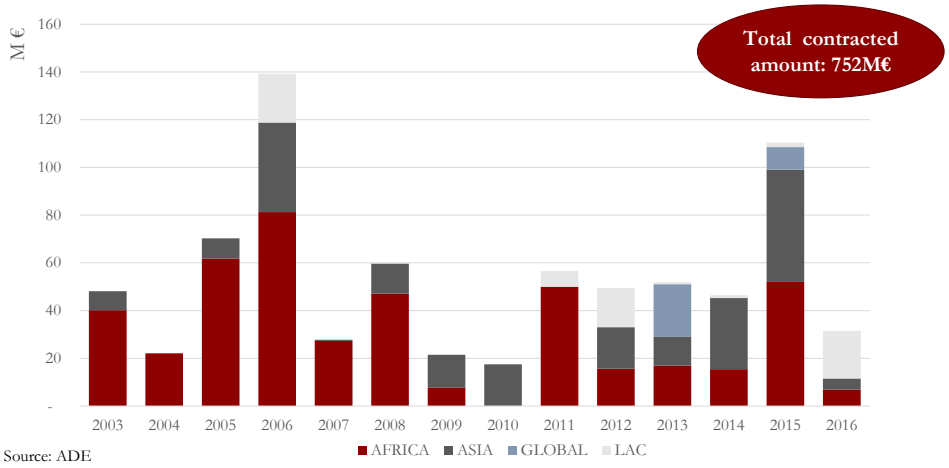
Agri-business has gained in importance in IDF portfolio over the last 4 years of the evaluation period, with several investments in Africa between 2013 and 2016 (including Zanzibar Sugar Factory in Tanzania and a 15M€ investment project in a palm oil plantation in DR Congo).

- **Region**

IDF portfolio significantly concentrated on operations in Africa (59% of contracted amounts over the period) and Asia (28% of contracted amounts). The remaining operations have been implemented in Latin America. In addition, global operations have represented 4% of IDF portfolio.

The following graph indicates the trend of contracted amounts per region over the period.

Figure 5 – Annual contracted amounts per region (2002-2016)



Source: ADE

IDF operations have been significantly concentrated in Africa since the inception of the Fund, with Tanzania the 1st recipient country in terms of amounts contracted over the period 2003-2016 (46.6M€).

Asia is the second region of IDF interventions in terms amounts contracted. The proportion of investments in this region has been significantly high compared to Africa in 2006 and 2010, and recently in 2014 and 2015. Bangladesh is the 1st recipient country of IDF investments worldwide (92M€ over the period 2003-2016).

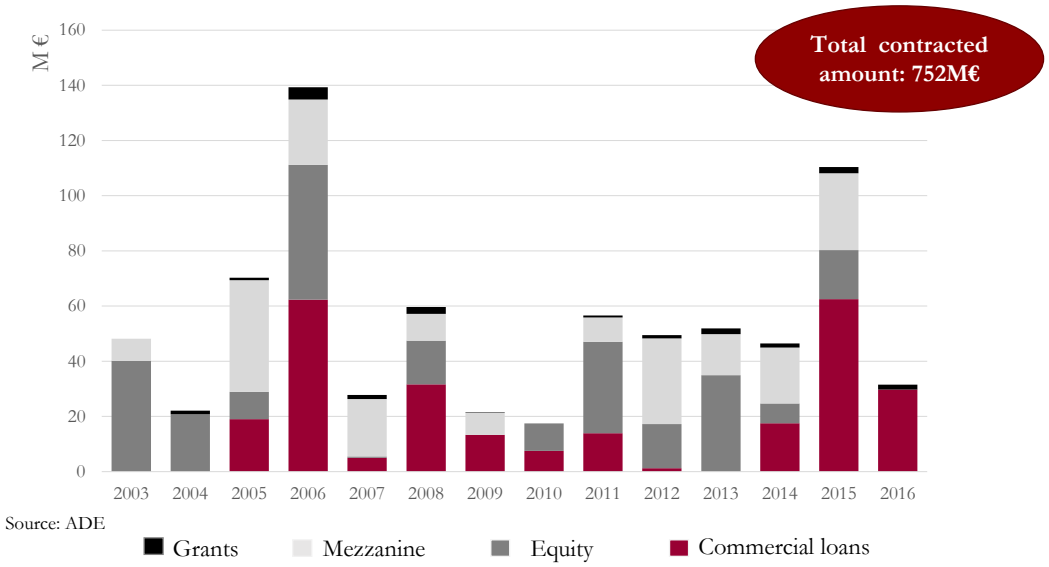
The third region of IDF investments is Latin America, with Nicaragua being the 1st recipient over the period 2003-2016. Energy is the 1st sector of intervention in this region which has been the principal recipient of IDF contracted amounts in 2016, before Africa and Asia, with Latin America some way behind.

- **Financial Instrument**

The financial instruments mostly used for IDF operations in terms of amounts contracted were the senior loans (35%) and equity (34%). Mezzanine financing represented 28% of IDF portfolio, while grants totalled the remaining 3%.

As illustrated in the graph below, at the very beginning of IDF operations, equity and mezzanine were the two principal instruments used, whereas recently (2014-2016) senior (secured) loans has been preferred.

Figure 6 – Annual contracted amounts per instrument (2003-2016)

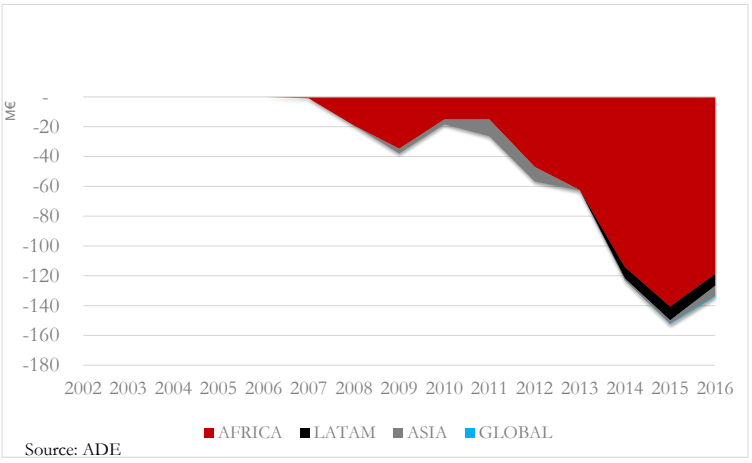


Source: ADE

- **Financial Performance**

In the absence of other indicators, financial performance is used as proxy for financial sustainability of the whole IDF portfolio. As detailed under EQ3, the overall portfolio has had a negative performance over the period 2002-2016, with an IRR of -0.7% (the IRR on loans was a positive 2.5% and on equity it was a negative IRR of 6.6%). The chart below shows the growth in impairments. It can be seen that impairments were relatively modest up to 2006 before a big increase in the period 2012 to 2015. The predominance of problem projects in Africa (considerably more than 59% of the portfolio in this region) is evident.

Figure 7 – Cumulated impairments per region (2002 – 2016)



Source: ADE

- **Co-funding**

According to the information provided by FMO on projects co-funding, a total of 21 IDF projects have been co-financed by FMO-A and other facilities, which represented about 22% of projects portfolio.

As represented in the table below, there has been fairly limited co-financing with other government funds over the evaluation period since most of co-funding combinations included only IDF and FMO-A funds. Four IDF projects have involved both MASSIF and AEF government funds, with two of them also co-financed by FMO-A. One project has involved FMO-A and the 3 government funds managed by FMO.

Combination of funding	Number of projects
IDF & FMO-A	15
IDF & MASSIF	1
IDF & AEF	1
IDF & FMO-A & AEF	1
IDF & FMO-A & MASSIF & AEF	1
Other	2
Total	21

Source: ADE

Most of co-funded projects were related to the energy sector:

SECTOR	Number of projects
Energy	**15**
Other / Mixed Renewable	*5*
Hydro Energy	*3*
Solar Energy	*3*
Infrastructure	*3*
Wind Energy	*1*
Mining	*2*
Universal Banking	2
Other Agri, Food and Water	1
Telecom	1
Other Sectors	2
TOTAL	**21**

Source: ADE

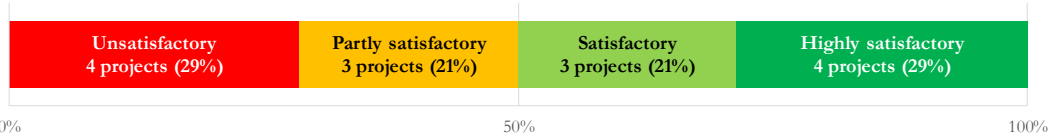
- **Investment leverage/funding mobilisation**

The following figures are based on the database provided by FMO on project sizes. Typically, there is no information for investments made by Equity Funds, Financial institutions and corporates. From the remaining projects it appears that on average IDF contribution has amounted 12% of the overall project size. This average varies by sector:

19% for agri-business, 9% for energy and 15% for infrastructure, manufacturing and services (IMS) projects. In only one case (WWR BIO Fertilizer, a 7.4M€ energy project in Bangladesh) IDF contribution amounted to 53% of the project cost, despite the limit of 49% set in the 2002 agreement[26].

JC 1.2 IDF financed projects outputs

The ratings for the 15 projects, presented in Table 4 above, are also summarised in the chart below. In total 71% of the projects (10 of the 14 that are operating) have met satisfactory standards in terms of effectiveness (i.e. delivering expected outputs, without considering delays and cost overruns). The percentage falls to 50% when considering "delivering expected infrastructure outputs on time and within budget". Indeed, 3 projects with delivered outputs are rated as partly satisfactory or unsatisfactory as regards to delivering them in time and within budget. These ratings are based on documentary analysis conducted at project level combined with direct observations for the 8 projects visited in Bangladesh, Mozambique, Nicaragua and Tanzania. Only 14 ratings were possible because in the case of Essel Clean Solu the construction is scheduled to be completed in December 2019.



Source: ADE

Further analysis of the investments in the different rating categories shows:

Highly satisfactory: From the selected sample, a total of 4 projects over 15 have delivered expected outputs on time and within budget. These successful projects were energy (Eolo in Nicaragua, and Songas in Tanzania) and telecoms (Axiata in Bangladesh and Digicel in Haiti), sectors in which FMO has specialised. The telecoms projects were both expansion projects to which IDF had provided loans (subordinated and senior loans respectively for Axiata and Digicel). In both cases at the time of IDF funding the telecoms sectors (Bangladesh and Haiti) were at a nascent stage with the low mobile coverage levels. Both telecom projects have experienced rapid growth and were implemented or promoted by strong (as regards to experience or finance) regional telecom groups. Both energy projects were promoted by Globeleq, a specialist power company group created by CDC and Norfund that has initiated and managed power projects in the developing countries, especially in Africa. Energy projects were new constructions that received equity and mezzanine funding from IDF. The four projects demonstrate the importance of strong, competent sponsors.

[26] "IDF fund is never the largest financier/share holder in a company, project or fund" (Beschikking 2002). The 53% arose because of additional funding to a problem project. According to FMO, this is an exception ("This was a problem loan where later in the process extra investments were added to reduce liabilities, resulting in the 53%").

Satisfactory: 2 of the 3 projects rated satisfactory are regional projects involving equity investments in specialised financial institutions established to support the housing sector (Pan African Housing Fund, PAHF) and provide credit guarantees (Guarantco[27]). Guarantco has a positive track record and strong external ratings for a few years which enhanced its publicity, brand and familiarity in the markets it operates. Furthermore, demonstrated shareholders' commitment to provide support and the continued involvement of DFI (KfW and FMO) benefit the project expansion of the guarantee portfolio. Guarantco has reached break-even in 2017. PAHF has invested so far modest amounts in the projects, about 3-4 M€ per project. The largest project PAHF was supposed to invest in was a housing development in Zambia of 840 units at an estimated cost of 55MUS$. The original PAHF financing was 1.7MUS$ to be raised in 2017 to an amount of 6MUS$. One of the limiting factors to the development of the Fund was the Key Man clause in the shareholders agreement, which stipulated that the Fund could not make investments before a third partner had been found. Omera Petroleum is the third project rated satisfactory. The project involved construction and operation of four green field LPG bottling plants. The construction and commissioning off all plants has been completed. The stations are fully operational since March 2015 and approximately 215 000 cylinders have been supplied to the market[28]. Omera Petroleum had a 6 months delay and 9% increase in costs.

Partly satisfactory: All three projects rated partly satisfactory have reached planned outputs but only after significant implementation delays and cost overruns. They were all loans (combined with equity in 2 cases). One of them, KivuWatt, concerns energy (construction of new infrastructures). Outputs have been delivered but the project experienced delays and cost overruns. The plant has been operating commercially since end 2015 with peak power of 26 MW, with 192 GWH being delivered in 2016. At this time there was a single transmission line from Kivu serving the Rwandan grid. KivuWatt had 3 years of delays and 53% of additional cost (electricity is now being generated at expected outputs and gas quality and quantity exceed expectation).

Regarding the finance project Dutch Bangla Bank, only partial disbursement of IDF facility took place. During the field visit a list of clients in the textile sector could be obtained from DBBL but no amounts of the loans could be provided. Mining project Kenmare in Mozambique, which required as well as the investment in the mine itself additional infrastructures (e.g. construction of a 170 km transmission 28MW line to connect the mine in Tipuito with the grid, airstrip because of the lack of good roads and mobile telecoms connections) has delivered the outputs and the mine is now working well. However, the project has experienced major financial problems (both a large cost overrun, from USD 348m to USD 1.1bn, and the collapse of titanium prices) that resulted in a restructuring in mid-2016.

Unsatisfactory: Four project (29% of the sample) either failed to deliver planned outputs or (in the case of Zanzibar Sugar) are still a considerable distance away from

[27] Guarantco has in fact provided a credit guarantee to local banks in Nepal funding the Essel Solutions hydroelectric project which IDF has also financed.

[28] According to FMO, there are presently more than 2.7 million Omera cylinders in the market (March 2018).

doing so. These four projects are therefore rated as unsatisfactory (i.e. the evaluation criteria have not been met). All of them are located in Africa, in energy (Bengaz, Artumas) and agri-business (Grown Energy, Zanzibar Sugar Factory); although no conclusion can be drawn as to whether this by chance or not. The four different instruments have been used for these projects.

- Bengaz (Benin): the construction of the pipeline was behind schedule and ended up costing nearly twice the budgeted amount. Due to political circumstances in Nigeria that has prevented planned gas volumes from being transported in the pipeline the capacity of the pipeline has hardly been used. Consequently, revenues are too low to make the West African Gas Pipeline Company WAPCo commercially viable (and also Bengaz which depends on dividends from WAPCo to service IDF loans that have never been paid). See box below.
- Artumas (Tanzania): the power plant and pipeline connecting the gas field to the power plant were complete and operational in 2007; however, the transmission and distribution (T&D) component has not gone ahead. The upgrade, expansion and operation of the T&D component was dependent upon the ORET subsidy which did not go ahead. Both power and gas activities were reportedly heavily loss making and operating at a small proportion of installed capacity.
- Grown Energy (Mozambique): no infrastructure outputs have been produced. In 2010 IDF decided to pull out citing delays in land acquisition, weak project management and continuing uncertainties regarding the participation of the main sponsor.
- Zanzibar Sugar Factory (Tanzania): the 1970s factory has been modernised and expanded to good standards. The project is however facing major operating problems and shortfalls in financial performance. Despite the factory being completed and ready to process sugarcane, it is severely underutilised because far less cane is being cultivated at the nucleus farm and outgrowers than planned. The field visit revealed that currently no solution has been found to increase cane production for the project to reach viability.

Box 1 – Bengaz

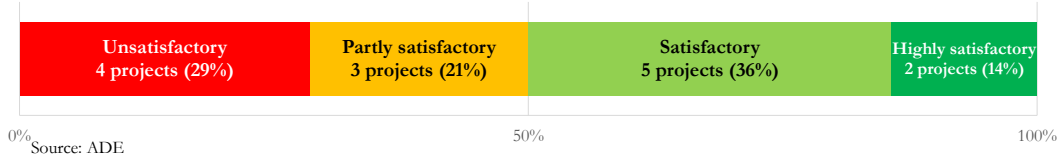
The project consisted in construction, ownership and operation of a 620 km gas pipeline designed to transport natural gas from Nigeria, across Benin and Togo, to Ghana. Bengaz was sponsored by the Benin Government to take a 2% stake in WAPCo, the company set up by oil major and Nigerian National Petroleum Corporation (NNPC) to build and operate the pipeline. The pipeline was completed three years late (July 2010). As regards to Bengaz itself, there has been no business development as expected, due to limited exploitation of the pipeline. Indeed, there are constraints on the gas supply, politically driven by Nigeria (politicians believe gas should serve the domestic market). Therefore, the gas supply from N-Gas is uncertain and remains unpredictable, which jeopardizes the whole project. The pipeline has therefore not been used at its maximal capacity.

The construction of the pipeline itself faced important challenges, going from difficulties at the level of construction management to pipe damage, leakage, political unwillingness to supply gas from Nigeria, etc. At the implementation level this has

resulted to delays and cost overruns. In the end, the construction of the pipeline was delayed by three years and doubled almost in cost. The cost overruns have arisen notably from onshore construction delays in Wilbros construction activities and changes of contractors.

JC 1.3 IDF financed projects outcomes

As summarised in the chart below, 50% of the selected projects are considered to have reached to a minimum a satisfactory rating. This highlights the challenges that IDF has faced. The rating is based on available information on outcomes achievements from documentary analysis and field interviews. Essel Clean Solu has not been considered in the analysis since the project is under construction.



Source: ADE

Further analysis of the investments belonging to the different rating categories shows:

Highly satisfactory: Two projects exceeded expectations in terms of delivering expected outcomes, Digicel in Haiti and Songas in Tanzania. Both have contributed to increasing access to services (telecoms, electricity) for the population notably thanks to cheaper prices and/or improved services. Increased access to electricity and telecoms have enhanced development opportunities for the beneficiaries:

- The strong coverage of Digicel mobile network enabled a wider access to telecoms and a drop in the prices. Prices drop may have contributed to GDP per capita increase in Haiti (32% between 2005 and 2007) since telecoms increase access to development opportunities.
- Songas's pipeline brings gas 225km from Songo Island to its 180MW Ubongo power station in Dar Es Salaam which generates power that is sold to Tanesco for distribution. Ubongo which accounts for 12% of national generating capacity in Tanzania operates at over 95% capacity and is planning to add further gas turbines to raise capacity to 240MW or more. Songas is also providing access to relatively cheap energy to a considerable number of industrial gas-users. Furthermore, Songas has conducted developmental activities at the local level, including connecting points along the pipeline for gas-usage by villages along the way.

Satisfactory: About one third of sample projects have been satisfactory as regard to delivering expected outcomes.

- Energy projects (Eolo and KivuWatt) have contributed to increase the electricity generated in their respective countries of implementation. Nevertheless:

  - At Eolo, wind generated electricity is directly injected to the national interconnected system and from 2015 the prices offered by Eolo were above the national average because of the reduction in oil prices.
  - Despite late completion, KivuWatt has delivered expected power generation. Nevertheless, there have been some constraints in transmission and distribution. Improved/increased access to electricity has been partly achieved. The total energy delivered in 2016 was 192 GWh (compared with target of 222 GWh). Reasons for lower delivery include reliability issues and load shedding from the single transmission line to Karonga.

- The mining project Kenmare delivered limited benefits at the national level, with notably a tax holiday on profits it makes. At regional level however (Nampula province), the project has brought economic social benefits to villages and their inhabitants, including electrification of areas around the mine and availability of connections to the mobile telephone network.
- Axiata and Guarantco have high developmental potential (e.g. telecoms should facilitate access to information and boost small businesses in remote areas; the projects that receive assistance from Guarantco should contribute highly to job creation); it has however not been measured.

Partly satisfactory: About 20% of the sample is considered as having only partly achieved expected outcomes, mostly because they do not target the most vulnerable. Indeed, Omera Petroleum targets middle-class households with largest potential for LPG (25% of the population). Real estate development to which Pan African Housing contributes benefit more middle-income class than poorest people and vulnerable groups. Dutch Bangla Bank remains a modest player on the market and no target was set for job creation.

Unsatisfactory: A total of 4 projects implemented in Africa have poorly performed as regard to delivering expected outcomes.

- For the two energy projects (Artumas and Bengaz), expected economic development results have not materialised essentially because the outputs were not (fully) delivered or operational. Both projects failed:
  - Artumas: Less than 10% of the planned gas was supplied to the power station in Mtwara near the Mozambique border. The company was taken over by a French company.
  - Bengaz: the pipeline was expected to provide reliable gas supplies to Benin, Togo and Benin. This has not happened, with only negligible volumes being transported due to a refusal of NNPC in Nigeria to provide gas. West African Gas Pipeline Company (WAPCo) revenues for this $1bn project are only about $8m per year.
- The two agri-business projects of the sample have not performed well in terms of delivering expected outcomes:

- Grown Energy did not go ahead (in 2009 FMO decided to exit notably due to continuing delays with approval of land rights, process delays and weak project management);
- The lack of sufficient sugarcane production continues to hold back Zanzibar Sugar. Moreover, even with artificially high sugar prices in Tanzania, which are the result of high import tariffs, it is unclear whether it can be viable.

JC 1.4 IDF-financed projects contributed to green and inclusive development

For the 15 case-study projects the average rating was 2.73, i.e. slightly lower than a Satisfactory level.

The 'headline' FMO Impact Model Target is *'Doubling impact, halving footprint by 2020'*. This target was introduced from a baseline period 2010 – 2012 (2018 – 2020 is the end-line period when actual results will be measured).[29]

However, it is clear that projects do have greenhouses gases (GHG) reduction objectives (e.g. Artumas, Mtwara Tanzania; Eolo, Nicaragua; KivuWatt). Estimates of GHG reduction vary from the very optimistic (e.g. Artumas, Mtwara) to the ambitious but probably achievable (KivuWatt) whilst actual GHG reduction depends upon implementation and operation of project infrastructure. Eolo for instance has almost achieved GHG reduction targets in 2016/2017; KivuWatt is likely to achieve targets whilst Artumas targets will be missed due to non-delivery of some project components combined with over-ambitious targets in the first place.

Box 2 – KivuWatt

Lake Kivu is one of Africa's great lakes and straddles border of Rwanda and the Democratic Republic of Congo; it is also one of three known lakes with a risk of limnic eruption (uncontrolled release of gas) as it contains high levels of methane gas and CO_2, dissolved at great depth which pose a risk as gas clouds can emerge from the lake. At the same time Rwanda desperately needs more electricity. In 2010 only about 6% of the nation's then 10 million inhabitants were connected to the grid. As methane gas is a good feedstock for power generation, extracting the gas and using it

[29] The DIHF approach is not intended to report or steer decisions ex ante on individual projects. Furthermore, it is not IDF specific. This being said, projects pre-dating introduction of this strategy would not be expected to refer to the 2020 target but of the 'later' case study projects only KivuWatt, Rwanda referred to this target (in the baseline report)

for power generation provided a business opportunity while at the same time reducing the risk of uncontrolled gas release. The off-shore component contains the gas extraction and production facility located 13 km from the shore. The extracted gas is transported to the on-shore MWM gas-fired power plant operating since 31/12/2015 with peak power 26 MW with 192 GWH being delivered in 2016. The innovative extraction is in compliance with prescriptions that were produced jointly by the governments of Rwanda and DRC and were established by a panel of international experts. Various studies have indicated that the methane gas resources in the Lake can support up to 300-500 MW of installed capacity for a period of approximately 40 years, with current extraction technology.

Whilst some case study projects are arguably GHG-neutral (e.g. Dutch Bangla Bank) some projects do not actually address GHG reduction, rather to the contrary (e.g. Grown Energy, Mozambique - no estimates for potential GHG emissions plus mitigation measures would have been necessary to address emissions of CO2 and particulate matter; Kenmare, Mozambique – the mining operations are a net producer of GHG emissions). It is noted that there is no FMO requirement for reporting on GHG emissions for projects with GHG emissions that are below 25k tons (e.g. Omera Petroleum, Bangladesh).

Mitigation, remediation and reinstatement are issues in a few case study projects although such actions are a conditionality for IDF financing as well as a requirement of national environmental legislation (e.g. Kenmare – restoration of mined out dredge paths and hand-over of restored land to local communities; Essel Clean Solutions – waste management issues).

There are clear examples of projects aiming at social benefits directly (in the immediate project location) and indirectly (although some estimates of indirect employment generation seem ambitious and largely unconfirmed). In the immediate project area there are multiple examples of project support to community development and social inclusion (in addition to direct project employment) [e.g. Kenmare – KMAD providing support to local economic, socio-cultural and rural infrastructure development; Eolo – social investment (safety, water supply, education and training)]. However, an unexpected result of project implementation has been an influx of people into the immediate area of the project seeking employment or other benefits (e.g. Kenmare – surrounding population increased from 7,000 to 24,000; Songas, Tanzania – local population increase from 2000 to 6700). Social projects supported by IDF projects were visited on ADE field visits in Bangladesh, Mozambique, Nicaragua and Tanzania.

Highly satisfactory: Eolo, Songas. These projects have demonstrated significant GHG avoidance due to cleaner electricity generation (Eolo by wind turbines, Songas by use of natural gas). Both project contribute to more balanced and more reliable national energy generation (in Nicaragua and Tanzania respectively) whilst providing significant development benefits for populations in the immediate vicinity of the project site and more widely.

Satisfactory:

- There is clear evidence of GHG reduction objectives which have been largely achieved (to a greater or lesser extent) by completed projects. Little reference is made to the FMO *'Doubling impact and halving footprint by 2020'* (which functions at portfolio level, not at individual projects level).
- There is some reference to GHG avoidance (although some original estimates appear to have been optimistic).
- Most projects have delivered social benefits (albeit that the most reported social benefits refer to the immediate project area rather than higher level outcomes).

Partly satisfactory: These are projects which have gone ahead but which have only achieved green objectives to a limited extent (for different reasons). Omera is basically an LPG distribution project where there is no requirement for GHG emissions reporting as emissions are considered to be negligible under FMO reporting requirements – OPL will only trade in LPG end users contributing the majority of GHG emissions. ZSFL could be considered as a green and inclusive project but like other sugar companies in Tanzania it can only be viable with the benefit of high import taxes on foreign sugar. The outgrower scheme, a key feature of the project in terms of social inclusion has been significantly scaled back.

Unsatisfactory: These are basically failed projects which have not delivered expected green or developmental outcomes.

JC 1.5 IDF financed projects contribution to the development of the private sector

Overall there is limited information on IDF financed projects contribution to private sector development, in particular on indirect job creation. This is because financial proposals do not include logical frameworks or other descriptions of the wider developmental outcomes/impacts of IDF projects. Furthermore, initially FMO M&E and reporting systems were not generating information on development impacts[30].

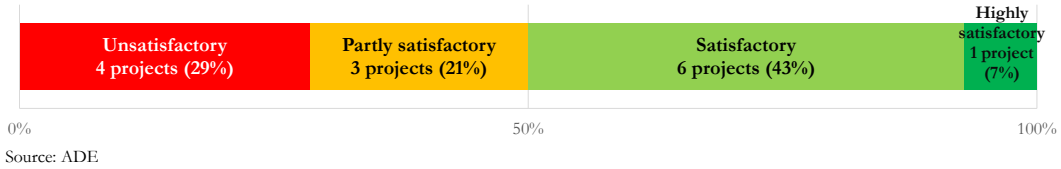
Infrastructure (electricity, mobile telecoms, water and sanitation, ports, roads etc.) are critical to the development of the private sector since they contribute to making business activity both possible and more efficient. IDF in a modest way can help develop the private sector especially in low income countries where it is most needed. Strong, growing private sectors contribute, inter alia, to poverty alleviation and job creation. A 2014 World Bank study confirmed the positive effects of infrastructure investment on employment, albeit with somewhat different numbers; it estimates that "spending on construction of roads and bridges would generate more than twice as many jobs as the same amount of spending in any of the other sectors. Construction of water and sewage infrastructure is the second most job-intensive activity relative to spending, whereas transport and communications is the least job-intensive activity." In addition, through

[30] Initially, FMO was not requested by MFA to do so until 2013. Since 2013 an evaluation plan (i.e. *Evaluation Plan for FMO – Managed Government Funds)*, which involves conducting ex-post impact studies, is being implemented and which generates information on development impacts

mobile banking the telecom sector is playing an important role in economic development in general and private sector development in particular, especially in developing countries where access to finance is one of the major constraints faced by micro and small entrepreneurs.

Given that most PSD benefits arising from infrastructure projects are indirect there is the issue of attribution and quantification. The further away from a project that one looks the larger the possible developmental effects are, but this must be set off against much weaker links and therefore much more subjective attribution. Direct jobs in infrastructure projects (power stations, telecoms companies, water/sanitation companies, ports, etc.) are much likely to be relatively low since they are capital intensive and the jobs created per euro of investment low. In the absence of specific information in project files, ADE can only assess in qualitative terms the indirect jobs (likely to be at least several times greater than project specific jobs) and other PSD benefits of IDF project; except for the few in agri-business and mining.

As summarised in the chart, 50% of the selected projects are considered to have reached ta minimum a satisfactory rating for this judgment criterion related to contribution to PSD. The rating is based on available information on outcomes achievements from documentary analysis and field interviews. Essel Clean Solu has not been considered in the analysis since it is still under construction.



Source: ADE

Further analysis of the investments belonging to the different rating categories shows:

Highly satisfactory: Only Digicel, a telecom project, is considered to have exceeded this criterion. Regarding direct job creation, by 2008 Digicel totalled 828 staff in Haiti. There is quantitative information on long term employment opportunities (indirect employment effect) at regional level only, not at the country level: 12 000 jobs in the region, mainly in SMEs providing services to Digicel customers (re-sellers of pre-paid cards, distribution shops, etc.). Regarding induced employment effect, the mobile penetration rate has increased from 5% in 2004 to 20% in 2007 in Haiti. According to the World Bank, in 2015 new telecommunications technology had increased internet penetration to 11.4 percent, and 65 percent of the population in Haiti had access to a cell phone, with many having access to internet via their phone. As previously mentioned, access to telecoms increases opportunities for the private sector (through mobile banking, access to business opportunities via Internet, etc.). Although not measured, the induced effect on employment of Digicel is therefore expected to be high.

Satisfactory: Six projects have been rated satisfactory in terms of contribution to private sector development. Mostly energy projects (4) and equity investments (4).

- Axiata was able to benefit from local currency financing and from the loan being subordinated, which made it quasi equity. After a merger in 2016, Axiata moved from the number three to the number two position in Bangladesh with a 29% share. There are 141m SIM cards in a country of 160m people. Mobile coverage is now 99% with low call costs and increasing use of a 3.5G network for internet and data.
- Eolo's wind farm generates about 3% of Nicaragua electricity which is supplied directly to the grid. The overall access to electricity in the country has improved since 2013, as indicated by the positive evolution of the related ranking in Doing Business. This improvement is related notably to the reliability of the system. By end of December 2017 Eolo had 26 employees, but the indirect and induced employment effects of the project should be high since the improved reliability of the electricity beneficiates to the private sector.
- Guarantco has activities in 15 countries in Africa and Asia and 16 staff based in London. The infrastructure sector in which Guarantco involves itself (e.g. gas transportation and distribution, transport, energy, telecoms) through expansion activities creates direct and indirect jobs. No information is available on jobs in projects to which Guarantco has provided guarantees.
- Regarding KivuWatt, a peak of 535 (direct and indirect) workers were involved in construction. More than 50 people are currently employed in operations. As regard to private sector development, improved economic performance of informal businesses in grid connected areas has been reported, but no specific figures on employment.
- There is limited information on direct job creation at beneficiary level by Pan African Housing, but it is expected to be relatively high since building housing is labour intensive. However, jobs during construction are short term. Longer-term jobs in housing can be created through management of the properties. As the exit from housing projects appears to be more difficult for PHAF than expected, renting out the properties seems to be the only option at the moment, which will help creating some longer-term jobs.

Partly satisfactory: The three projects rated partly satisfactory have used commercial loans combined, in 2 cases, with equity investments. They are in financial, mining and energy sectors. There is no information on indirect employment effects, but it has probably been limited due to:

- underutilisation of IDF facility to finance water treatment plants in the textile industry (Dutch Bangla Bank);
- enclaved project (Kenmare; as regards to direct employment effect, the project has exceeded the target set in the financial proposal with 1 323 employees by end 2016 vs. 410 foreseen in the FP; however, since it is enclaved, the indirect employment effect should be limited); and
- concentration on domestic market rather than industrial market, limiting potential in terms of private sector development. (Dutch Bangla Bank).

For Omera Petroleum, direct employment generated by operations and maintenance is estimated at around 200 full time posts.

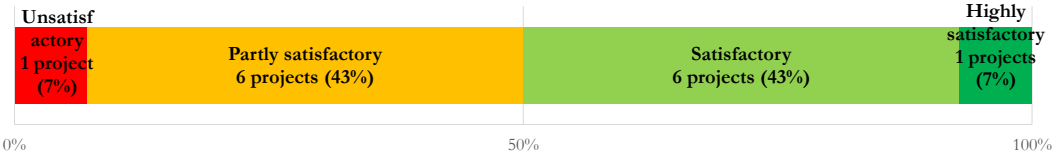
In addition to the above, in the case of Dutch Bangla Bank, it can be considered that there has been an indirect support of IDF to policies formulation and implementation, since FMO have been actively dealing with the Central Bank in Bangladesh.

Unsatisfactory: About 30% of the selected projects have been rated unsatisfactory regarding contribution to private sector development. All of them are in Africa, two in energy (Bengaz, Grown Energy) and two in agri-business (Artumas, Zanzibar Sugar). There is no information on indirect jobs created by these projects. However, most expected development results (including indirect jobs creation) have not been achieved due notably to limited or non-delivery of outputs. In the case of Zanzibar Sugar for instance, delays in project implementation, particularly in building up sufficient sugarcane production, combined with an outgrower scheme that have scaled back to a target of only about 25% of the planned size means that private sector benefits have been modest or even poor. Apart from Zanzibar Sugar, these failed projects will have generated small to negligible PSD benefits.

JC 1.6 IDF financed projects monitoring and reporting frameworks

Reporting requirements for IDF projects (as with FMO-A projects) focus primarily on financial and environmental reporting with little or no data required by FMO/IDF on outputs and developmental outcomes[31].

As summarised in the chart below, 50% of the selected projects are considered to have reached at least a satisfactory rating as regard to 'monitoring reporting frameworks providing accurate and timely information for management of the results'. The rating is based on available information from documentary analysis and field interviews. Digicel has not been considered in the analysis since the duration of the project from IDF perspective has been limited due to the early reimbursement.



Source: ADE

Further analysis of the investments belonging to the different rating categories shows:

Highly satisfactory: Only Eolo has been rated highly satisfactory as regard to monitoring and reporting. The reporting framework of this project worked effectively and provided accurate and timely information for the management of the results, including E&S information. Reference is also made to other projects nearby Eolo (Amayo wind farm), although there is no specific lesson learnt mentioned.

[31] A new set of impact indicators has been agreed between DGIS and IDF in November 2015 (see JC1.5).

Satisfactory: For 43% of the sample (6 projects), the monitoring and reporting have been good and appropriate, with however quality and consistency issues. In the case of Artumas, Guarantco and Omera in particular, mistakes, incomplete scorecards or poor compliance with reporting obligations were identified. The dependence upon sponsors for reporting and changes during the implementation of the project notably are the reasons of these identified issues. For the 3 African projects Kenmare, KivuWatt and Songas, the overall M&E systems was also of good quality, with the reports addressing the main issues of the projects. However, the focus of monitoring and Client Credit Reviews (CCRs) of Kenmare has been primarily financial because of the critical financial condition of the company up to mid-2016 when a recapitalisation and debt restructuring undertaken. For KivuWatt, there has been an effective monitoring of progress and results, but not entirely timely. There is also evidence of applying the results of the monitoring to the on-going project. The quality of reporting on Songas was good with reports of good quality prepared. The main issues of the project were addressed in the CCRs.

Partly satisfactory: For 5 projects of the sample (36%), the criteria have been rated as only partly satisfactory (i.e. criteria met partially but significant forthcomings). There are monitoring and results reporting for these projects, with however significant issues as regard to providing accurate and timely information for management of results:

- for both Axiata and Bengaz, difficult relationships with the managers of the projects have led to limited and not timely reporting to FMO;
- in the case of Dutch Bangla Bank[32] and Pan African Housing, the reporting on development indicators is scarce, leading to a difficult assessment of IDF financing results;
- from the field visit it appeared that Zanzibar Sugar factory was facing more problems and challenges than indicated in the last CCRs;
- Finally, there is no evidence yet of a monitoring system for Essel Clean Solu which is still in the implementation phase. The Financial proposal of the project refers to previous lessons that have been used for the preparation of the project.

Unsatisfactory: There is no evidence of consistent monitoring systems and reporting for Grown Energy. There is neither evidence of application of lessons learnt from Grown Energy in other FMO projects.

[32] The legal agreement did not require reporting on how IDF money was used.

3.2 EQ 2 – Additionality and catalytic effects

Over the period 2012 to 2016, has IDF's core principle of being additional and catalysing resources from third parties (private and development finance) been respected?

EQ2 – Summary Response

Looking to the results in respect of Additionality of IDF investments, based on the 15 reviewed projects, a positive judgement can be made. The average score of the different dimensions of Additionality as explained in evaluation questions JC2.1-2.3 is 2.8 which is close to the Satisfactory level.

Comparing the outcomes on Additionality of the group of 15 reviewed IDF projects with the remainder of IDF portfolio, the conclusion shoud be somewhat more nuanced. Reviewing all 95 projects it can be concluded that through the allocation of IDF financing in high risk instruments and grants, and taking into account that the majority of investments has taken place in lower income countries (LICs), additionality of IDF current portfolio has been positive. However, when reviewing the country classifications of countries in which IDF has invested during certain time periods of the evaluation period 2003-2016, it seems that in more recent years slightly more IDF projects were developed in countries other than LICs. Namely, in the period 2003-2011 64,8% of the projects were developed in LICs and only 11,1% in the group of MLICs/UMICs. However, in the period 2012-2016, fewer IDF projects were developed in LICs (34,1%) and more in higher income countries MLICs/UMICs (36,6%). If IDF were to continue this trend there is the risk that in the future IDF's additionality might decrease, as too little is done in LIC countries where its additionality, all other things being equal, is greater.

For a Government-supported fund such as IDF, where there is a need to foster development, it is very important that the investments made are additional, i.e. that the funds could not have been obtained by the recepients from commercial banks or other sources at conditions equal or better than provided by IDF. The MFA's additionalty requirements were set out in the 2002 *Beschikking* which stated that the motivation for intervening in LDCs was a *"lack of financial capacity for investments in infrastructure"*. The main eligibility criteria included:

- non-market distortion but complementary to local and international financing sources;
- role of catalyser by lowering the threshold for other, commercial financiers.

The definition of additionality that is used by FMO focusses on financial additionality[33], i.e. providing financial services only where the market can or does not do the same, or

[33] When FMO assesses E&S additionality, the focus is on FMO's role and contribution in the E&S area, thereby enhancing FMO's value addition and doing good. This issue is address under EQ1 and EQ2.

otherwise does not provide on an adequate scale or on reasonable terms. Other development finance institutions such as the International Finance Corporation (IFC) of the World Bank Group and the European Bank for Reconstruction and Development (EBRD), who also focus on private sector financing, apply an additionality concept comparable to FMO's.[34]

Applying the concept of additionality in the case of equity investments, one would expect that IDF invests in infrastructure and other projects in more difficult countries where the risks are relatively high and where the need is greatest. When providing loans it would make sense if the duration of the loans was longer than commercial funding, that adequate grace periods would be granted and that the loans would be provided in local currency. In specific cases subordinated loans could help other financial sources to join the finance plans of projects. During the evaluation of the additionality of IDF financing all these elements were verified. An important comparator during the analysis was FMO-A financing and the evaluation questions therefore focus on whether the risks taken by IDF are higher than in the case of FMO-A investments such as presented below under EQ 2.1. To judge the additionality of IDF financing in projects it is important to look at the catalytic effect (EQ 2.2) of the intervention as well, as it is essential that through IDF financing other development finance institutions and or commercial banks are willing to provide financing. Finally the assessment focused on the additionality question whereby the terms of IDF financing was compared with other funding sources, including FMO.

Set out below is a table summarising the 15 project ratings for additionality from the projects on which desk reviews have been carried out.

[34] IFC's additionality is defined as the benefit or value addition the institution brings that a client would not otherwise have. In other words, their additionality is a subset of IFC's role that is unique to IFC and that cannot be filled by the client or any commercial financier. Additionality for the EBRD is where the institution offers terms and conditions which reflect risk and private funding is not available on reasonable terms. That such opportunities exist is a result of imperfectly functioning markets in combination with the EBRD's attributes compared to those potential private alternatives, which lower the risk of the project. IFC and the EBRD base their performance evaluation criteria, including additionality, on the good practice standards of the Evaluation Cooperation Group (ECG). The ECG is the working group where the heads of evaluation departments of the five multilateral development banks and some other international financial institutions collaborate to develop good practice standards and to learn from each other.

Table 6 – Additionality analysis - Rating per project

EQ 2 – Additionality and catalytic effects																	
Project	**Average**	**Artumas Mtwara**	**Axiata**	**Bengaz**	**Digicel**	**Dutch Bangla**	**Eolo**	**Essel Clean Solns**	**Grown Energy**	**Guarantco**	**Kenmare**	**Kivu Watt**	**Omera Petroleum**	**Pan African Housing**	**Songas**	**Zanzibar Sugar**
Country		Tanzania	Bangla-desh	Benin	Haiti	Bangla-desh	Nicaragua	Nepal	Mozam-bique	Global	Mozam-bique	Rwanda	Bangla-desh	Africa	Tanzania	Tanzania
Sector		Energy	Telecoms	Energy	Telecoms	Financial	Energy	Energy	Agri-business	Financial	Mining	Energy	Energy	Housing	Energy	Agri-business
Region		Africa	Asia	Africa	Latin America	Asia	Latin America	Asia	Africa	Global	Africa	Africa	Asia	Africa	Africa	Africa
JC2.1 - Higher risk	3.2		3			3	4	3		3	3	3	3	4	3	
JC2.2 - Catalytic effect	2.6	2	3	1	3	3	2	3	3	3	3	3	3	3	3	1
JC2.3 - Additionality	3.1	2	4	2	3	4	4	3	3	3	3	3	3	3	3	3
Overall	2.8	2	3.3	1.5	3	3.3	3.3	3	3	3	3	3	3	3.3	3	2
JC2.1	IDF Loans and Equity Investments have higher financial risk ratings than FMO-A															
JC2.2	Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects															
JC2.3	Additionality of IDF Loans and Equity Investments															

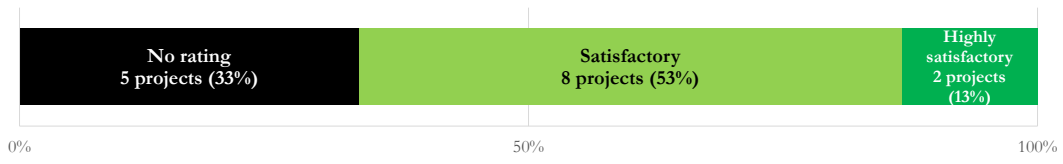
Rating scale: 4- Highly satisfactory; 3- Satisfactory; 2- Partly Satisfactory; 1- Unsatisfactory

Source: ADE

The analysis below is structured around the level of financial risk of IDF vs. FMO-A (JC2.1), the catalytic effect of IDF projects (JC 2.2), and their additionality (JC 2.3), which indicates that the IDF financing cannot be provided by commercial sources at equal or better terms.

JC 2.1 IDF Loans and equity investments have higher financial risk rating than FMO-A

As presented in the chart below in respect of higher risk of IDF investments versus FMO-A investments, of the 15 reviewed projects, 5 could not be assigned a rating due to the fact that in some cases there was no FMO-A financing involved. The lack of FMO-A financing may, however, indicate that a project was too high risk since the policy/operating procedure at FMO is that all potential new projects received should first be considered for FMO-A funding.



Source: ADE

IDF and other government funds are only considered when the risk of a possible project is unacceptably high for FMO-A. In some cases no comparative ratings or profiles of IDF portfolio and FMO-A portfolio could be examined as the documentation received

did not provide the information. In one case, the investment in Digitel in Haiti, the risk ratings were virtually identical and the FMO-A financing was provided to finance the expansion plan of the Company, although at shorter tenors and grace period than IDF financing. In the case of Omera Petroleum in Bangladesh, after serious consideration to provide FMO-A financing, an IDF investment was made as FMO considered the risks for a FMO-A financing too high.

The annual risk rating of IDF porfolio compared with annual risk rating of the FMO-A portfolio for the group of reviewed projects shows the appetite of IDF to take on higher risk investments than is the case for the FMO-A investment. The 3,2 (Satisfactory) average score for the 10 projects that were considered of a higher risk shows that for this group of projects FMO did well in selecting the right projects for IDF financing (see an example in Box 1).

Box 3 – Digicel, telecoms in Haiti

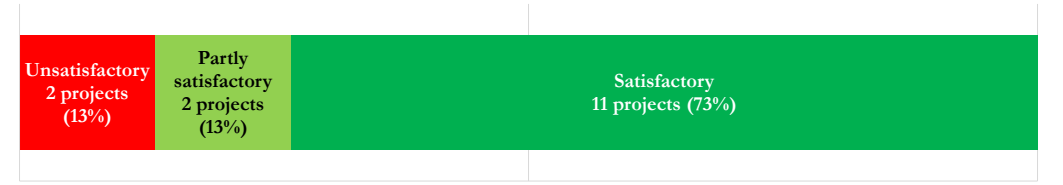
This is an example of a project with a Satisfactory score whereby IDF accepts a higher risk than the FMO-A investment. IDF contributed to the initial investment plan (USD 12m over the USD 64m requested) whereas FMO with FMO-A funding participated in a subsequent financial plan to fund the high growth in the number of subscribers (USD 140m, of which 50% of debt including USD 15m from FMO-A). The original finance plan was funded through IDF due to weak regulatory framework, country risk and Digicel being a start-up. Since Digicel has not encountered any problem with the regulator and has exceeded its business plan, FMO felt comfortable to finance the expansion phase with FMO-A funds. The margin of both loans was the same, but in the case of IDF financing the tenor and grace period were longer.

When looking to the country risk profile in respect of the 15 reviewed projects it is important to note that countries were mostly low income countries at the time that IDF financing was arranged. Although Bangladesh is currently a Lower Middle Income country (since 2016), all nine IDF-financed projects were developed when Bangladesh was a Low Income Country. Nicaragua was the only country belonging to the group of lower Middle Income countries at the time of financing in 2011. Of the group of 15 projects, 6 of them or 40% of the projects were considered too risky for FMO-A financing. High country risk was often an important reason for FMO not to offer FMO-A funding. The analysis in respect of country risk shows that the funds from IDF for this group of projects were invested in developing countries that needed assistance most.

JC 2.2. Catalytic effect - mobilisation of commercial and development institution financing in IDF financed projects

The average score for the catalytic effect of the 15 IDF projects examined was just below Satisfactory at a level of 2.6 (see Table 5 above). Although 11 projects scored a Satisfactory rating (3), as is demonstrated in the chart below, the overall score was influenced negatively by two Unsatisfactory ratings on catalytic effect, i.e. Bengaz in Benin and Zanzibar Sugar in Tanzania, and two Partly Satisfactory ratings, i.e. Artumas in Tanzania and Eolo in Nicaragua. In the case of Bengaz, there was not been

commercial funding available and from the development funding side, DEG from Germany at the end decided not to participate in the project. In the case of Zanzibar Suger, no catalytic effect could be observed either and the investment was motivated by doing business with a large agribusiness group operating in East Africa.



Source: ADE

The presence of FMO-A financing along side IDF financing seems to have been important in the majority of the projects examined. In the cases where, because of the risks involved, FMO-A financing or financing from other development sources such as DEG, was not provided, IDF financing was crucial for the realisation of the Satisfactory rated project in respect of catalytic effect. Box 3 presents mining project Kenmare in which development financing was available and in which IDF financing had a Satisfactory catalytic role.

Box 4 – Investment in the Kenmare mine in Mozambique

In the larger infrastructure projects such as the mining company Kenmare in Mozambique, IDF financing of 2004 at the amount of € 15m could only be modest. However, together with other financial parties such as the European Investment Bank (EIB) and KfW of Germany, alongside FMO-A financing, the contribution of IDF towards the subordinated loan financing was important for the financing plan and helped in the mobilisation of commercial loans. IDF played a crucial role in 2007 and 2014 through funding of US$ 2,5m to enable Kenmare to continue operations following cost overruns and project delays. In addition, IDF provided a grant of € 300,000 in 2009 to further support the project. Overall, IDF played a Satisfactory role from a catalytic point of view in the financing of Kenmare.

As mentioned above, two Unsatisfactory rated project on Catalytic effect were Zanzibar Sugar in Tanzania and Bengaz in Benin. In respect of Zanzibar Sugar see further Box 4 below.

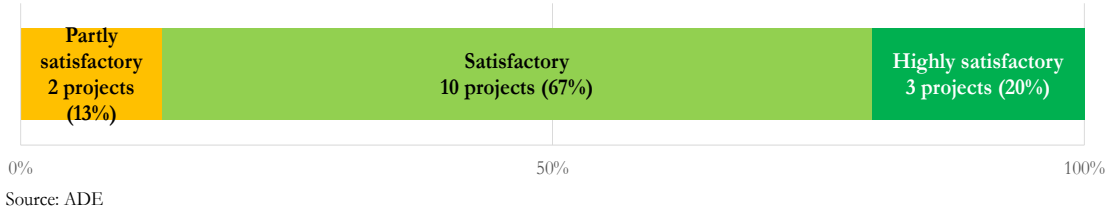
Box 5 – Zanzibar Sugar in Tanzania

Zanzibar Sugar involves the restart and rehabilitation of a sugar plantation and factory in Mahonda, Zanzibar with a nucleus farm of 4,000 acres (1,600 hectares). The project involves the expansion of: (i) processing capacity from 500 MT/day of sugarcane to 800MT/day, (ii) the nucleus farm by 1,380 acres, and (iii) establishment of outgrower program with nearby farmers to provide up to 36% of the cane. Planned annual capacity of the factory is 200,000 MT, based on 250 days of production.
Unfortunately, there was no catalytic effect as no additional funding was mobilised. In fact $1.8m of the $11.5m IDF loan was used to repay another loan from the East

African Development Bank. There was no discussion about the rationale for the funding other than it being used as a possible first step into a relationship with a very large agribusiness group with over $2 bn of revenues and a number of interests in East Africa, reason why an Unsatisfactory rating on catalytic effect is justified. The latest information is that FMO maintains a dialogue with the shareholders to seek opportunities to enhance the catalytic effect.

JC 2.3 Additionality of IDF Loans and Equity Investments

As mentioned in the introduction, additionality of IDF funding in projects requires that the funds could not have been obtained by the client from commercial banks or other sources at conditions equal or better than provided by the IDF. The analysis of the 15 reviewed projects shows (see chart below) that the score on IDF's Additionality with a rating of 3.1 is above Satisfactory (3 projects are rated highly Satisfactory and 10 projects are rated Satisfactory). Only two projects were rated Partly Satisfactory (see chart below).



Source: ADE

Highly Satisfactory: Three projects were given a Highly Satisfactory score on additionality: Dutch Bangla Bank (DBBL) in Bangladesh where IDF financing was allocated to infrastructure (water treatment plants) financing in the textile sector; Axiata, also in Bangladesh involving financing for a dynamic telecom enterprise in an immature market situation, and Eolo, a windfarm in Nicaragua. In the case of DBBL IDF financing was a subordinated loan denominated in local currency with a tenor of 12 years and 5 years grace period, which could not be matched by any other source of funding. The FMO-A financing that was provided was a senior loan requiring a mortgage on the assets of the bank and the tenor was 9 years. FMO had been an early equity investor in the DBBL and at the time of IDF financing in 2008, only 1% of the equity remained. Axiata, in which DEG and FMO-A funding was made available, was supported with IDF funding through a subordinated loan in local currency. In the case of Eolo, tenures of IDF and FMO-A financing were the same, although the US$ 12 million from IDF was provided as a subordinated loan (see further Box 5 below).

Box 6 – Eolo Windfarm, Nicaragua

The Eolonica S.A. wind farm is a 44MW wind farm on the shore of lake Nicaragua, adjacent to the wind farms Amayo I and II; about 120km south of Managua. The project includes 22 2MW G90 Wind Turbine Generators, 200m transmission line, and a 60 MW substation connecting the project to the regional grid. The farm is connected to the Nicaraguan National grid via a 230-kV transmission line at its own substation. The sponsor Globeleq provided the equity while IDF provided a subordinated loan, while simultaneously FMO-A, Proparco and DEG provided

senior loans. At the time of project approval FMO considered IDF investment in Eolo to have strong additionality as there was no availability of other long-term mezzanine funding at such early stage, allowing the sponsor to optimise the size of the project.

Partly Satisfactory: One of the two projects with such level of rating on Additionality was Bengaz (Benin) in which IDF financing comprised a loan to allow the company to purchase 2% of the equity of the West African Pipeline Company[35] (WAPCo). Although IDF investment seemed additional, the lower rating is justified as the 2% equity stake in this large project with very high profile shareholders could have easily been financed by these shareholder (See Box 6 below).

Box 7 – Bengaz, Benin

Bengaz had a capital of $0.5m and IDF provided a loan of $15m. Due to WAPCo construction cost overruns (project increase from $0.6bn to more than $1bn) further loans to Bengaz for onward investment in WAPCo of more than $10m were made. In this project all the risks were taken by IDF. There was no mobilisation of commercial or development finance by IDF.

Bengaz was considered as a project promoting regional integration and thus contributing to the creation of larger energy markets in Africa. The WAPCo transaction therefore fitted with IDF criteria. The funding seems to have been additional in the sense that at the time no other commercial or development bank was prepared to finance the participation of Bengaz in WAPCo. However, Bengaz's contribution was minimal with a 2% stake in WAPCo that was promoted by major oil companies and Nigeria National Petroleum Company. IDF funding to Bengaz was not essential, hence why the Additionality of IDF in this project is rated only Partly Satisfactory.

The Table below lists the type of IDF investments, by sector, country and type of product. It can be seen that financing was provided in a mix of risk capital instruments, senior loans and grants. The 15 reviewed projects were allocated in total 20 products, of which 70% involved equity or quasi equity products plus grants. The fact that these risk-taking products were used mainly in LIC countries is an indication of the development rationale for these IDF interventions. It shows that IDF funds were used in risky environments, and that development impact of projects was a key objective. It should, though, be noted that the use of subordinated loans, where IDF has a higher additionality and catalytic role, were only used in four projects, compared with six where senior loans were provided. Moreover, subordinated loans are less risky than pure equity while still allowing IDF to mobilise other financial partners in projects.

Comparison of the 15 reviewed projects with the Non-reviewed IDF portfolio

As the analysis based in this report is substantially based on the 15 reviewed IDF projects, the question should be asked whether there are considerable differences between the group of 15 reviewed IDF projects and the group of non-reviewed IDF

[35] IDF also financed Sotogaz in Togo that was also involved as a shareholder in the pipeline company WAPCo.

projects. In this section such comparison is made in respect of type of products/facilities. As presented in Table 6 below, the composition of the group of non-reviewed projects with 27,6% in number of senior loans and 72,4% in number of equity and other risk taking products plus grants, shows similarities with the group of 15 Reviewed projects where 70% was allocated as high risk products or grants. It is important to conclude that the 72% risk taking products and grants for IDF portfolio as a whole, as presented at the bottom of Table 6, is a clear indication that IDF investments have assumed Satisfactory risks and brought significant additionality to the IDF- supported projects.

Table 7 – Allocation of IDF Financing products to the 15 reviewed projects compared with 80 non-reviewed IDF projects

No.	Projects	Sectors	Countries	Country Classification	Loans		Equity	Grants	No. products	%
					Senior Loan	Mezzanine financing				
1	Artumas	Energy	Tanzania	LIC			1		1	5.0%
2	Axiata	Telecoms	Bangladesh	LIC		1			1	5.0%
3	Bengaz	Energy	Benin	LIC	1			1	2	10.0%
4	Digicel	Telecoms	Haiti	LIC	1				1	5.0%
5	Dutch Banglabank	Financial	Banglasesh	LIC		1			1	5.0%
6	Eolo	Energy	Nicaragua	LMIC		1			1	5.0%
7	Essel Clean Solns	Energy	Nepal	LIC		1			1	5.0%
8	Grown Energy	Agribusiness	Mozambique	LIC				1	1	5.0%
9	Guarantco	Financial	Global	na			1		1	5.0%
10	Kenmare	Mining	Tanzania	LIC	1		1	1	3	15.0%
11	Kivu Watt	Energy	Rwanda	LIC	1		1		2	10.0%
12	Omera Petroleum	Energy	Bangladesh	LIC	1		1		2	10.0%
13	Pan African Housing	Housing	Africa	na			1		1	5.0%
14	Songas	Energy	Tanzania	LIC		1			1	5.0%
15	Zanzibar Sugar	Agribusiness	Tanzania	LIC	1				1	5.0%
				Total	6	5	6	3	20	100.0%
				Percentage of products used	30.0%	25.0%	30.0%	15.0%	100.0%	
	Total financing products in remainder of IDF Portfolio (80 projects				29	20	25	31	105	
				Percentage of products used	27.6%	19.0%	23.8%	29.5%	100.0%	
	Total financing products IDF Portfolio				35	25	31	34	125	
				Percentage of products used	28.0%	20.0%	24.8%	27.2%	100.0%	

Source: ADE

As is presented in Table below, of the group of 15 reviewed projects based on income classifications in year of approval, 80% of the number of projects took place in LICs and for the group of non-reviewed projects this is only 46,3%. Of the entire IDF portfolio, 51,6% of the projects took place in LICs, 22,1% in higher income countries and 26,3% regional/globally. The focus on LICs is in line with IDF's objectives, which started as a fund for lower income countries.

Table 8 – Focus of IDF portfolio 2003-2016 based on Country Income Classifications at year of approval: reviewed versus non-reviewed projects

Reviewed versus Non-reviewed IDF Projects	LIC	%	LMIC	%	UMIC	%	Global/ Regional	%	Total IDF Projects	%
Reviewed	12	80.0%	1	6.7%	0	0.0%	2	13.3%	15	15.6%
Non-reviewed	37	46.3%	16	20.0%	4	5.0%	23	28.8%	80	83.3%
TOTAL	49	51.6%	17	17.9%	4	4.2%	25	26.3%	95	100.0%

Source: ADE analysis

However, when reviewing these country classifications during certain time periods of the evaluation period 2003-2016, it seems that in more recent years slightly more IDF projects were developed in higher income countries. Table 8 below shows that in the period 2003-2011 64,8% of the projects were developed in LICs and only 11,1% in the group of MLICs/UMICs. However, in the period 2012-2016, less IDF projects were

developed in LICs (34,1%) and more in higher income countries MLICs/UMICs (36,6%). If IDF would continue this trend there is the risk that in the future IDF's additionality might decrease, as too little is done in LIC countries.

Table 9 - Comparison of country classificationsin year of IDF approval 2003-2011 versus 2012-2016

Description/Country income classifications	LICs	MLIC/ UMICs	Global/ regional	Total no. of projects
Total number of IDF projects approved during the period 2003-2011	35	6	13	54
Percentage of total	64.8%	11.1%	24.1%	100.0%
Total number of IDF projects approved during the period 2012-2016	14	15	12	41
Percentage of total	34.1%	36.6%	29.3%	100.0%

Source: ADE

3.3 EQ 3 – Revolvability

Has IDF complied with its mandate to be a revolvable fund? Does IDF have a viable business model that strikes an appropriate balance between higher potential developmental outcomes/impacts and higher project financial risks/lower potential returns? Will the Fund be able to sustain itself after 2018?

EQ3 – Summary Response

Key Features and Outputs of ADE Revolvability Model (RM)

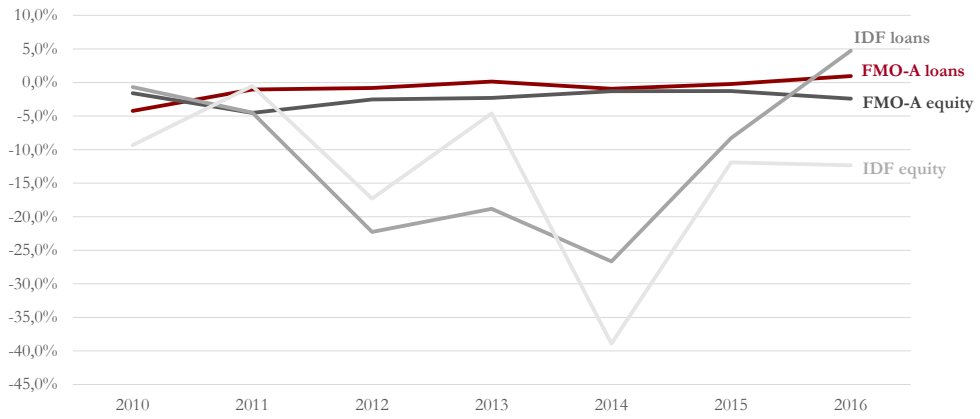
In building a model that demonstrates IDF 2 to be financially sustainable and meet the target commitments of €60m per year, it should be noted that:

- The 2012 revolvability model had major flaws that necessitated ADE having to build a RM for IDF 2 from scratch. The new model assumes that €314m of IDF 1 assets will be transferred to IDF 2 in 2019. Thereafter with annual commitments projected at €60m per annum the portfolio of IDF 2 will grow to €460m (net of loan repayments and equity exits) by 2028.
- From the RM simulation, based on annual commitments of €60m there is a requirement of DGIS (top-up) funding totaling €115m over the five years 2019 to 2023 (an average of €23m per year). Should the annual volume be €50m then the DGIS funding requirement drops to €76m. However, there is great uncertainty over how much will actually be required given the volatility in IDF operations. Moreover, the effect of implementing the FMO 2025 Strategy for IDF is unclear.

JC 3.1 Evolution and drivers of portfolio performance pre and post 2012

The chart compares the performances of FMO-A and IDF. It illustrates clearly the much higher risk and volatility in IDF portfolio. The FMO-A portfolio has suffered relatively low portfolio losses, even in the years following the global economic crisis. IDF, by contrast, saw a dramatic increase in impairments starting in 2012 and through to 2015.

Figure 8 – IDF versus FMO-A Impairment Charges



Source: ADE

Also:

- Overall value adjustments for the A portfolio averaged 1.2% compared with 10% for IDF. For loans the figures are 0.8% for A and 8.0% for IDF, while for equity the ratios are 1.2% and 13.9% respectively. While the simplistic methodology used to calculate these rates is not rigorous it still highlights the poor investment performance of IDF portfolio.
- In only one year, 2010, were FMO-A impairment charges higher than those for IDF.

In summary, FMO-A's portfolio has been much more cautiously managed than that of IDF, which has taken on a large number of risky investments, especially in the early years when a number of high value, high risk investments were made.

IDF's volatile portfolio performance can be seen in the chart on the right that covers the period from 2005 to 2016. The equity performance and overall IDF net income are very closely related. In 2005 there was a very large equity gain on a telecom investment in Bangladesh of almost €30m, by far the largest that IDF has made. Equity impairments were particularly high in 2008 and the 2012 to 2014 period.

Figure 9 – IDF Portfolio Performance

Source: ADE

The chart also shows the high dependence of IDF profitability and viability on the loan portfolio where interest income and lower impairment rates have been the drivers. Dividends from the equity portfolio have been low. In 2015 and especially 2016 there has been a notable improvement in portfolio performance and profitability.

JC 3.2 Financial Performance

The summarised balance sheets of IDF together with the revolvability ratios are shown below.

Table 10IDF summarised Balance Sheets (2002-2016)

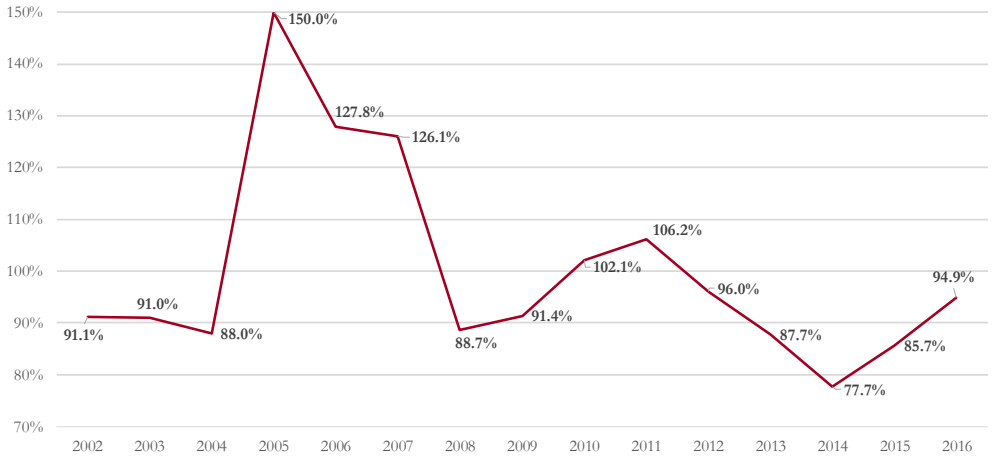
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Portfolio	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m
Loans	-	8.0	12.4	60.8	101.3	82.9	112.5	134.3	143.4	152.1	139.0	126.1	115.1	126.0	191.5
Equity	-	13.3	36.2	25.1	50.3	82.1	32.9	40.2	50.6	75.2	75.9	83.7	62.8	89.2	89.2
Total	**-**	**21.2**	**48.5**	**85.9**	**151.6**	**165.0**	**145.4**	**174.5**	**194.0**	**227.4**	**214.9**	**209.8**	**178.0**	**215.2**	**280.7**
Cash	22.4	27.9	6.8	4.6	10.6	16.3	- 3.2	- 10.9	10.7	- 0.8	10.4	27.0	30.8	13.8	14.2
FMO	- 2.1	- 4.1	- 6.2	0.9	- 12.8	- 8.7	- 1.1	0.7	-	-	- 1.0	0.0	-	0.0	- 1.0
Other assets (net)	0.1	0.2	0.1	8.9	6.2	3.5	3.4	1.6	3.1	6.1	2.2	1.8	2.6	3.9	1.9
IDF Net Assets	**20.5**	**45.3**	**49.2**	**100.3**	**155.6**	**176.2**	**144.4**	**165.9**	**207.7**	**232.6**	**226.5**	**238.7**	**211.3**	**233.0**	**295.7**
DGIS Contribution	22.4	49.7	55.9	66.8	121.7	139.7	162.9	181.5	203.5	219.0	238.1	272.0	272.0	272.0	311.5
Reserves etc	- 2.0	- 4.5	- 6.7	33.4	33.9	36.4	- 18.5	- 15.6	4.2	13.7	- 11.7	- 33.3	- 60.7	- 39.0	- 15.8
Net DGIS 'Capital'	**20.5**	**45.3**	**49.2**	**100.3**	**155.6**	**176.2**	**144.4**	**165.9**	**207.7**	**232.6**	**226.5**	**238.7**	**211.3**	**233.0**	**295.7**
Revolvability	91.1%	91.0%	88.0%	150.0%	127.8%	126.1%	88.7%	91.4%	102.1%	106.2%	95.1%	87.7%	77.7%	85.7%	94.9%

Source: IDF annual reports

- As would be expected the portfolio accounts for more than 90% of net assets.
- The portfolio values are shown net of provisions that have been significant in recent years. Major weaknesses in the portfolio were first recognised in 2012 and are reflected in the revolvability ratio (RR) that reached a low of 78% at the end of 2014 before improving in 2015 and 2016, although it was still below the 100% threshold in 2016.
- The gross portfolio (equity and loan) at the end of 2016 was €417m against which there were provisions of €136m (33%).

- 41% of the loan portfolio by value was non-performing at the end of 2016.
- The effect of the poor portfolio is reflected in IDF revolvability ratio[36] (RR) that has fluctuated widely since IDF was established. The peak ratio of 150% in 2005 was the result of a large equity gain (almost €30m) when the portfolio was relatively small. The RR declined steadily until 2008 before a modest recovery. There were then major impairment provisions in the 2012 to 2014 period. By the end of 2016 the RR stood at 95%.

Figure 10 – IDF Revolvaiblity ratio



Source: ADE

- The RR reflects income on the portfolio, primarily from interest on loans, that is offset by portfolio losses primarily on equity investments. The gains on succesful equity investments have not compensated losses on other equity investments.
- While the RR has improved to 95%, it remains to be seen whether provisions will be required in the future against projects that are currently in the early stages of implementation.

In short, while the balance sheet has improved it still has a way to go to attain a satisfactory level of financial strength and attain a RR of at least 100%.

The financial performance of IDF is set out in the following table.

[36] Defined as IDF net assets / total DGIS contributions. A ratio of 100% is a breakeven position for financial viability.

Table 11 – IDF Financial Performance

IDF Financial Performance															
			2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
			€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m
Loan Interest + fees			5.6	8.1	9.5	5.4	9.3	14.7	11.4	10.7	11.8	11.6	16.3	17.9	132.2
Dividends			0.1	0.3	0.4	0.5	1.2	0.9	1.2	5.1	3.3	2.8	2.2	2.5	20.5
Equity gains			26.4	-	-	- 0.1	- 1.3	1.4	-	8.2	-	1.7	3.1	0.4	39.8
Total Income	a		**32.0**	**8.4**	**9.9**	**5.8**	**9.2**	**17.0**	**12.6**	**24.0**	**15.1**	**16.1**	**21.7**	**20.8**	192.5
															-
Loan impairments			-	-	- 1.0	- 6.2	- 4.7	- 1.0	- 6.8	- 30.9	- 23.7	- 30.7	- 10.4	9.1	-106.4
Equity impairments			- 0.1	-	-	- 23.8	- 2.5	- 4.7	- 0.4	- 13.1	- 3.8	- 24.5	- 10.6	- 11.0	- 94.6
Total impairments	b		**- 0.1**	**-**	**- 1.0**	**- 30.1**	**- 7.2**	**- 5.7**	**- 7.2**	**- 44.1**	**- 27.6**	**- 55.1**	**- 21.0**	**- 1.9**	-201.0
															-
Net Portfolio Income	a+b		**31.9**	**8.4**	**8.9**	**- 24.3**	**2.0**	**11.3**	**5.4**	**- 20.1**	**- 12.5**	**- 39.1**	**0.6**	**18.9**	- 8.4
															-
Management Fee FMO			- 2.9	- 3.6	- 3.2	- 3.3	- 3.4	- 3.5	- 3.7	- 2.9	- 3.1	- 3.3	- 3.6	- 5.1	- 41.6
FX + derivatives movements			2.5	- 4.5	- 8.1	3.2	- 2.8	5.8	0.8	- 1.6	- 4.1	16.2	13.5	6.6	27.5
Grants			- 2.3	- 2.9	- 4.0	- 1.0	- 0.5	- 0.3	- 1.0	-	-	-	-	-	- 11.9
Other			0.0	0.2	- 0.0	- 1.3	- 0.9	0.4	0.4	- 0.0	- 0.0	-	-	-	- 1.2
Total fees etc	c		**- 2.6**	**- 10.9**	**- 15.3**	**- 2.4**	**- 7.5**	**2.4**	**- 3.5**	**- 4.5**	**- 7.2**	**12.9**	**9.9**	**1.5**	- 27.3
															-
Net IDF Result	a+b+c		**29.3**	**- 2.4**	**- 6.4**	**- 26.7**	**- 5.5**	**13.8**	**1.8**	**- 24.6**	**- 19.7**	**- 26.2**	**10.5**	**20.4**	- 35.7
Yields on average portfolio															
Loans -average interest			14.6%	9.8%	8.9%	5.1%	6.6%	10.1%	7.3%	7.3%	8.9%	9.6%	13.5%	12.9%	
Equity - dividends			0.2%	0.8%	0.6%	0.9%	3.3%	1.9%	2.0%	6.8%	4.1%	3.8%	2.9%	3.9%	

Sources: IDF Annual Reports + ADE analysis

It should be noted:

- Overall from inception to 2016 IDF made a cumulative loss of €36m, the result primarily of high impairments and value adjustments totalling €201m. Although loan impairments were slightly higher than equity losses, proportionately the equity portfolio suffered bigger losses, as would be expected given the higher risk levels involved.
- Losses and impairments on the equity portfolio (€95m) dwarf the equity gains that total only €40m. There was one gain on a Bangladesh telecoms equity investment in 2005 of €26m. The only other significant gains amounting to €8m were in 2012. To be viable, IDF has to reduce the portfolio losses it incurs.
- Interest on loans accounts for 69% of total income, compared with 11% from dividends. It is this interest income that underpins the financial viability of IDF not dividends and capital gains on equity investments. This can be seen in the relatively average interest rates on loans (reaching 13% in 2015 and 2016) compared with much lower dividend yields[37].
- Foreign exchange losses on equity investments and local currency denominated loans have also been a heavy expense for IDF.
- The accounting treatment for grants in the annual reports appears to have changed. Since 2012 it has not been possible to identify the amounts that IDF has committed/disbursed.
- IDF's performance improved significantly in 2015 and 2016 with profits of 410m and €20m respectively, due to a combination of lower portfolio

[37] It should be stressed that interest rates and dividend yields are illustrative only. Moreover, they are based on the net portfolios (after impairments).

impairment provisions (especially in 2016) and favourable foreign exchange movements.

The overall portfolio performance is summarised in Table 12 below. It shows that while the IRR on loans was a postive 2.5%, on equity it was a negative IRR of 6.6%. Overall the portfolio had an IRR of -0.7%. On loans the relatively high interest rates have been sufficient to offset high loan impairment rates. The challenge is to raise the retun on equity investments, or at least reduce the rate of failure.

Table 12 – IDF Portfolio Performance

Product	Income Mix	Result	IRR
	%	€m	
Loans	69%	25.8	*2.5%*
Equity	30%	- 34.3	*-6.6%*
Overall	**100%**	**- 8.4**	***-0.7%***

Source: ADE, based on IDF Annual Reports

IDF's cashflow is summarised below.

Table 13 – IDF summarised Cashflows (2002-2016)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m
Inflows																
DGIS	22,4	27,3	6,2	10,9	54,9	18,0	23,2	18,6	22,0	15,5	19,1	33,9	-	-	39,5	311,5
Interest and dividends	-	-	-	-	8,4	3,3	3,8	12,1	7,7	7,8	17,6	12,4	12,0	12,4	19,1	116,5
Loan repay'ts + equity sales	-	-	0,4	37,0	6,8	29,9	8,6	6,2	9,5	5,2	17,8	7,5	15,9	14,2	23,1	182,2
Total	**22,4**	**27,3**	**6,6**	**48,0**	**70,1**	**51,1**	**35,6**	**37,0**	**39,3**	**28,5**	**54,5**	**53,8**	**27,9**	**26,6**	**81,6**	**610,3**
Outflows																
Investments	-	- 22,0	- 28,2	- 38,5	- 70,4	- 37,5	- 41,9	- 34,7	- 20,6	- 35,6	- 41,0	- 31,0	- 24,4	- 45,8	- 73,8	- 545,5
FMO management fee	- 2,1	- 2,3	- 2,9	- 2,9	- 3,6	- 3,2	- 3,3	- 3,4	- 3,5	- 3,7	- 2,9	- 3,1	- 3,3	- 3,6	- 5,1	- 48,9
Grants and other	0,1	0,6	1,1	- 1,6	- 3,7	- 0,7	- 2,3	- 4,8	5,7	- 0,6	- 0,4	- 2,1	3,6	5,9	- 3,4	- 2,8
Total	**- 2,1**	**- 23,7**	**- 30,0**	**- 43,0**	**- 77,8**	**- 41,3**	**- 47,5**	**- 42,9**	**- 18,4**	**- 40,0**	**- 44,4**	**- 36,1**	**- 24,2**	**- 43,5**	**- 82,3**	**- 597,1**
Net cashflow	**20,4**	**3,6**	**- 23,4**	**4,9**	**- 7,7**	**9,8**	**- 11,9**	**- 5,9**	**20,9**	**- 11,5**	**10,2**	**17,7**	**3,7**	**- 16,9**	**- 0,7**	**13,2**
Opening cash	-	20,4	24,0	0,5	5,4	- 2,2	7,6	- 4,3	- 10,2	10,7	- 0,8	9,4	27,0	30,8	13,8	-
Closing cash	20,4	24,0	0,5	5,4	- 2,2	7,6	- 4,3	- 10,2	10,7	- 0,8	9,4	27,0	30,8	13,8	13,2	13,2

Source: ADE, based on IDF annual reports

The key findings are:

- Almost €600m was disbursed in investments (€545m) and management fees to FMO (€49m).
- Of the €545m invested in the portfolio since 2002 a gross amount of €417m (77%) was still on the balance sheet in 2016. Reinvestement of loan repayments and equity realisations in new projects has therefore been modest, in part due to relatively high investment losses.
- Few IDF projects have been transferred to FMO-A

The 2012 revolvability model (2012 RM) was not used by FMO as a planning or management tool in administering IDF. In fact there was no copy of the 2012 RM available at FMO and ADE had to obtain one from its author (Carnegie Consult). Particular features of the 2012 RM are:

- The model was built in the first half of 2012 and used financial and portfolio data on IDF as at the end of 2011. Given that the 2011 portfolio had only modest levels of impairments the 2012 RM factored in investment loss rates that were relatively low. However, the 2012 IDF balance sheet included very large increases in impairments that continued up until 2015. Consequently, the 2012 RM was based on assumptions that were unrealistically optimistic.
- As a result of the 2012 RM there was an explicit goal for IDF to recycle about €50m a year in new projects.
- It was not an integrated model comprising balance sheets, income and cashflow statements.
- The model contains inconsistencies between the assumptions that are supposed to drive the model outputs and the actual outputs. Unfortunately since the model was not used by FMO to manage IDF there was no information on the various key features and apparent anomalies in the model.

In short, the 2012 RM had no use subsequent to the DGIS approval to provide an additional €100m to IDF. Nevertheless, as per the ToR, it has been used as the basis for the ADE model.

JC 3.3 Focus of risk management systems and policies on long-term sustainability

IDF follows the risk management guidelines set by FMO. The risk rating systems for loans have changed several times since IDF was established. The current client risk (CRR) system was introduced in 2012 in consultation with Moody's. Clients are rated on a scale from F1 (best) to F21 (default) that are comparable with the AAA to C scale of rating agencies. It takes account of country risk which for a large proportion of IDF clients means that most new loans are rated between F13 and F16. Ratings are reviewed annually in the CRR reports and may be revised up or down depending on performance. For problem projects the FMO provisioning matrix[38] is used. Given the higher credit risk ratings that IDF projects have (high F scores), and the use of subordinated loans, high provision levels can be quickly reached.

Equity investments are valued according to FMO's equity valuation principles[39]. FMO's policy is to value its FMO and State Fund Equity Investment Portfolio (further referred to as the FMO Portfolio) at Fair Value and to achieve this by valuing individual Investments on an appropriate basis using a consistent approach across the portfolio. FMO's valuation policy follows the guidelines issued by the International Private Equity and Venture Capital valuation board (the "IPEV guidelines"). As part of its IDF portfolio management, investments are valued four times a year by FMO. Where a

[38] Memo from FCC to IRC – Approach Refinement Provisioning Policy, 19 November 2015

[39] Set out in the FMO Manual Equity Valuation November 2016

valuation is higher than cost price then unrealised gains are reported in the available for sale reserve.

IDF provides information to MFA on its operations and financial position in quarterly reports and annual reports. The ARs and brief quarterly reports are available on the FMO website. Prior to the start of each year, IDF also provides to MFA an Activity Plan (AP) that sets out its goals and objectives for the coming year. The AP includes a budget. It is important to note that DGIS disbursements to IDF take the form of grants to FMO. They are not paid into a separate legal entity with separate bank accounts. As a result, IDF is not accounted for as a traditional fund would be where a fund manager has a fiduciary duty to ensure that its assets are properly invested and accounted for. It is useful to contrast a government fund such as IDF that is managed by FMO-A with outside pension fund assets that are managed by FMO Investment Management B.V. which was established specifically for this purpose. As a fund manager FMO IM has to follow stringent regulations to ensure that these funds are being properly managed. While the quality and scope of financial reporting and disclosure of IDF annual reports has steadily increased, it is still some way behind that for investments made by third parties in funds managed by FMO IM. A case in point is the FMO Privium Impact Fund (PIF) launched in June 2016. The 2016 annual report for PIF sets out information that could provide a model for IDF reporting. Of particular interest for IDF would have been to provide in its quarterly and annual reports performance charts showing how it has evolved since its 2002 launch and its overall investment activities and portfolio.

In summary, IDF risk management guidelines and investment provisioning and valuation policies are good. The reporting and accountability of IDF, however, could be significantly improved, based on what FMO IM currently provides to outside investors whose funds it manages. Specifically, reports focus only on the time periods (quarters and years) they cover and not on performance over the medium to long-term, including the portfolio development since IDF was established.

IDF's eligibility criteria and portfolio limits were set out in *Beschikkingen* issued by MFA at the time of IDF's launch in 2002 with amendments in 2006, 2010 and 2013. Key conditions, which are set out in a IDF eligibility checklist, are:

- Project in DGIS approved country;
- Private ownership where possible;
- Maximum transaction no higher than 10% of portfolio (from 2010);
- Equity stake no higher than 20%;
- Maximum of 49% of total project financing;
- Maximum 40% in one sector;
- Acceptable ESG;
- Significant role for IDF.

The recently approved FMO 2025 Strategy which also applies to IDF will limit it to three sectors: renewable energy, agribusiness and financial sector. The 40% sector limit may be difficult to comply with, especially since financial sector projects are for the benefit of energy and agribusiness clients. It is noteworthy that in the early years of IDF

the 10% of portfolio maximum transaction appears to have been breached in projects such as Bengaz. Currently, IDF web page indicates "Loans of up to €10 million".

In summary, the eligibility criteria appear reasonable, with the possible exception of the sector limit.

JC 3.4 Revolvability

ADE has invested substantial resources in building a revolvability model (RM) intended to address two requirements. First, the RM provides an objective and realistic view of how IDF 2 might perform if a decision is made by MFA to approve its launch. It therefore demonstrates how the financial sustainability/revolvability might be achieved. Second, the RM could be used by FMO as a way of managing IDF 2 should it go ahead.

The key assumptions on which the RM has been built are the following.

- As a starting point, there is no constraint on funding availability from DGIS. Such funding makes up the any shortfall in IDF's cashflow. A minimum cash balance of €7.5m has been assumed to provide IDF 2 with sufficient liquidity. DGIS funding is the amount required year by year to maintain this minimum.
- Annual investment commitments of €60m over a 10-year period (2019 to 2028) in the renewable energy and agribusiness sectors (through direct and indirect investments using financial instruments ranging from pure equity, mezzanine finance, senior loans and grants) in accordance with the FMO 2025 Strategy adopted in mid-2017[40].
- An alternative scenario with annual investment commitments of €50m has also been modelled.
- IDF 2's capital will be provided primarily by the transfer of most of IDF 1's portfolio on 1 January 2019, a total of €314m. Data on the projected closing balance of IDF 1 at 31 December 2018 and the liquidation of IDF 1 portfolio from 2019 onwards was provided by FMO[41].
- Agri-business projects are assumed to be more risky and have higher failure rates than energy projects where FMO has more experience and expertise.
- IDF 2 loss/impairment rates will be lower than actually incurred on IDF 1 due to lessons learned on IDF 1 and a lower tolerance for risk.
- The management fee has been fixed at €8m per annum. No account has been taken of the lower fees of €4m per annum proposed by FMO in 2018 and 2019.

Because of the inherent major fluctuations in IDF investment volumes the RM being based on constant annual commitment volumes may be seen as an unrealistic approximation. While this may be true on a year to year basis, over the 10-year horizon of the model it is expected that annual variations will overall balance out. Readers/users are, however, advised to focus on the first five years of the model (2019 to 2023), since

[40] ADE is aware that IDF 1's investment volumes have fluctuated significantly year to year.

[41] ADE has not analyzed or reviewed these figures, other than making estimates as to the income elements (interest/dividends/capital gains) of receipts from 2019 onwards.

the final five years are subject to even more uncertainty. The model should not be seen as definitive. Rather it is a starting point in planning for IDF 2. Accordingly, the DB (Dashboard) sheet allows users to input different (*'What if'*) assumptions and see how this affects outputs.

The RM has three key outputs, displayed in the '3 Statements' sheet, the essential features of which are discussed below. The RM's base case income statement reveals:

- IDF 2's income (and inflows) in the early years arise primarily from IDF 1 portfolio as IDF 2 builds up its portfolio. If such income is excluded, then the income from IDF 2 portfolio is only sufficient to exceed FMO fees and impairments in the last three years.
- Based on the experience of IDF 1, interest income dominates portfolio income with only modest dividend income expected.
- The much higher FMO management fee severely reduces profitability.
- No gains on IDF 1 equity investments have been included because of their uncertainty according to FMO which expects a number of current IDF 1 equity investments to remain in the portfolio throughout the 10-year period.
- Modest IDF 2 equity gains are expected in the last three years of the RM period. Equity as investment instrument is expected to generate inferior returns than mezzanine or senior loans.
- Investment losses and impairment provisions while lower than those suffered by IDF 1 still represent a significant cost to IDF 2.

Overall IDF 2 returns are likely to be modest. It should be stressed, however, that the range of possible outcomes is wide, particularly in the latter years when the returns from IDF 2 portfolio that has to comply with the FMO 2025 Strategy will become evident. Below are the projected balance sheets.

Table 14 – IDF 2 Projects Balance Sheets (2019-2028)

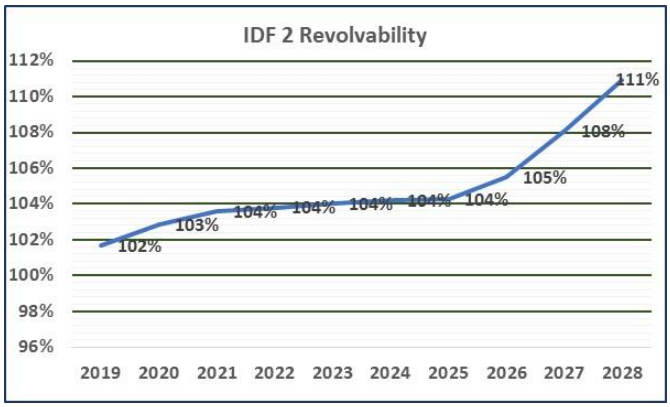
IDF 2 PROJECTED BALANCE SHEETS - €60m annual commitments											
Year	31-Dec	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Assets		€m	€m	€m	€m	€m	€m	€m	€m	€m	€m
Cash		7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Equity		7.2	22.1	44.4	66.4	88.2	110.5	133.3	152.5	167.5	177.9
Loans		12.8	37.9	73.0	104.5	131.2	153.6	171.6	185.0	193.8	197.6
IDF1 Portfolio		301.3	310.9	283.9	255.1	227.8	198.3	171.6	152.0	135.4	121.3
ASSETS		**328.8**	**378.4**	**408.8**	**433.6**	**454.6**	**469.9**	**484.0**	**497.1**	**504.2**	**504.3**
Liabilities											
LIABILITIES		-	-	-	-	-	-	-	-	-	-
Fund Capital											
IDF1 Capital transfer		326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4
IDF2 Paid-in capital		-3.3	41.2	68.7	92.9	115.5	132.0	147.8	158.9	160.8	150.3
IDF2 Reserves		5.6	10.8	13.7	14.2	12.8	11.5	9.8	11.8	17.0	27.6
NET ASSETS		**328.8**	**378.4**	**408.8**	**433.6**	**454.6**	**469.9**	**484.0**	**497.1**	**504.2**	**504.3**

Source: ADE

These balance sheets are relatively simple as they comprise portfolio and cash in assets on one side and capital on the other. Other notable features include:

- A relatively modest increase in the portfolio from €321m in 2019 (of which 91% is from IDF 1) to €497m[42] in 2028 (of which 24% is still from IDF 1 portfolio and 76% undertaken by IDF 2 from 2019 onwards).
- Driven initially by the IDF 1 portfolio. The revolvability of IDF 2 is forecast to grow modestly throughout the 10-year period. While it is not possible to separate the capital funding IDF 2 portfolio from that underpinning the declining IDF 1 portfolio, the operating losses it will incur imply that it will have a revolvability below 100%, notably in the first seven years before equity gains are forecast to occur in years 2026 to 2028. As would be expected, the cashflow forecast below mirrors the income statement in terms of inflows and outflows.

Figure 11 – Forecast IDF 2 Revolvability



Source : ADE

[42] The 2028 portfolio reflects new investments and the repayment of loans and equity exits for both IDF 1 and IDF 2 components.

Table 15 – IDF 2 Projected Cashflow Statements

IDF 2 PROJECTED CASHFLOW STATEMENTS - €60m annual commitments											
Year	31-Dec	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Beginning cash balanc	**A**	**40.0**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**
IDF1 cashflow into IDF2											
IDF1 loan interest + repayments		22.6	25.2	29.9	30.9	27.8	26.2	25.4	16.4	10.0	5.0
IDF1 dividends + exits		7.0	9.0	10.0	9.0	9.0	11.0	7.0	7.0	8.0	10.0
IDF1 portfolio disbursements		-30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IDF1 NET CASHFLOW	**B**	**-0.4**	**4.2**	**39.9**	**39.9**	**36.8**	**37.2**	**32.4**	**23.4**	**18.0**	**15.0**
IDF2 INFLOWS											
Dividends and fees received		0.2	0.3	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7
Interest on loans		0.0	0.0	0.4	1.5	3.3	5.2	6.9	8.3	9.5	10.4
Equity exits		0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	17.8	28.0
Repayments on loans		0.0	0.0	0.8	2.8	5.9	9.5	13.3	17.2	21.2	25.5
TOTAL INFLOWS	**C**	**0.2**	**0.3**	**1.7**	**4.8**	**9.7**	**15.3**	**20.7**	**34.5**	**49.1**	**64.5**
IDF2 OUTFLOWS											
FMO management fee		-8.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
Disbursements loans		-12.8	-25.1	-37.0	-36.3	-35.7	-35.0	-34.3	-33.7	-33.0	-32.3
Disbursements equity		-7.2	-14.9	-23.0	-23.7	-24.3	-25.0	-25.7	-26.3	-27.0	-27.7
Grants		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
TOTAL OUTFLOWS	**D**	**-29.0**	**-49.0**	**-69.0**	**-69.0**	**-69.0**	**-69.0**	**-69.0**	**-69.0**	**-69.0**	**-69.0**
Net cash before DGIS (E=A+B+		**10.8**	**-37.0**	**-19.9**	**-16.8**	**-15.0**	**-9.0**	**-8.4**	**-3.6**	**5.6**	**18.0**
DGIS FUNDING	**F**	**-3.3**	**44.5**	**27.4**	**24.3**	**22.5**	**16.5**	**15.9**	**11.1**	**1.9**	**-10.5**
FINAL NET CASH	**E+F**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**

Source: ADE

- The key item of note is the DGIS funding requirement line near the bottom of the sheet. No cash is required in 2019 due primarily to a large forecast cash balance being transferred from IDF 1 at the beginning of the year.This has been generated from what is required to maintain €7.5m of operating cash for IDF 2. It can be seen to peak in 2020 when IDF will be disbursing the final €30m of commitments for IDF 1 as well as €40m for IDF 2. From 2021 onwards, disbursements will be exclusively €60m per annum for IDF 2.
- The forecast total DGIS funding required for IDF 2 has been calculated over the first five years of IDF 2 (2019 to 2023) amounts to €141m, an average of €28m per annum. While there is a project peak requirement of €61m in 2020 in practice it should be possible for DGIS to smooth out disbursements to IDF 2 through discussions with FMO.
- Projecting cashflows beyond this period involves dealing with such high levels of uncertainty of IDF's investment operations as to make forecasts of little or no value. It is though projected that DGIS will have to continue making modest payments into IDF up until 2027, an average of about €11m per year bewtween 2024 and 2027.
- Net annual cash inflows from IDF 1 portfolio will exceed €30m for the years 2021 to 2025 inclusively.

Summary

The model and base line simulation generates the key data presented in the table below.

Table 16 – IDF Key simulation results

IDF 2 - KEY SIMULATION RESULTS							
	2019	2020	2021	2022	2023	Total	Avg
€60m Commitments p.a.	€ Mln	€ Mln	€ Mln	€ Mln	€ Mln	€ Mln	€ Mln
DGIS Contributions	- 3.3	44.5	27.4	24.3	22.5	115.5	23.1
IDF 1 + 2 Portfolio	321.3	370.9	401.3	426.1	447.1		
€50m Commitments p.a.							
DGIS Contributions	- 6.6	37.9	17.5	14.4	12.6	75.8	15.2
IDF 1 + 2 Portfolio	317.9	360.9	381.6	397.0	409.0		

Source: ADE

It can be seen that an annual commitment level of €60m will require a total funding (top-up) from DGIS of €115m over the period 2020 to 2023. If, however, commitments are reduced to €50m then the DGIS funding requirement drops to €76m. The table below shows that the 2023 portfolio for IDF would be €447m with €60m of annual commitments and 8% smaller at €409m with a €50m level.

SIMULATION RESULTS - KEY FINDINGS		
	Scenarios	
	€60m	€50m
TOTAL DGIS FUNDING 2019 - 2023	115.5	75.8
AVG YEARLY DGIS FUNDING	23.1	15.2
2023 NET PORTFOLIO	447.1	409.0

Source: ADE

It should be stressed that the RM has to deal with a very high level of volatility and uncertainty in the underlying assumptions that drive the outputs. Sensitivity analysis and regular reviews of these assumptions will need to be undertaken regularly if the model is to be a useful management tool for FMO and planning for DGIS.

JC 3.5 Individual Project Sustainability

In the table below are shown the financial sustainability ratings for the of 15 projects selected for desk review.

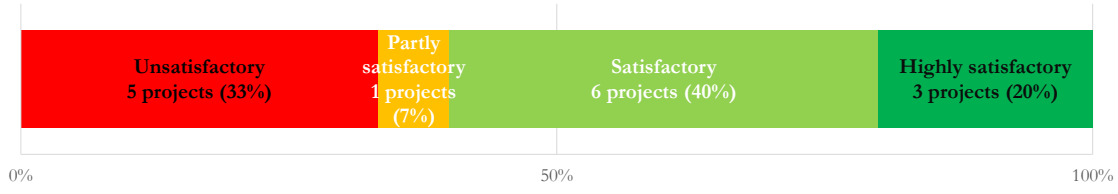
Table 17 – Revolvability analysis – Rating per project

EQ 3 – Revolvability																
Project	**Average**	**Artumas Mtwara**	**Axiata**	**Bengaz**	**Digicel**	**Dutch Bangla**	**Eolo**	**Essel Clean Solns**	**Grown Energy**	**Guarantco**	**Kenmare**	**Kivu Watt**	**Omera Petroleum**	**Pan African Housing**	**Songas**	**Zanzibar Sugar**
Country		Tanzania	Bangla-desh	Benin	Haiti	Bangla-desh	Nicaragua	Nepal	Mozam-bique	Global	Mozam-bique	Rwanda	Bangla-desh	Africa	Tanzania	Tanzania
Sector		Energy	Telecoms	Energy	Telecoms	Financial	Energy	Energy	Agri-business	Financial	Mining	Energy	Energy	Housing	Energy	Agri-business
Region		Africa	Asia	Africa	Latin America	Asia	Latin America	Asia	Africa	Global	Africa	Africa	Asia	Africa	Africa	Africa
Project sustainability	2.47	1	4	1	4	4	3	3	1	3	2	3	3	1	3	1
JC3.5	Individual Project Sustainability															

Rating scale: 4- Highly satisfactory; 3- Satisfactory; 2- Partly Satisfactory; 1- Unsatisfactory

Source: ADE

The ratings show a clear separation between satisfactory and highly satisfactory projects (9) and unsatisfactory (5) projects, with only one (Kenmare) being partly unsatisfactory. In applying ratings ADE has separated the financial effects on IDF of cost overruns and delays from the bringing in to service of a project that is viable. A project might have been too expensive for the investors but finally deliver the planned outputs, a good example of this is KivuWatt. In the case of greenfield innovative infrastructure projects in difficult operating environments, cost overruns and delays are almost always to be expected. Given the nature of IDF's mandate and the inherent trade-off between low risk/better financial returns and high risk/potentially higher development outcomes, it is difficult to comment on what is an appropriate/successful business model that it should seek to achieve.



Source: ADE

Ratings take account of the need for projects to demonstrate a viable business model. Key findings are analysed by ratings category.

Highly Satisfactory: Two of the three projects (Axiata and Digicel) are mobile telecoms companies that were expanding their networks from very low bases. In both cases the expansion happened more quickly than planned. Digicel with an 80% share dominates the Haiti market. Axiata is the number two in Bangladesh. Both are part of regional telecoms groups. The third project, Dutch Bangla Bank, is the eighth largest bank in Bangladesh where it has built a strong position focusing on the SME market.

Satisfactory: Five[43] of the six satisfactory projects are in the energy sector. All of them have demonstrated the capacity to operate successfully in difficult environments. One of them, KivuWatt, is an innovative electricity generation project using methane gas extracted from under Lake Kivu that straddles the Rwanda DRC border. Despite the 50% cost overrun the project started at the end of 2015. Increasing output from 26MW to 100MW is under consideration. The Eolo wind farm in Nicaragua has been performing above expectations both financially and in the volumes of electricity generated. The only concern is the regulatory environment and country risk. Omera Petroleum successfully entered the domestic bottled gas market in Bangladesh and after two years is the second largest distributor. It is currently expanding its capacity and is profitable. Songas in Tanzania is a stable infrastructure company whose medium to long term viability appears assured. It has remained profitable despite major challenges in obtaining payment from the state owned power offtaker Tanesco. Succesful energy projects demonstrate FMO's ability to identify and structure investments in this sector.

Guarantco, a financial company providing guarantees (including to local Nepalese banks funding Essol), has a strong capital base and support from its shareholders (including FMO). Although it is yet to be profitable, it is moving towards a viable business model.

Partly Satisfactory: Kenmare suffered major delays and cost overruns in bringing its mine in northern Mozambique into operation. Subsequently prices of its principal product fell by as much as 80%. With, inter alia, FMO support (both FMO-A and IDF) it was restructured in 2016 and combined with cost cutting has become profitable. There remain production and market challenges, however, hence the partly satisfactory rating.

Unsatisfactory: The five companies rated as unsatisfactory have either failed in terms of implementing the projects that were the reason for IDF financing, or they have yet to develop viable business models that will ensure financial viability.

Two of the five projects (Grown Energy and Zanzibar Sugar) are in the agribusiness sector. In both idea was to grow sugarcane (and sweet sorghum for GE) that would be processed into bio-ethanol and refined sugar respectively. In each project the primary problem has been the agricultural production. ZS has to date failed to produce sufficient cane for its factory. In the case of GE[44] it appears that the land chosen in central Mozambique for sugarcane and sweet sorghum was not suitable. Moreover, ethanol prices have declined substantially. While ZS may yet succeed this is unlikely to happen in the foreseeable future.

Pan African Housing is an example of a financial institution that has to date failed to build a business model for the development of affordable housing to sell or rent, and also has major weaknesses in its management, hence the unsatisfactory rating.

[43] One, Essel a hydropower project in Nepal, is still under construction but a tentative 3 rating has been given on the basis of the project progress and the quality of the sponsors.

[44] Limited monitoring information on this convertible grant was available.

Artumas built the planned infrastructure (a 12MW power plant and pipeline connecting it to an offshore gas well) but was unable to generate sufficient quantities of electricity due to a lack of connections to consumers for viability. IDF accepted a minimal settlement to exit the project which is now being managed by another company.

Bengaz is a company sponsored by the Benin government to take a 2% stake in the West African Gas Pipeline Company (WAPCo) that built a pipeline that would take gas from Nigeria to Ghana with terminals in Benin and Togo. As well as delays and cost overruns, the pipeline is transporting much less gas than envisaged because gas produced by N-Gas that was expected to be exported is being used domestically in Nigeria. The viability of WAPCO and thus Bengaz (which requires dividend and shareholder loan payments from WAPCo to service IDF loans) is thus doubtful.

3.4 EQ 4 – ESG Risk Management

What have been the social and environmental effects (i.e. outcomes) of IDF financed projects (entire portfolio, all years)?

This EQ aims at going beyond the 15 case study projects. Analysis hence draws upon IDF Annual Reports (up to 2016) in identifying cumulative social and environmental outcomes (in other words development impact).

EQ4 – Summary Response

IDF portfolio has, overall, tolerated greater ESG risks than the FMO-A portfolio. Trends over time of IDF ESG risk (compared with FMO-A) show the relatively lower ESG risk of FMO-A [i.e. only in 3 out of 15 years is IDF ESG risk lower than FMO-A].

At the specific project level, social screening and identification of ESG risk was consistently undertaken. ESIAs/ESMPs compliant with national legislation and international norms were prepared for all applicable case study projects.

FMO due diligence management of ESG risks was, overall, to a high standard despite some problems noted during implementation including tardy reporting. Mitigation measures have been addressed with evidence of FMO concern for benign environmental legacy. There is also evidence of FMO feedback resulting in improved implementation performance and of FMO advocacy of ESG policies being taken up by clients who value FMO's ESG expertise and perceive positive operational efficiency benefits

There is limited identification of ESG 'lessons learned' and there is little evidence of such lessons being systematically collated, disseminated or applied. Nevertheless, FMO has a strong commitment to ESG as evinced by the 28 staff that it has across the organisation, including three managers and 21 officers

Set out below is a table summarising the 15 project ratings for ESG Risk Management.

Table 18 – ESG Risk Management analysis – Rating per project

EQ 4 – ESG Risk Management																	
Project	**Average**	**Artumas Mtwara**	**Axiata**	**Bengaz**	**Digicel**	**Dutch Bangla**	**Eolo**	**Essel Clean Solns**	**Grown Energy**	**Guarantco**	**Kenmare**	**Kivu Watt**	**Omera Petroleum**	**Pan African Housing**	**Songas**	**Zanzibar Sugar**
Country		Tanzania	Bangla-desh	Benin	Haiti	Bangla-desh	Nicaragua	Nepal	Mozam-bique	Global	Mozam-bique	Rwanda	Bangla-desh	Africa	Tanzania	Tanzania
Sector		Energy	Telecoms	Energy	Telecoms	Financial	Energy	Energy	Agri-business	Financial	Mining	Energy	Energy	Housing	Energy	Agri-business
Region		Africa	Asia	Africa	Latin America	Asia	Latin America	Asia	Africa	Global	Africa	Africa	Asia	Africa	Africa	Africa
JC4.2 - Due diligence	3.3	3	3	3	3	3	4	4	3	3	3	4	4	3		3
JC4.3 - Lessons	2.8	2	3			3	4	2	2	3		3	3	3		
Overall	3	2.5	3	3	3	3	4	3	2.5	3	3	3.5	3.5	3		3
JC4.2	FMO due diligence ensured identification and management of social and environmental risks (including risks															
JC4.3	Lessons learned in identification and management of social and environmental risks being identified and															

Rating scale: 4- Highly satisfactory; 3- Satisfactory; 2- Partly Satisfactory; 1- Unsatisfactory

Source: ADE

JC 4.1Trends in the nature and component balance of ESG risk in IDF portfolio

Analysis of the 15 case study projects shows about half of them (53%) have a potential significant risk and a third of them (33%) a "higher risk profile":

Category A: Potential significant risk - 8 projects (53%): Artumas, Mtwara; Essel Clean Solutions; Grown Energy; Guarantco; Kenmare; KivuWatt; Pan African Housing; Songas

Category B+: Limited potential adverse risk – higher risk profile - 5 projects (33%): Bengaz; Dutch Bangla Bank; Eolo; Omera Petroleum; Zanzibar Sugar

Category B: Limited potential adverse risk – lower risk profile- 2 projects (13%): Axiata; Digicel;

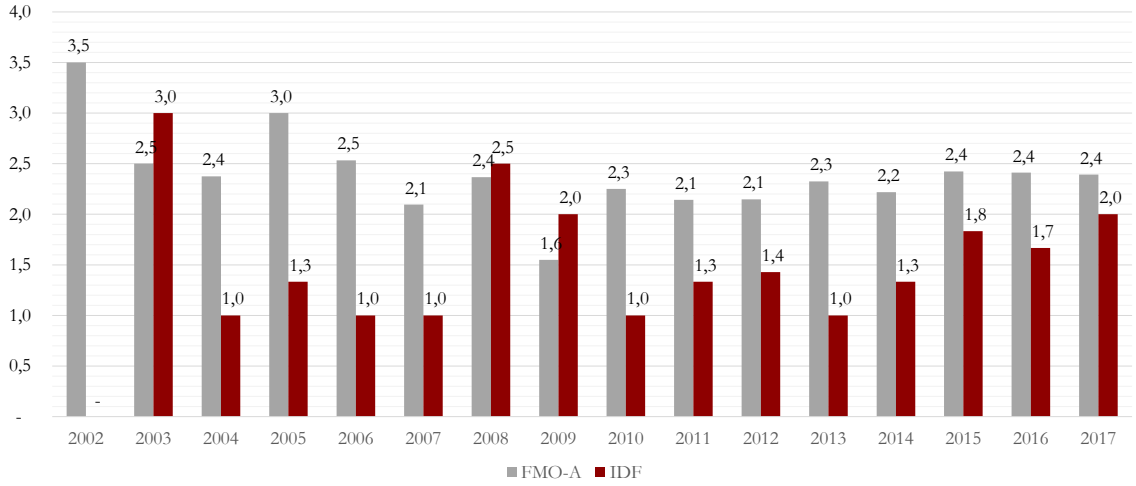
Category C: Minimal or no adverse risk - 0 projects

These proportions seem reasonable for an infrastructure support portfolio; there is no discernible trend of risk reduction or increase over time. This spread of ESG risk in the case study projects may be compared with the entire IDF portfolio i.e. A – 46%, B+ - 13%, B – 41%, C – 0% which shows that the case studies were marginally riskier than the entirety of IDF portfolio. In comparison between IDF and FMO-A portfolios (i.e. A – 23%, B+ - 43%, B – 27%, C – 7%) the riskier ESG ratings of the portfolio IDF are clearly shown.

Trends in the nature and spread over time of IDF ESG risk (compared with FMO-A) are shown below. Whilst the relatively lower ESG risk of FMO-A (average 2.4 i.e. B/B+)

is again clear [only in 3 out of 15 years is IDF ESG risk (average 1.6 i.e. B+/A) lower than FMO-A] there is a hint that IDF may be becoming slightly less tolerant of ESG risk in recent years.

Figure 12 – Average ESG ratings per year



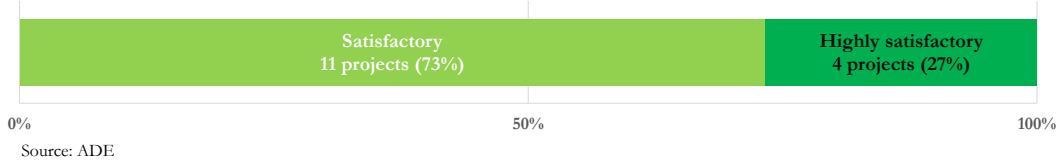
1 = A (potential significant risk); 2 = B+ (limited potential adverse risk – higher risk profile); 3 = B (mlimited potenital adverse risk – lower risk profiel); 4 = C (minimal or no adverse risk)

Source: ADE

JC 4.2 FMO due diligence ensured identification and management of social and environmental risks (including risks to local communities) in accordance with best international practices

For the 15 case-study projects the average rating was 3.29, i.e. it is Satisfactory.

Although some documentation was not made available to the evaluation (e.g. Artumas, Mtwara, Tanzania) screening and identification of ESG risks was found to be consistently undertaken for all case study projects – ESIAs and ESMPs were prepared in all cases; this screening process is a component of the FMO Investment Criteria. All project designs were compliant with national environmental legislation/norms and ESIAs/ESMPs scrutinised were compliant with international practices.



Source: ADE

Client compliance with IDF/FMO ESG requirements was a conditionality for IDF financing with covenants to this effect being included in financing agreements. However, FMO/IDF has appeared to be somewhat 'distant' from the ESG process during implementation of some case study projects as client execution of the ESMP and

compliance with agreements and extant legislation is dependent upon the engagement and capacity of the client which has, in some cases, been unsure. [e.g. E&S requirements for Guarantco (GCO) clients were never formalised with FMO. Although GCO does submit annual reports prepared by consultant AECOM not all borrowers (ie clients of Guarantco) are contractually required to submit E&S reports]. Whilst IDF/FMO monitors implementation performance (e.g. FMO visits most ongoing projects annually) such monitoring is dependent upon agreed reporting actually being delivered by the client. This reporting performance has been variable (e.g. Bengaz, Benin – *'reporting not up to standard'* and *'…overall situation considered by FMO as worrisome'* whilst on the other hand, Kenmare, Mozambique provides an annual report to Lenders that contains details of E&S audits, accidents, community grievances etc). In some cases FMO monitoring has been more 'hands on' (e.g. Essel Clean Solu, Nepal – a 'Lenders' Technical and E&S Adviser' has been appointed; Omera Petroleum, Bangladesh – Royal Dutch Haskoning DMV appointed for technical and environmental due diligence). There are even examples of IDF/FMO E&S concerns potentially extending beyond the actual involvement of IDF ie FMO is concerned at possible 'legacy' effects (e.g. Essel Clean Solutions – concern regarding disposal of project wastes; Omera Petroleum – perceived FMO obligation to ensure that E&S risk management is up to standard at time of FMO exit).

FMO has consistently advocated to clients the introduction of E&S management policies and practices. There are some examples of uptake by clients who perceive positive operational efficiency benefits (and not simply 'ticking the box compliance' in order to secure financing) [e.g. Eolo, Nicaragua and Omera, Bangladesh have both been certified under ISO 14001: Environmental Management Systems[45]].

However, despite FMO insistence on high standards of ESG risk management there are some examples of clients not performing to expected standards [e.g. Zanzibar Sugar (although the client did commit to improvement); Bengaz].

That being said, FMO due diligence has, on the whole, ensured identification and management of ESG risks to a high standard, comparable to international best practices and to peer IFCs.

Highly satisfactory: The common due diligence features that characterise 'highly satisfactory' projects include:

- high levels of client commitment (going beyond compliance with national E&S legislation) including qualification under ISO 14001: Environmental Management Systems;
- high levels of FMO commitment to ensuring compliance with E&S best practices. In some cases, due diligence extends beyond IDF's likely involvement with the project/client.

Satisfactory: All 'Satisfactory' projects have common due diligence features:

[45] Using ISO 14001:2015 can provide assurance to company management and employees as well as external stakeholders that environmental impact is being measured and improved.

- Full compliance with national E&S legislation and international standards.
- Covenants in loan agreements regarding client obligations for compliance with specified legislation and IFC standards. An extension of this principle refers to financial institutions' clients ensuring that adequate ESG conditionality is included in that institution's legal documentation (and that their clients report on ESG issues although such reporting is not without issues).
- ESIAs/ESMPs undertaken (to national and international standards) including identification of ESG risks, mitigation measures and monitoring activities during implementation of an ESMP.
- Generally acceptable client responsiveness including reporting of ESG impacts and mitigation measures.
- Uptake by clients (usually as a result of IDF/FMO advocacy) of ESG responsibilities by way of adoption of ESG policies/strategies. There is some evidence of (in some cases sceptical) clients realising that uptake of IDF/FMO advocacy of high ESG standards can have a commercial/operational efficiency pay-off.
- FMO commitment to ensuring continuing client compliance with legislation, international standards (and terms and conditions of loan agreements). In some cases, IDF/FMO advocacy was aided by having a board seat (e.g. Songas and Omera Petroleum) which facilitated IDF/FMO access to the decision-making process (including ESG issues).

However, the due diligence process has not been without challenges:

- Reporting has not always been to agreed frequencies either directly to IDF/FMO of to FMO's financial institutions' clients (by their clients).
- There is little or no reference to *'Free prior and informed consent'* principles although alternative approaches were used.
- IDF/FMO representation at board level did not always resolve issues.
- Remedial action was found to be necessary in some cases as IDF/FMO due diligence noted client ESG risk management that did not meet IDF/FMO standards as design stage and during implementation. IDF/FMO generally demonstrated success in turning around such weak compliance.

Finally, special mention should be made of the due diligence undertaken for the KivuWatt project which, uniquely, sought to address and mitigate an existing natural environmental risk, albeit of unknown likelihood (i.e. alimnic eruption) by way of the project implementation and operation.

Unsatisfactory: No project reviewed received an 'Unsatisfactory' rating.

JC 4.3 Lessons learned in identification and management of social and environmental risks being identified and applied to subsequent portfolio management

For the 15 case-study projects the average rating was 3.11, i.e. Satisfactory.

It is appreciated that whilst IDF requires compliance with best international ESG practices (preparation of such ESIAs and ESMPs and compliance with national ES legislation are a conditionality for IDF financing), such compliance (ESIAs, ESMPs and reporting on implementation compliance) depends upon the engagement and capacity of the client. Having committed to investment, the FMO/IDF role is of advocacy of compliance, monitoring and raising concerns if necessary). There is evidence of such monitoring and reporting of ESG issues during implementation and of feedback to project implementation leading to corrective actions being taken by the client (e.g. Eolo; Guarantco). But not all such reporting has been timely (e.g. KivuWatt). 'Lessons learned' may not be available from all projects. For some projects t is premature to expect lessons to yet be generated (e.g. Zanzibar Sugar; Omera Petroleum; Pan African Housing). In other projects the lessons may not be generally applicable due to the nature of that project (e.g. Kenmare), or the project did not move forward to implementation (e.g. Grown Energy). However, reporting and accrued experience of ESG management is an obvious source of potential 'lessons learned' but there appears to be no formal identification, collation and application of such lessons learned. Some projects have been evaluated including coverage of ESG issues (e.g. Artumas Mtwara, KivuWatt) and whilst 'lessons learned' may have been identified by the evaluation there is little or no reference to ESG lessons (in the evaluation reports scrutinised) albeit it would be premature to expect disemmination of lessons learned from KivuWatt as the evaluation is still ongoing.

As regards identification and application of lessons learned in the development of other similar projects the only such reference noted was in preparation of the Omera LPG distribution project (although this reference was more background/historical context than application of lessons learned in order to avoid pitfalls). This is not to suggest that FMO project experience is completely 'lost' – there are undoubtedly FMO personnel who have accrued valuable experience – it is rather that there appears to be no clear systematic collection or repository for such lessons to be institutionalised.

Supplementary Note: ESG screening & FMO Eligibility criteria

Basically, FMO's position on ESG is a component of FMO's Sustainability, Good Governance and Human Rights policies. FMO seeks *'ESG additionality'* which should accrue from value addition in application of Environmental, Social and Governance standards thus seeking to ensure that outcomes/returns to society would be higher than would otherwise be the case. *ESG additionality* is considered to be an element in IDF financing that cannot be obtained from other market sources and would be expected to result from FMO leading for ESG and providing ESG inputs that other parties do not provide (i.e. if FMO offers unique value-added services or provides unique expertise in ESG standard setting or in enhancing green and inclusive outcomes, of value to the

client). There are 3 types of ESG additionality: E&S Risk management, Green/Inclusive development, and Governance improvement. Thus, potential FMO clients are expected to manage projects in line with FMO's ESG requirements and Client Protection Principles (CPP). ESG and CPP Investment Criteria vary according to whether the investment is Direct Investment, Financial Institutions or Private Equity Funds (although the main principles are common to all categories of investment).

Where IDF is one of a group of IFIs supporting a project, compliance with high ESG standards would not only be at FMO's insistence as other financing institutions would have similar concerns. However, it is concluded that there is clear evidence of FMO/IDF offering '*ESG additionality*'.

3.5 EQ 5 – Policy

To what extent have IDF activities been coherent with other Dutch policy and activities in the framework of the Dutch aid, trade and policy agenda?

No project ratings were derived for any of the 15 case-study projects

EQ5 – Summary Response

IDF activities have been fully coherent with Dutch government policies and activities in the framework context of Dutch aid, trade and policy agendas.

IDF has consistently supported projects which, to a greater or lesser extent aimed at pro-poor employment growth and private sector development in developing countries either directly (e.g. Grown Energy, Mozambique – intended employment creation) or indirectly (e.g. Kivu Watt, Rwanda – facilitating employment by means of increased access to electricity).

No evidence of support to Dutch companies was found in the case study projects other than limited technical support/consultancy services to IDF-financed projects (e.g. Omera Petroleum, Bangladesh – Royal Haskoning as 'Independent Engineer'). Although this finding is perhaps not surprising, given that the change in Dutch government focus on supporting Dutch companies, was only introduced in 2013.

Although there have been few linkages to other Dutch infrastructure programmes, there has been manifest coherence and complementarity with other multi-lateral and bilateral agencies development programmes as evinced by co-financing (e.g. Kenmare, Mozambique).

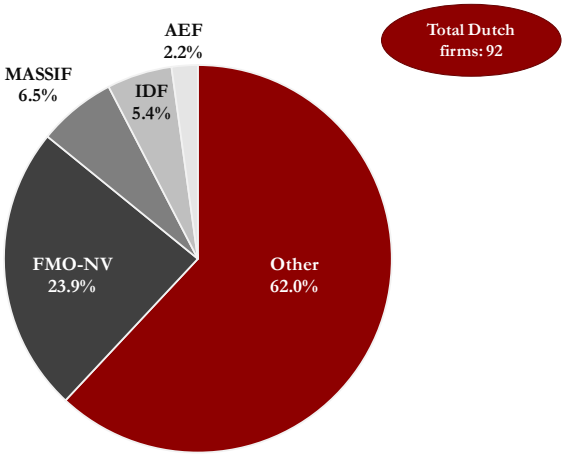
JC 5.1 Involvement of Dutch companies in IDF projects

The portfolio analysis shows limited involvement of Dutch companies in IDF projects – only 9 transactions were identified which relate to three IDF projects (i.e. African Improved Foods, Rwanda; DFCU Bank, Uganda and the pan-African Investment Fund

for Health). The 15 case study projects reported no involvement of Dutch companies other than in a consultancy role (e.g. Royal Haskoning DHV as Independent Engineer for Technical and E&S due diligence for the Omera Petroleum LPG distribution project in Bangladesh)[46].

The relative involvement of Dutch firms in the various funds is graphically presented below:

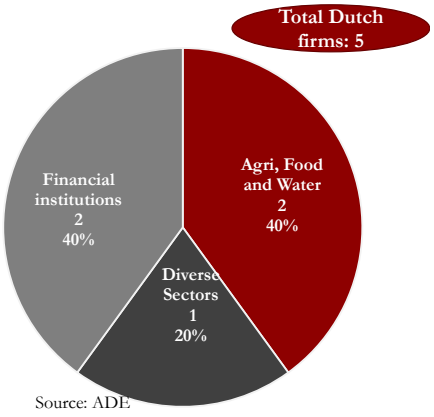
Figure 13 – Percentage of Dutch firms involved by fund entity



Source: ADE

The involvement of Dutch firms in IDF portfolio is only in Africa (i.e. African Improved Foods, Rwanda; DFCU Bank, Uganda and the pan-African Investment Fund for Health):

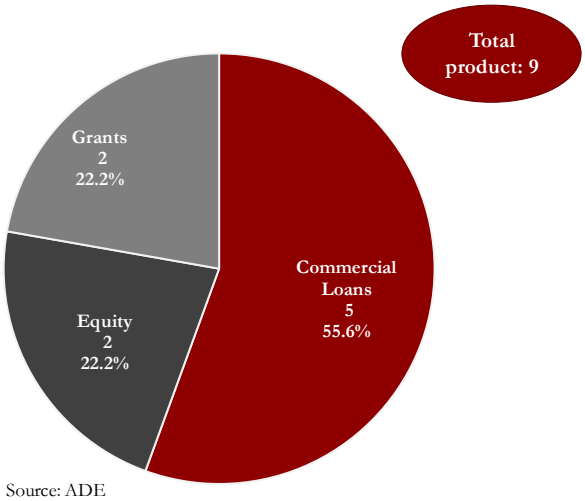
Figure 14 – Strategic sector presence of Dutch firms in IDF



Source: ADE

[46] Although additional IDF support to Dutch firms in projects not included in the case study is reported e.g. Aguas el Carmen – convertible grant; DSM Rwanda (Africa Improved Foods – debt and equity; Flying Swans (African port developments – cool chain logistics) - CD

Figure 15 – Finance instrument preferred by Dutch companies in IDF



Source: ADE

JC 5.2 Effects for Dutch companies and economy

Given the very limited involvement of Dutch companies in IDF projects included in the case study the effect of these case study projects for Dutch companies and economy has been minimal (it is suggested that this finding may be safely assumed for the entire IDF portfolio).

JC 5.3 Linkages with other infrastructure programmes (ORIO, DRIVE, D2B) from the Ministry

There have been a few linkages between IDF and other MFA/Dutch programmes (and no linkages with ORIO, DRIVE, D2B were identified). Reference to potential FMO-A financing is most common but, other than proposals for ORET and EIAF financing which did not actually go ahead [Artumas Mtwara] Kivu Watt received financing under AEF and the FMO-Bio Framework.

Whilst there has been little by way of Dutch linkages there is clear synergy with the infrastructure development programmes of multi-lateral agencies with multiple examples of co-financing with international agencies (e.g. AfDB, WB, EIB, EFG, EDFI) and compliance with international norms (e.g. Common DFI Approach to Corporate Government).

JC 5.4 (Supplementary) Coherence with Dutch government aid, trade and policy agenda (with focus on involvement of Dutch companies)

As regards establishment of the LDC Infrastructural Fund (and subsequently IDF) Dutch government policy on private sector development goes back to the 2000 publication *'In Business against Poverty' (Ondernemen tegen Armoede TK 2000-2001)* which

highlighted private sector development as a factor in pro-poor growth in developing countries.

Infrastructure (transport, communication, energy, WATSAN) was recognised as a crucial facilitator for private sector development together with lack of access to finance, knowledge gaps and poor EIRRs in investments in developing countries. Concurrently the Netherlands advocated the 'untying' of aid which was taken up by OECD such that aid to LDCs would cease at the end of 2001. The Dutch government terminated the tied aid ORET/MILIEV programme for LDCs in 10/2001. FMO which administered the programme for MDC proposed creation of a new infrastructure development programme for LDCs in place of ORIET/MILIEV. MDC adoption of the FMO proposal predicated a major policy chance in that the fund would finance/facilitate investment (instead of subsiding exports) which MDC considered to be a more effective promotion of investment (and thus private sector development in LDCs) i.e. by directly supporting demand-side financial facilities rather than indirect supply-side support to investments by export subsidies.

For the period up to 2013 IDF reporting on policy developments and compliance has been limited and somewhat generic. FMO annual reporting has more frequent (but equally generic) reference to Dutch government policies referring to private sector development aims.

It was in 2013 that MFA introduced a *'New Agenda for Aid, Trade and Investment' (A World of Gain – A New Agenda for Aid, Trade and Investment, MFA, April 2013'*). This policy initiative of an 'Aid and Trade' agenda (aiming at eradication of extreme poverty in a single generation, sustainable inclusive growth, all over the world and success for Dutch companies abroad) seeks to increase the profile of Dutch companies – SMEs in particular – in emerging economies such as MICs in Asia and Sub-Saharan Africa in sustainable, socially responsible enterprises in sectors such as agriculture, WATSAN, health, chemicals, high-tech, energy, logistics and creative industry.

FMO is explicitly identified for provision of financing of larger (higher risk) investments whilst a new *'Dutch Good Growth Fund'* provides funding for Dutch companies and entrepreneurs development-relevant activities in developing countries. The fit of DGGF with IDF (as successor to LDC-IF) mandate is obvious. Reporting after 2013 reflected (to some extent) FMO response to the *'New Agenda'* in FMO Annual Reports (e.g. 2014 *'In the Dutch political environment, foreign policy is shifting its focus from an emphasis on aid to stimulating trade…..making available capital to support Dutch companies investing in emerging countries….FMO's business as a development bank has clearly gained in relevance in the Dutch political arena')* and in more detail in the 2016 Annual Report in which the CEO highlighted the aim of realising *'investments in corporates and projects in the Netherlands and internationally that are unable to attract sufficient financing from the market as a result of unsecure risk-return characteristics or long payback time'*[47].

[47] The 2016 FMO Annual Report goes on to note (2.5.8 Servicing Dutch Companies): *'With respect to servicing Dutch corporates, in 2016, we committed a total of €186M related to Dutch companies in developing countries……We have worked towards developing a strategic agenda, supporting Dutch corporates investing in and exporting to emerging markets and developing countries. We are committed to further develop and implement this agenda in the future. In that context, we are also a constructive*

Overall there has been good coherence of IDF with Dutch Government aid, trade and policy agendas.

3.6 EQ 6 – Efficiency

Has FMO efficiently and appropriately managed the Fund?

In this chapter Efficiency is assessed under the following judgement criteria:

JC 6.1 FMO's organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness.

JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support.

JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?

EQ6 – Summary Response

- IDF follows FMO processes and procedures, supplemented by its own eligibility criteria, that are appropriate.
- Based on the sample of 15 projects, FMO's management of IDF has generally been satisfactory and efficient, although the due diligence on a number of projects was below normal standards and monitoring was not always thorough.
- The management fee paid to FMO is low by reference to what other comparable public and private funds pay.
- Looking forward, more staffing needs to be dedicated to IDF 2 to ensure that better due diligence and project monitoring is undertaken. The proposed higher fee for IDF should enable such additional staffing.
- IDF's reporting provides insufficient information on its overall performance and financial condition, especially when compared with what FMO provides to pension funds whose assets it manages. Specifically, pension fund clients receive more detailed information on the overall portfolio and its performance. It was, for example, difficult at the outset of the IDF evaluation to obtain a complete list of the IDF portfolio.
- FMO's approach to corporate governance takes full account of its importance to the proper implementation and management of IDF projects.
- The case studies identified, inter alia, the following drivers of project performance:

participant in discussion concerning the establishment of a national financing institution and support the intent to bundle knowledge and resources to facilitate foreign activities of Dutch corporates. We were pleased with the approval of the Dutch government to support the establishment of the Partnership Development Facility. Through this facility we aim to develop a number of trade corridors and infrastructure projects with high development impact and unique Dutch business content. Finally, we are working on an approach to expand our presence in the market of export finance for Dutch corporates, additionally to Dutch commercial banks').

- quality of due diligence, especially on technical issues;
- strong sponsors, greatly increasing the likelihood of success;
- support to companies through difficult periods, which is developmentally and financially beneficial;
- innovative projects with untested business models, which are inherently more risky;
- judgements on whether project sponsors and counterparts will honour commitments they make to secure IDF funding, even though key issues such as corporate governance can appear to have been covered as part of due diligence.

Before discussing the findings in detail it is useful to summarise the 15 project ratings for JC6.1 and JC6.2. It was not appropriate to assign ratings for JC6.3[48] as the findings were inferences from the analyses for 6.1 and 6.2.

Table 19 – Efficiency analysis – Rating per project

EQ 6 - Efficiency Ratings from Project Reviews																
Project	**Average**	**Artumas Mtwara**	**Axiata**	**Bengaz**	**Digicel**	**Dutch Bangla**	**Eolo**	**Essel Clean Solns**	**Grown Energy**	**Guarantco**	**Kenmare**	**Kivu Watt**	**Omera Petroleum**	**Pan African Housing**	**Songas**	**Zanzibar Sugar**
Country		Tanzania	Bangla-desh	Benin	Haiti	Bangla-desh	Nicaragua	Nepal	Mozam-bique	Global	Mozam-bique	Rwanda	Bangla-desh	Africa	Tanzania	Tanzania
Sector		Energy	Telecoms	Energy	Telecoms	Financial	Energy	Energy	Agri-business	Financial	Mining	Energy	Energy	Housing	Energy	Agri-business
Region		Africa	Asia	Africa	Latin America	Asia	Latin America	Asia	Africa	Global	Africa	Africa	Asia	Africa	Africa	Africa
JC6.1 Processing	2.60	1	4	1	4	3	4	3	1	3	2	3	2	3	3	2
JC6.2 Staffing	2.79	2	3	2	4	2	4	3	1	4	3	3		3	3	2
Overall	2.67	1.5	3.5	1.5	4	2.5	4	3	1	3.5	2.5	3	2	3	3	2
JC 6.1	FMO's, organisational structure, policies and procedures adopted for business operations enhanced timeliness an															
JC 6.2	FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support															

Rating scale: 4- Highly satisfactory; 3- Satisfactory; 2- Partly Satisfactory; 1- Unsatisfactory

Source: ADE

[48] JC 6.3 - Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?

JC 6.1 FMO's organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness

a) Review of FMO and IDF organisational structure, policies and procedures

While there is a fund manager (FM) for IDF within FMO who is responsible for its activities[49]at the operating level, IDF is not a separate activity that is distinct from FMO-A operations. IDF projects therefore follow the standard FMO project processing cycle and are subject to FMO's operating policies, processes and procedures. The role of IDF FM has evolved since 2002. In early years of IDF the FM worked only part time on IDF the rest being devoted to the activities of an FMO investment officer working on IDF and non-IDF infrastructure projects. In the second half of 2008 when the FM stopped being involved in processing transactions and instead reviewed/approved the suitability of potential projects for IDF funding, for which IDF Eligibility Form is completed[50]. FMO investment officers (IOs) and managers/directors in Front Office departments are responsible for identifying potential investment opportunities that may be funded from its own resources (FMO-A) or one of the Government funds that it manages, including IDF.

It is noted that IDF FM is also the FM for the smaller Access to Energy Fund (AEF). Other duties include marketing IDF and AEF (internally within FMO and externally), business development and origination, as well as reviews, change requests and exits, reporting to DGIS and managing communication between DGIS and FMO on IDF and AEF related matters. The FM is responsible for annual activity plans (budgets) and the preparation of IDF's quarterly and annual reports

As described in EQ3, there are specific investment criteria (sectors, portfolio concentration limits etc.) that IDF had to follow that were specified in the MFA *Beschikkingen*. IDF is also able to make grants[51] that are intended to help make projects with high potential development outcomes commercially viable. In high risk greenfield /start-up projects IDF can also provide convertible grants.

In summary, IDF follows FMO processes and procedures supplemented by its own eligibility criteria. As discussed in c) below the level of support to IDF appears to be insufficient.

[49] The fund manager responsible for IDF works within the Public Investment Management Department that is responsible for the management of all State funds.

[50] Although the FM does not participate in the IC that approves the FP for an IDF project, his/her clearance of the FP required.

[51] IDF & AEF Grants Manual, Date: 12/03/2015 is the most recent policy/procedures document.

b) Comparison with the requirements of the procedures of other DFIs

The principles in FMO's 2016 Sustainability Policy[52] require that *"…FMO upholds the following (inter)national standards, including in its own operations, as applicable:"* These include:

- IFC Performance Standards/ World Bank Group Environmental Health and Safety Guidelines/ Equator Principles;
- OECD Guidelines on Multinational Enterprises;
- European Development Finance Institutions (EDFI) Principles for Responsible Financing; and
- G20/OECD Principles of Corporate Governance/ Dutch Corporate Governance Code.

FMO works closely with DEG and Proparco to the extent that there are standardised procedures amongst the three DFIs. This enables them to operate on a *"Take it or Leave it"* principle. This means that in joint DEG-FMO deals, for example, there is one deal team (the lead) from one of the three DFIs which undertakes the due diligence. The other two follower DFIs, including FMO where DEG or Proparco are in the lead, apply commercial, credit/risk, E&S and legal structuring criteria in deciding whether to vote on a "yes or no" to participate in the project. In the case of the Songas project in Tanzania, for example, which was led by FMO-IDF, DEG declined to participate citing the risk of the power off-taker Tanesco as being too high; IDF however decided to fund the project without DEG.

On E&S issues FMO follows the policies and procedures of IFC, the private sector arm of the World Bank group. In 2006, FMO adopted the Equator Principles, which relies on the IFC Performance Standards to create a risk management framework for determining, assessing and managing environmental and social risks in projects.[53]

FMO is also an active member of EDFI[54], the Association of bilateral European Development Finance Institutions which has 15 members from across Europe including the largest DFIs (CDC, DEG, FMO and Proparco). Through its membership of EDFI, FMO has adopted:

- Declaration on Principles for Responsible Finance, coined the "Rome Consensus". These Principles, applied by all members when co-financing projects, especially underline that the respect for human rights and environmental sustainability is a prerequisite for any financing by EDFI institutions; and
- Standardised indicators to enable a more efficient, consistent and timely analysis of projects' impact results.

In addition, a retired CEO of FMO is the chairman of EDFI.

52 https://www.fmo.nl/policies-and-position-statements

53 https://www.fmo.nl/about-us/reports

54 https://www.edfi.eu

c) FMO Management Fee

Along with the other government funds that it manages (MASSIF, AEF and FOM), FMO is compensated for the investment operations and management of IDF. The table below shows how the management fees have evolved since 2004 and what burden they represent to IDF, shown by the ratio of fees to the average gross portfolio[55] year by year.

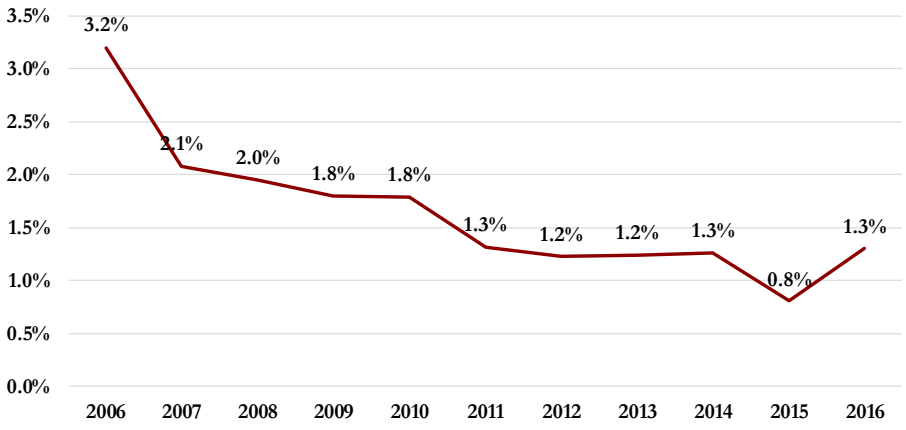
Table 20 – Management Fees paid by IDF to FMO

FMO Management Fees														
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
31-déc	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m	€m
Gross Portfolio														
Loans	8.7	12.4	60.8	102.7	85.0	121.0	146.2	156.8	173.2	188.0	181.4	206.9	234.1	281.2
Equity	13.3	36.2	14.2	50.3	82.1	56.8	64.2	46.6	64.4	78.2	89.5	94.8	135.7	133.4
Total	**22.0**	**48.6**	**75.0**	**153.0**	**167.1**	**177.8**	**210.4**	**203.4**	**237.6**	**266.2**	**270.9**	**301.7**	**369.8**	**414.6**
Average portfolio		*35.3*	*61.8*	*114.0*	*160.1*	*172.5*	*194.1*	*206.9*	*220.5*	*251.9*	*268.6*	*286.3*	*335.8*	*392.2*
FMO Fee		2.90	3.65	3.65	3.33	3.37	3.49	3.70	2.90	3.09	3.33	3.60	2.70	5.09
Fee % of portfolio		8.2%	5.9%	3.2%	2.1%	2.0%	1.8%	1.8%	1.3%	1.2%	1.2%	1.3%	0.8%	1.3%

Source: Annual reports and ADE calculations

Between 2004 and 2014 the fee varied between €2.9m and €3.7m before dropping to €2.7m in 2015. There was in 2016 a large 88% increase in the fee to €5.1m. As a proportion of the gross portfolio the fee rates in the early year are high as IDF portfolio was built up. Between 2007 and 2015 there was a steady decline in the rate of management fee from from 2.1% to 0.8%, before rising to 1.3% in 2016.

Figure 16 – Management Fee – Percentage of Portfolio



Source: ADE

[55] The gross portfolio has been used as this represents the amount actually invested at the end of each year, reduced only by loan repayments and equity exits. The net portfolio (after taking account of impairments) omits projects that FMO is actively trying to turn around or maximise the amount that it recovers. Problem projects that are often managed by the Special Operations department require much more FMO management effort than projects that are performing well.

Overall the fee rates as a proportion of funds managed appear to be modest, or even on the low side. For a high risk private equity/venture capital type of fund a typical fee rate would be 2% or higher. While no direct causal link was established, it is reasonable to deduce that more due diligence and closer project monitoring would probably have resulted in better portfolio performance. While some losses are inevitable and expected to occur at higher levels than for FMO-A, portfolio performance has been much worse than anticipated in the 2012 revolvability model. The issue of management fees for IDF, but also for all government funds, was the subject of a recent review commissioned by MFA the key findings of which are discussed below.

2017 Review of Government Funds

In the second half of 2017, MFA commissioned an external review of the methodology by which management fees for all government funds are calculated[56]. The draft report recommends a continuation of the weightings methodology whereby the allocation of FMO operating costs to projects is based on their complexity and the amount of work that this is believed to be required, both before and after commitment. Government fund projects, including those of IDF, are considered to involve higher amounts of staff work as they take longer to prepare. The key conclusions and recommendations set out in the draft report are fairly substantial with regard to incremental changes in respect of government funds such as IDF to the way that the weightings are calculated as summarised below with the changes proposed in the review highlighted.

Table 21 – Weightings methodology

Weighting	Loans	Guar	Equity	Grants	Conv Grant	€/$	Local Currency	Government Fund
Current	1.00	1.00	1.50	0.25	-	1.00	2.00	1.15
Proposed changes	1.00	1.00	1.50-2.00	0.50	0.50	1.00	2.00	1.10-1.50

Source: EY

Comments on the 2017 Review of Government Funds

It is noted that as long as FMO front office staff do not charge time to projects (something several other DFIs such as IFC do) the weighting approach is appropriate. This seems reasonable. It is unclear from the report whether the issue of projects that involve funding from (i) FMO-A and one or more government funds, or (ii) more than one government fund has been addressed in the calculation of ratings. One way of doing this might be to divide the weighting by the number of funding sources. For example, if FMO-A provided a senior loan and IDF a subordinated loan then the weighting would be 0.5 to each. There is no discussion in the report of the need to recognise the difference between direct investments in projects and indirect investments in funds and financial intermediaries. In general, direct investments require more work both during the project cycle and monitoring periods,

[56] Evaluatie beheerskostenmodel fondsen FMO, Ministerie van Buitenlandse Zaken, 27 November 2017 DBTVH-98782

and therefore higher weightings could be justified. Indirect investments, in effect, delegate much of the due diligence and monitoring to a fund or intermediary.

The report notes: *"IDF has relatively low management costs. A reason for this is that IDF invests in infrastructure and the duration of infrastructure projects is relatively long. The long term has one reducing the management costs because the funds in the fund need to be redeemed less often invested."* FMO has undertaken, inter alia, an analysis of the management fees on government funds[57]. Below is a comparison of the 2016 fees based on the current weightings scale. It can be seen that this results in IDF having the lowest effective management fee of 1.03%, less than half the rate for MASSIF and only just over one third the rate for AEF 1. This lower management fee is explained by the much higher average deal size for IDF, only 30% smaller than for FMO-A.

Table 22 – Summary on "input and weighting facilities – Management fee 2016"

Summary on "input and weighting facilities - Management fee 2016									
		Non -state	State Funds => "SF"						
		FMO-A…	MASSIF	IDF	AEF I	AEF II	FOM-OS	Total	Total
Direct costs		23,419	5,337	2,119	688	40	238	8,422	
Travel		2,607	592	253	96	5	41	987	
ICT		4,944	1,169	464	151	9	52	1,845	
FS		2,226	526	209	68	4	24	831	
HR		4,377	1,035	411	133	8	46	1,633	
Total direct		**37,573**	**8,659**	**3,456**	**1,136**	**66**	**401**	**13,718**	51,291
Corporate		6,392	1,512	600	195	11	68	2,386	
Mid office		2,473	585	232	75	4	26	922	
Finance risk		10,614	2,511	997	323	19	112	3,962	
FIM		400	-	-	-	-	-	-	
Climate Inv 1		-	-	-	312	40	-	582	
		57,452	**13,267**	**5,285**	**2,041**	**140**	**607**	**21,570**	79,022
		FMO	**MASSIF**	**IDF**	**AEF I**	**AEF II**	**FOM-OS**	**SF**	Totaal
No of projects	#	854	182	77	27	1	9	296	1,150
Weighted no	#	980	232	92	30	2	10	366	1,345
Committed portfolio	€'000	7,788,482	550,164	513,315	68,957	10,000	29,860	1,172,296	8,960,779
Average project	$m	7.95	2.37	5.58	2.31	5.80	2.89	3.21	6.66
Mgt fee €'000	€'000	57,452	13,267	5,285	2,041	140	607	21,570	79,022
Mgt fee	%	0.74%	2.41%	1.03%	2.96%	1.40%	2.03%	1.84%	
Source: Copy of 1b. Beheerskostenvergoeding 2016 nacalculatie version 1									

As an alternative to the weightings methodology, the FMO November 2016 memo discusses management fees for IDF and other government funds being set at rates that would be market related. For IDF, however, a new fee rate of 2.00% (that would start in 2020) would be double the 2016 level. There would be a major shift in the burden of fees from the other government funds (most importantly MASSIF) to IDF. A question that arises – is a much larger IDF management fee justified in terms of the services that FMO provides? It is understood that MFA has agreed to the FMO proposal to raise

[57] Memo to Management Board from Finance, PIM, FIM, 24 November 2016 - Management fees third party funds as of 2017

the management fee for IDF to 2% that would increase it for IDF2 to at least €8m annually (although the increase would be deferred for two years).

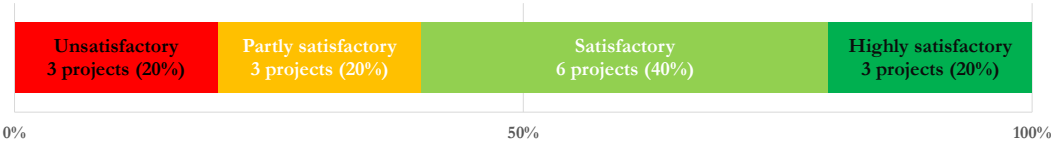
Comments on FMO Management Fee

- IDF fee level does appear to be low by reference to what other comparable public and private funds pay[58].
- Greater levels of technical due diligence are undertaken to identify and assess project risks prior to project approval;
- Development impacts and outcomes are better articulated during due diligence, especially in the financial proposals that the credit committee approves;
- Development goals and reporting are clearly reflected in legal documents;
- Project monitoring and supervision should be intensified, thereby focusing much more on the achievements of planned development outcomes;
- The synthesis of the 15 case studies undertaken by ADE set out in d) below points to weaknesses in the due diligence of IDF projects, especially regarding the technical and commercial viability of projects. While it is of course easy with the benefit of hindsight to say what should have been done, ADE is of the view that a greater investment in more thorough due diligence would have resulted in lower levels of problem projects and a portfolio that delivers higher financial, economic and social outcomes. A higher management fee would have enabled outside technical and commercial specialists to be used in the due diligence of proposed projects;
- An increase in dedicated staffing for IDF (paid for from a higher fee) would enable projects to be better structured and monitored. This would improve the inclusion of well articulated development outcomes/impacts in FPs, more developmental focused reporting requirements in legal agreements and also better project monitoring post investment.

a) Application of policies and internal procedures throughout the investment process

The ratings for the 15 projects are summarised in the chart. 60% of projects were subject to a minimum of a satisfactory rating, while 40% failed to meet satisfactory standards. These ratings are, it must be stated, based on indirect evidence, in particular the quality of the financial proposal. Care was taken not to simply rate projects that failed or substantially underperformed as having had major failures in the project processing simply because of that. Instead the ratings have tried to take account of what due diligence for each project individually should have been performed and what actually was done. The following analysis seeks to identify themes and lessons to be learned.

[58] Comparators included: DRIVE –an infrastructure development program that primarily provides subsidies. GAFSP – this is a higher risk instrument that is under management of IFC. PIDG – Private Infrastructure Development Group. This is a group of facilities that each have different characteristics and are focused on higher risk infrastructure investments. In practice, these are parties that IDF sometimes co-invests with.



Source: ADE

Highly Satisfactory: Both of the telecoms projects (Axiata in Bangladesh and Digicel in Haiti) were rated as HS. Key elements identified in the financial proposals included the quality of the project sponsors (both well established regional telecom companies) regional and the market opportunity in both Bangladesh and Haiti where mobile penetration levels were low at the time of IDF's investments. Moreover, monitoring of both projects was good.

In the case of Eolo, the wind energy project in Nicaragua, like the other two, had a strong project sponsor (Globeleq) that was correctly judged to be vital to the successful implementation of the project. In addition, FMO is well respected by the client as an interviewee on the field visit told ADE: *"FMOs team is accessible and really open to communicate. Experiences with other DFIs are not that satisfactory. In FMOs relationship, we perceive the team has short response times, and understand the diverse situations that happen in this region, such as government related challenges, contractors performance, etc. We think that FMOs intervention in the project is correct, managing the project, and trusting that Owner is responsible for taking the best decisions."*

Satisfactory: In respect of these six projects the due diligence as reflected in FPs and other documents was of an acceptable standard. The following findings provide useful lessons.

- The credit line to DBBL, a long stading FMO client, was appropriate and well designed. The reporting requirements set out in the loan agreement did not, however, require the Bank to report on how IDF funds had been used.
- Essel Clean Solu is a hydropower project in Nepal, a challenging country to do business. The quality of the sponsor (technical capability, experience etc) was therefore vitally important.
- Guarantco is a DFI/IFI sponsored insitution. IDF was therefore able to rely in part on the participation of these institutions, particularly as it has only one field office in Johnannesburg.
- The due diligence identified that Kivu Watt had a technically capable and financially strong sponsor that was able to see the project through implementation delays and 50% cost overruns in this innovative project that is now delivering the planned outputs.
- While a conceptually appropriate project to support, the FP underestimated the challenges that Pan African Housing would face in establising a viable business mode.
- The FP for Songas identified the challenges in the gas well to power project in Tanzania. It also correctly assessed that Globeleq had the capability to overcome them. Moreover, IDF insisted on appointing a director to play an

honest broker role between Globeleq the majority shareholder and the Government (through state owned companies).

Partly Satisfactory: In these three projects the due diligence while identifying issues and challenges either underestimated them or ignored them.

- In the Kenmare the appropriateness of investing a large amount (alongside FMO-A) in a mining project where infrastructure was an incidental output was not directly addressed. Moreover, the commercial risks of a greenfield project in northern Mozambique were understated.
- While the issue of corporate governance in Omera Petroleum was judged as important an investigation of the majority shareholder gave IDF the assurance it needed to invest. IDF also nominated a director. Despite these safeguards, corporate governance became an issue very soon after disbursement with OP failing to consult IDF and the other minority shareholder. As a result, IDF two years ago indicated its intention to exit OP by exercising its put option.
- In the case of Zanzibar Sugar the due diligence did not include a sugar specialist visiting Zanzibar to assess how sufficient sugarcane could be grown to keep the factory busy. Also, there is no mention in the FP of the risk to viability of the project being dependent on high import taxes. Instead the provision of a parent company guarantee to IDF was judged as sufficient to reduce the financial risk to an acceptable level.

Unsatisfactory: In all three unsatisfactory projects the due diligence and FPs failed to properly assess the sponsors and key drivers of project viability.

- Artumas Mtwara was established in southern Tanzania to extract gas offshore that would be sent by pipeline to a nearby power station that would supply a local grid. While the project was correctly judged as having high risk and a high potential development impact the capacity of a small Canadian oil and gas exploration company with no experience in Africa to undertake it was not appreciated. It is noteworthy that Songas had similar challenges but, crucially, a sponsor that had operations in Africa and globally in challenging environments. In addition, IDF's exit mechanism from the project was not defined clearly.
- Bengaz was a newly created company with a capital of €0.5m to which IDF lent €15m (later €31m) to enable it to buy a 2% stake in WAPCo, a $1bn pipeline. It was therefore taking all the risk but had none of the upside. The FP failed to assess properly the risks of this project. It incorrectly judged the risk of the supply of gas by Nigerian National Petroleum Corporation NNPC, which was rated as low, when in fact it is the failure to deliver gas that has pushed WAPCo and therefore its 2% shareholder Bengaz to de facto insolvency.
- The due diligence of Grown Energy, a convertible grant project in rural central Mozambique failed to include a technical visit to the farm where sugarcane and sweet sorghum were to be grown as in puts for a nearby bio-ethanol factory. While post disbursement data is incomplete, it is evident that the land was not

suitable. Moreover, IDF appears to have taken at face value the capability of the sponsor to undertake a very ambitious project in which he had no prior experience.

Summary and key findings

- The quality (experience, reputation and financial resources) of a project sponsor is key to project success.
- Technical due diligence involving project site visits, while expensive, should wherever possible, and especially in agribusiness projects, be undertaken.
- IDF should ensure that financial risk is shared with sponsors.
- Innovative greenfield projects are very likely to involve delays and overspends.
- Financial sector credit lines should require reporting that details how IDF funds have been on-lent.

b) I-6.1.5 - Sound corporate governance embedded in FMO's clients' organisations

FMO's approach to corporate governance (CG) at its clients has evolved and become more formalised. It has been developed in consultation with DEG and Proparco with which it frequently undertakes projects where one of them takes responsibility for due diligence on behalf of all three. CG is an area that FMO believes:

- adding value to a client through better performance and access to capital;
- reducing investment risk; *and*
- avoiding reputational risk.

Within the Funds Department there is a CG specialist who is responsible for ensuring that CG is properly addressed during the due diligence of projects (starting at the CIP), as part of the conditions precedent for disbursement (if required) and in monitoring after disbursement. Toolkits are being developed for all types of project that FMO and IDF undertake. These require that checklists of CG issues that must addressed both at the CIP and due diligence (DD) stages.

The scorecards that form part of the financial proposals have weightings for CG that varies between 31%/32% for financial sector projects to 24%/25% for corporate and project finance projects. In assessing the quality of CG in a project as part of the DD there are five areas of focus[59]:

1. Commitment to Corporate Governance
2. Structure & Functioning of the Board
3. Internal Control Environment and processes
4. Transparency and disclosure
5. Shareholder practices

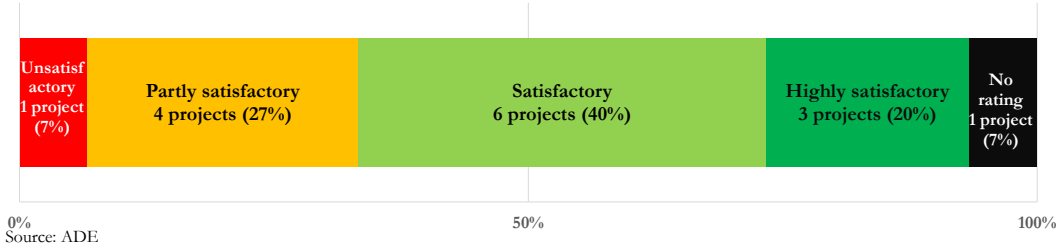
[59] Manual for the Corporate Governance Toolkit for banks, NBFIs and MFIs (CG-WI.001-3.0.)

The output of CG DD for the FP is a CG Result Matrix[60] that contains the final risk attribution and further results of the CG Review[61]. There are, broadly, two outcomes (i) an acceptance of the CG standards in the project, or (ii) CG action plans that a client must commit to implementing.
It is evident that FMO's approach to CG takes full account of its importance to the proper implementation and management of IDF projects.

JC 6.2 FMO's staff resources have been sufficient and skilled enough to ensure a timely and cost-effective support

a) Appropriateness of available FMO expertise

The appropriateness of FMO expertise has been rated for the 15 projects in the case study. It should be noted that the ratings are subjective and based on the quality of the documentation through the project cycle, in particular the FPs and monitoring documents (CRRs). These ratings take particular account of post investment monitoring and support as well as project processing. For the eight projects visited, the ratings also take account of client feedback.



Source: ADE

Highly Satisfactory: As already noted, Eolo is very happy with FMO staff. According to interviewees, the attention and support from senior executive and the analysts assigned to the loan administration has been satisfactory (*"We have found they are open and cooperative to discuss the project's diverse issues: cash distributions, waivers, self-operation project, model modifications"*). In the case of Digicell, FMO IDF support went beyond IDF transaction to a further project with FMO-A and Proparco, inter alia, providing funding and helping to mobilise other sources of finance. Guarantco was an investment fund that IDF invested in at the request of DGIS because of FMO's expertise in funds.

Satisfactory: In the case of projects that took longer to implement (KivuWatt) and also had financial problems (Kenmare) FMO IDF's support through difficult times is notable. In the case of Songas an FMO investment officer was on the board for eight years. For Axiata, Essel and PAH FMO staffing and support was satisfactory.

[60] CG risk ratings are not required for (i) start-up deals under project finance, (ii) funds and (iii) small loans equal to no more than 5% of the balance sheet of the client.

[61] At FP stage, CG risks are rated on a three-point scale: 1=high; 2=moderate; 3=low.

Partly Satisfactory: In the case of the problem projects Artumas and Bengaz more thorough due diligence and better monitoring might have improved performance. For Dutch Bangla Bank there is a disparity between the stated purpose of the credit line per the FP and that required in the loan agreement. Bank clients should be accountable for the uses they make of IDF funds. With Zanzibar Sugar insufficient attention is being paid to the problem of how to grow enough sugarcane for the factory and project to be profitable.

Unsatisfactory: Information on the performance of Grown Energy post disbusement was very limited. Moreover, being a grant with an option to convert into equity, IDF should have been tracking project implementation.

Overall FMO support to projects post-investment has been reasonable with only one project, a convertible grant, being unsatisfactory.

b) Trend in ratio of full-time equivalent staff to volume of operations

Table 23 – FMO Staffing and Commitments

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Staff (full time equivalents)	no	203	224	236	249	264	270	283	306	342	362	372	404
New commitments	€m	699	937	1315	1314	911	1026	1306	1390	1524	1632	1584	1550
of which Govt funds	€m	135	206	243	169	132	124	165	160	144	177	184	118
Productivity NC/FTE	€m	3.4	4.2	5.6	5.3	3.5	3.8	4.6	4.5	4.5	4.5	4.3	3.8
Govt funds/total committed portfolio	%	16%	21%	21%	17%	18%	15%	15%	13%	13%	12%	13%	13%

Source: FMO annual reports

The analysis reveals that:

- Staffing has increased steadily over the last 11 years, almost doubling to 404 people. The productivity of staff in terms of commitments per staff member, however, has fluctuated. In 2016 it was only slightly higher than 2005.
- Government funds (IDF, MASSIF and AEF) as a proprtion of total commitments peaked in 2006 and 2007 at 21%. Since 2012 they have been roughly constant at about 13% of annual commitments. They are therefore less important than they used to be.

JC 6.3 Which factors contribute to the success of the Fund and which factors hinder its effective utilisation?

Set out below are the key factors that the case studies indicate influence project performance.

- Poor and less than satisfactory project due diligence was especially evident in Artumas Mtwara and Bengaz.
- Strong sponsors greatly increase the likelihood of success as seen in Axiata, Digicel, Eolo, Essel and Songas

- Long term relationships with clients are mutually beneficial to them and FMO IDF. A good example is DutchBangla Bank.
- Being prepared to support companies through difficult periods is developmentally and fiancially beneficial, most notably in the case of Kenmare, as well as KivuWatt.
- There is no substitute for extensive, on the ground, technical and commercial due diligence. This was lacking in Grown Energy and Zanzibar Sugar.
- Working with development partners, as was the case in Guarantco, enhances project quality.
- Even though key issues such as corporate governance can appear to have been covered as part of due diligence, as was the case for Omera Petroleum, judgements still have to be made on whether project sponsors and counterparts will honour commitments they make to secure IDF funding.
- Innovative projects such as Pan African Housing that appear to be bringing something new to their sector are inherently more risky as it is only in implementation that the viability of a business model can be tested.
- Mangement teams and individuals may have successful careers in certain sectors and countries/regions. Nevertheless when they move into new areas it is uncertain how they will adapt and perform as was the case with PAH.

4. Conclusions

This chapter opens with an overall assessment of the IDF programme, in particular its appropriateness and performance. There then follows a synthesis of ratings, with the major and most significant findings and conclusions presented. They are grouped according to overarching (strategic) themes and with reference to the six Evaluation Questions.

4.1 Overall Assessment

IDF was well conceived to meet a clear lack of finance for high- and higher-risk infrastructure projects, especially in low-income countries (LICs), the initial focus being on seven LICs (six of them in Africa and Bangladesh). FMO was an appropriate implementing agency given its long track record as a DFI operating in developing countries with proven expertise in infrastructure. The focus of IDF was clearly complementary to that of FMO-A which had credit risk limitations on the countries and types of projects that it could finance.

After being established in 2002, the build-up in IDF project commitments and the portfolio was rapid, especially in Africa, reaching an annual level of commitments in 2006 of €140m before falling to much lower levels in subsequent years. As would be expected in a high-risk green field programme, there were mixed results in terms of the developmental performance of IDF projects and the financial performance of the portfolio. There have been significant project successes and the inevitable project failures. Some failures are to be expected given that IDF was supporting projects in LICs in which FMO-A had little or no experience as the country credit ratings were too high. At project level a programme such as IDF has to expect higher portfolio losses than FMO-A when it supports innovative high-risk projects in challenging environments. In fact, if there had not been some failures then it would indicate that IDF had been too cautious in its project selection. Nevertheless, it should be noted that, in the early years in particular, a number of high-value investments were made that have been both developmental and financial failures[62].

If MFA/DGIS is considering whether or not to provide further funding for IDF beyond the current mandate that terminates at the end of 2018, it may be helpful to take into account the finding of this evaluation that the performance of IDF overall has been generally satisfactory. Moreover, the shortage of infrastructure finance in LICs and the other constraints that were identified at the time IDF was established in 2002 persist. In view of the existing global infrastructure gaps, the rationale for IDF 2 is as strong as

[62] Of note is the aggregate €50m invested in the Bengaz and Sotogaz projects that both supported the West African Gas Pipeline project that is only transporting a small fraction of the expected gas volumes from Nigeria to countries along the west African coast.

it was for IDF 1[63]. FMO remains an appropriate institution for continuing the management of IDF although, as described below, there are a number of strategic and operational issues that need to be addressed if IDF 2 is to maximise its developmental effectiveness.

In terms of funding from DGIS, the ADE Revolvability Model shows that an annual commitment level of €60m will require a total funding (top-up) from DGIS of €115m over the period 2020-2023. If, however, commitments are reduced to €50m then the DGIS funding requirement drops to €76m.

4.2 Development Effectiveness of IDF Portfolio

It was not possible to assess the effectiveness of all the projects in the portfolio because the FMO management information systems do not capture this information. Instead a sample of 15 projects, judged as broadly representative of the overall portfolio, was examined in detail; this included field visits to eight of these projects.

The table below presents an overview of the evaluation's ratings for the 15 IDF sample projects according to the key evaluation criteria.

Table 24 – Summary Project Ratings

Summary Project Ratings																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Project	**Average**	**Artumas Mwara**	**Axiata**	**Bengaz**	**Digicel**	**Dutch Bangla**	**Eolo**	**Essel Clean Solns**	**Grown Energy**	**Guarantco**	**Kenmare**	**Kivu Watt**	**Omera Petroleum**	**Pan African Housing**	**Songas**	**Zanzibar Sugar**
Country		Tanzania	Bangla-desh	Benin	Haiti	Bangla-desh	Nicaragua	Nepal	Mozam-bique	Global	Mozam-bique	Rwanda	Bangla-desh	Africa	Tanzania	Tanzania
Sector		Energy	Telecoms	Energy	Telecoms	Financial	Energy	Energy	Agri-business	Financial	Mining	Energy	Energy	Housing	Energy	Agri-business
Region		Africa	Asia	Africa	Latin America	Asia	Latin America	Asia	Africa	Global	Africa	Africa	Asia	Africa	Africa	Africa
Additionality	2.8	2.0	3.3	1.5	3.0	3.3	3.3	3.0	3.0	3.0	3.0	3.0	3.0	3.3	3.0	2.0
Effectiveness	2.5	1.8	3.0	1.2	3.8	2.2	3.6		1.0	3.0	2.6	2.8	2.6	2.6	3.6	1.4
Financial sustainability	2.5	1.0	4.0	1.0	4.0	4.0	3.0	3.0	1.0	3.0	2.0	3.0	3.0	1.0	3.0	1.0
ESG	3.1	2.5	3.0	3.0	3.0	3.0	4.0	3.0	2.5	3.0	3.0	3.5	3.5	3.0		3.0
Efficiency	2.7	1.5	3.5	1.5	4.0	2.5	4.0	3.0	1.0	3.5	2.5	3.0	2.0	3.0	3.0	2.0
Overall	**2.7**	**1.8**	**3.4**	**1.6**	**3.6**	**3.0**	**3.6**	**3.0**	**1.7**	**3.1**	**2.6**	**3.1**	**2.8**	**2.6**	**3.2**	**1.9**

Rating scale: 4- Highly satisfactory; 3- Satisfactory; 2- Partly Satisfactory; 1- Unsatisfactory

Source: ADE

[63] Report of McKinsey Global Institute on "Bridging Global Infrastructure Gap "June 2016: https://www.mckinsey.com/~/media/McKinsey/Industries/Capital%20Projects%20and%20Infrastructure/Our%20Insights/Bridging%20global%20infrastructure%20gaps/Bridging-Global-Infrastructure-Gaps-Full-report-June-2016.ashx

Four of the five evaluation criteria fall below a "satisfactory" rating. The sample scored highest on ESG, reflecting FMO's ESG expertise. Additionality was satisfactory or better for 80% of sample projects (12 out of 15). Catalytic effect (a sub-set of additionality) was however lower (sub-rating of 2.6). Effectiveness and financial sustainability scored worst (2.4 and 2.5 respectively), reflecting the poor performance of a substantial proportion of the sample of projects.

In terms of project performance, just over half (8) of the 15 had a "satisfactory" or better rating. These projects were in various sectors, including the two telecoms projects, three energy projects and the financial institution (FI). The four "partly satisfactory" projects comprise two energy projects, one FI and the mining company. The four that were "unsatisfactory" include the two agribusiness projects and two in the energy sector. Regionally all the unsatisfactory projects were in Africa, while those that were satisfactory were spread across all three regions.

While all the other rating categories had to be based on the sample of 15 reviewed projects, additionality could be judged more broadly (data on all 95 IDF projects were reviewed).

- The effectiveness of the portfolio of projects was clearly mixed. Indeed, the effectiveness (i.e. delivery of outputs) of the overall selected portfolio was generally satisfactory, with about 70% of the sample performing satisfactorily. However, only about half of the sample performed satisfactorily in terms of providing outputs on time and within budget, while the other half under-performed. Establishing infrastructure projects that meet their development potential proved challenging. There were also limitations in the way in which development outcomes were articulated in financial proposals and subsequently tracked in FMO systems. It should be noted that while significant cost overruns and implementation delays do not necessarily threaten the viability and development effectiveness of projects, in many instances they are linked with poor outcomes. In particular, if a project has a financially strong and technically committed sponsor that is prepared to do what is necessary to put it on track and meet its original output and outcome goals, then setbacks can be relatively temporary in nature. This is the case with KivuWatt. On the other hand, it turns out that a poorly designed and structured project such as Bengaz, which has failed, has not benefited from a strong sponsor.

- Sectorally, IDF investments in telecoms and energy (sectors in which FMO has a long track record and expertise) performed well. On the other hand, agri-business projects were the worst performers. The two agri-business projects reviewed[64] have not been successful, although one (Zanzibar Sugar) may yet be. This may be due to a lack of FMO experience in projects involving *inter alia* primary agricultural production. Agri-business projects involving farming activities require strong agricultural and local knowledge, something that FMO does not have.[65]

64 Zanzibar Sugar in Tanzania and Grown Energy in Mozambique.

65 FMO notes this to be a rather bold statement, if it is based only on the Zanzibar case. The Agri sector is one of the Focus Sectors of FMO, financing infrastructure related investments (like irrigation equipment, storage capacity) and special programs for financing rural SME's, cooperatives and smallholders. Investments are if

- Assessing the private sector development contribution of infrastructure projects is inherently difficult but is made even more challenging by the fact that the expected developmental effects are not articulated in the finance proposals nor reported on by clients. Job creation is predominantly indirect. There are multiple examples of direct and indirect employment generation being delivered by IDF projects, notwithstanding that *ex ante* estimates of indirect employment generation may be generous.

- Successful outcomes are associated with strong, committed sponsors with the requisite sector skills and experience in developing countries, as was the case, for example, with the two telecoms projects reviewed and two energy projects in Nicaragua and Tanzania.

- Grants are less well monitored than investments. In the case of convertible grants to Grown Energy in Mozambique the data available was incomplete. No tracking of possible conversion of the grants into equity was undertaken.

- Measurement of results and development impact of IDF is an issue:
  - There were major changes in FMO's monitoring, evaluation and learning (MEL) framework that applied to IDF projects, making it difficult to compare development outcomes in a consistent manner. There were multiple changes to score-card systems and development indicators. Before 2014 a combination of three *ex ante* methodologies were used to evaluate IDF outcomes[66], whilst partially following the Multilateral Development Bank (MDB) Evaluation Cooperation Group (ECG) Good Practice Standards (GPS) for private sector evaluation. As from 2014 a changed impact framework approach aimed at linking FMO activity to expected impacts.
  - In finance proposals, development outcomes and impacts are not well articulated. Unlike other development institutions such as IFC, FMO does not use a comprehensive development evaluation system that allows tracking of the performance of the entire IDF portfolio based on key performance indicators. Moreover, the reporting conditions in IDF legal agreements focus on financial and ESG information but not on project outputs or performance and development outcomes[67].
  - A limited number of external evaluations have been or are being carried out (e.g. ongoing KivuWatt which involves baseline, mid-line and end-line studies) but there is limited evidence of application of lessons learned. There is a lingering impression that the MEL Framework is as much a historical record as a system

needed coupled with capacity development funds, through which technical assistance can be financed. ADE does not accept this comment. There were 2 agri-business projects in the sample of 15. Moreover, as stated, the finding refers specifically to projects that involve actually growing commodities, as opposed to buying them from out-growers or intermediaries..

66 Namely: EDIS (Economic Development Impact Score), DII (Development Impact Indicator) and Quantitative Indicators – which vary by sector and investment modality.

67 A single evaluation has been finalized (SOCOPRIM), as a result of which knowledge-sharing sessions were reportedly undertaken.

for feedback of lessons learned which may inform project and portfolio implementation management and strategy.
  - Within FMO there are only three evaluation specialists compared with 27 for ESG, showing a relative lack of commitment to assessing the developmental performance of projects.

- The case studies identified *inter alia* the following drivers of project performance:
  - Quality of due diligence, especially on technical issues.
  - FMO's and IDF's willingness to support companies through difficult periods is developmentally and financially beneficial.
  - Innovative projects with untested business models are inherently more risky both financially and developmentally.

Possible Consequences of FMO 2025 Strategy

- The 2025 Strategy adopted in mid-2017 will limit the scope of IDF activities to renewable energy, agri-business and related areas, with support for other infrastructure sectors only possible indirectly through private equity funds. The IDF 2 portfolio will most probably be less diversified. Moreover, in low-income countries, which are IDF's focus, it may be difficult to find sufficient projects that meet its more limited investment criteria. The IDF 2 portfolio may possibly grow more slowly than the average of €60m per annum of new commitments planned, which might weaken IDF 2's revolvability.

4.3 IDF Additionality

Additionality was generally satisfactory, but more recent approvals indicate increased focus on investments in more-advanced-income countries, which might create challenges to maintaining this positive level of additionality, *viz.*:

- In large infrastructure projects, in which IDF has provided relatively small proportions of the total financing, it can be difficult to identify and assess its additionality.

- IDF's additionality is generally highest in low-income countries. During the period 2012-2016 more IDF projects were approved in higher-income countries than in LICs in comparison with the period 2003-2011; if this trend continues, the additionality of IDF investments could decrease.

- IDF's additionality is higher in sectors where there is a shortage of commercial and development finance. However, this is not always the case, as the Bengaz loan for on-lending to a $1billion regional pipeline company, sponsored *inter alia* by some of the largest oil companies, lacked adequate additionality.

- More than a quarter of IDF investments are allocated through regional or globally-oriented intermediaries or funds. However, no data are readily available within FMO on the question of in which countries these intermediaries have funded projects, so that the development dimension of additionality cannot be adequately assessed.

- IDF's additionality was highest where it invested alongside FMO-A, providing equity or quasi-equity while FMO-A extended a senior loan.

- IDF has adequately invested in risky financing instruments such as equity, mezzanine financing and provision of grants that enhance IDF's additionality.
- Local-currency-denominated loans to projects that have local currency revenues have clearly enhanced IDF's additionality. However, it can be concluded that an institution such as FMO, with a development-oriented financing window such as that from the IDF, could have provided even more local currency financing.

4.4 Environmental, Social and Governance

Risk in projects: FMO has a strong commitment to ESG. This can be observed in IDF projects and is a major contribution it makes to them:

- The IDF portfolio has, overall, accepted higher ESG risks than the FMO-A portfolio. There are signs that in recent years IDF has become slightly less tolerant of ESG risk.

- Overall the contribution of IDF-financed projects to green and inclusive development has been satisfactory.

- Minimisation of adverse environmental effects or site reinstatement in IDF projects has been addressed satisfactorily, with evidence of FMO concern for benign environmental legacies. ESG ratings for 15 projects were the highest of the five categories.

- Projects emitting <25kT CO_2 per annum, not classed as 'green', have no requirement to report on emissions.

- In the 15 projects reviewed social investments were identified, although an unexpected result of the 'development island' has been a major influx of persons from outside the area seeking work and other benefits; however, no social friction was reported.

- FMO due diligence management of ESG risks was, on the whole, to a high standard despite some ESG problems noted during implementation including tardy reporting. There is, however, evidence of FMO feedback resulting in improved implementation performance. On the other hand there is also evidence of FMO advocacy of ESG policies being taken up by clients who perceive positive operational efficiency benefits (e.g. two clients have achieved ISO 14001 registration). Field visits show that FMO's ESG expertise is valued by IDF clients and is a major contribution it makes to projects.

- There is limited identification of ESG 'lessons learned' and there is little evidence of such lessons being systematically collated, disseminated or applied in subsequent projects.

4.5 Revolvability and Financial Sustainability

The financial performance and viability of IDF has fluctuated owing to high portfolio losses. These were in large part only recognised from 2012 onwards. Viability remains a challenge.

- The most important driver of IDF performance has been the high level of losses and impairments in the portfolio, especially in equity investments. This is a consequence of poor project selection and weaknesses in due diligence where risks were underestimated or not identified. Loans with relatively high interest rates have been able to deliver a notional IRR of 5.2% compared with a negative IRR for equity of -6.6%. There have been few significant equity gains to offset the equity investments that failed.

- 77% by value of the projects made since 2002 were still on the balance sheet in 2016, indicating low levels of assets being recycled, in part due to portfolio problems and also the difficulty of exiting from equity investments in illiquid markets.

- Revolvability has fluctuated considerably since IDF was established. The ratio reached a low of 78% in 2014 before recovering in 2016 to 95%, indicating that net assets are still 5% below what DGIS invested in IDF.

- The financial sustainability of the 15 projects reviewed was mixed, IDF having done best in those infrastructure sectors in which it has the most experience, especially in energy.

- Projects that are suggested or proposed by DGIS for financing through IDF funding, given that they fit Government policy very well, can conflict with the objectives of the Fund. In the case of Guarantco, the investment was in line with the DGIS policy of stimulating infrastructure investment through the PIDG initiative. The investment in Guarantco, however, violated the revolvability principle of the Fund as it was clear from the beginning that exit could only take place in 2040.

4.6 Efficiency and FMO Management of IDF

- FMO has generally good financial and portfolio management systems, but financial proposals and legal agreements put insufficient focus on development outcomes and effectiveness, and reporting on IDF is limited. FMO's front office staff are competent and well regarded by clients.

- FMO's management of IDF has generally been satisfactory and efficient, although the due diligence on a number of projects was below normal standards

and monitoring was not always thorough. Documentation on early IDF projects was often incomplete and difficult to access, in part - ADE was told - because of changes in FMO systems.

- Historically the management fee paid to FMO has been low in relation to what other comparable public and private funds pay. It is however being raised as this evaluation entered its final phase (mid 2018).

- IDF's reporting provides insufficient information on its overall performance and financial condition, especially when compared with what FMO provides to pension funds whose assets it manages. Specifically, annual reports focus only on operations in that calendar year and not on trends in, for example, sector and regional performance.

4.7 Coherence with Dutch Development Policy and involvement of Dutch Companies in IDF Projects

- It was only in 2013 that IDF was requested to bring Dutch companies into its projects wherever possible. Although IDF's activities are consistent with Netherlands development policy objectives in general and infrastructure in particular, there have been few linkages between IDF projects and other MFA programmes, making it difficult to compare development outcomes in a consistent manner with those of other Dutch Government infrastructure programmes.

5. Recommendations

5.1 General Recommendations

The following recommendations cover the strategic issues that are likely to have, or might have, a significant effect on IDF, both currently and for IDF 2 should it be launched.

- While, as a result of the adoption of the FMO 2025 Strategy, the focus of IDF 2 will be on renewable energy, agri-business and so forth, IDF should be able to support directly - and not just through funds - projects in the sectors that IDF 1 has supported, provided that there are very strong developmental reasons for doing so. Such projects should not, however, compromise on having acceptable levels of financial risk so as to avoid the portfolio problems that have affected IDF 1 and threatened its viability.

- Consideration should be given to the reestablishment of a small general infrastructure department or unit within FMO that would maintain its expertise in non-energy project finance.

5.2 Operational Recommendations

Enhancing Development Effectiveness – The recommendations are focused on improving, on the one hand, the articulation of development outcomes when projects are being structured, and on the other hand their monitoring and evaluation following investment:

- Greater attention and effort should be given to the methodology and systematic implementation of the IDF MEL Framework. FMO support to IDF should include greater resources for MEL. Moreover M&E frameworks on development outcomes and impacts should be systematized and improved so that performance evaluation is possible for the entire IDF portfolio. For all IDF projects a logical framework or theory of change should be prepared as part of the financing proposal. Loan and investment agreements should also include reporting requirements for clients to report on developmental outcomes specified in log frames or TOCs, including sector-specific indicators.

- A larger proportion of projects should be subject to *ex post* evaluation, although not necessarily following the pattern of an impact evaluation. Project monitoring frameworks should be established to inform and facilitate such evaluations and contribute to 'real time' project implementation; this implies better progress reporting and a comprehensive self-evaluation system as is used by the MDBs.

- Convertible grants should be subject to the same reporting and monitoring procedures as IDF investments. Other grants should also be tracked to see whether development goals have been achieved.

- There should be institutionalisation and application of lessons learned, especially when new projects are being assessed. The 'learning' component of MEL should be a priority.

Consider an approach of maximising Additionality – These recommendations are intended to further enhance IDF's additionality:

- The principle that IDF financing should not be provided whenever adequate financing sources are available should be strictly followed. IDF should be a financier of last resort to maximise the role it plays.

- By focusing more on providing subordinated loans and other quasi-equity products that have a high likelihood of being catalytic, IDF's additionality could be further enhanced.

- Providing more loans in the form of local currency financing is essential, particularly as many IDF projects only generate local cash, whereby changes in foreign currency rates cannot easily be absorbed locally.

- Unless there is a strong developmental rationale, IDF financing should be avoided in those cases where IDF financing is one of few financing sources and where there are no prospects of being truly catalytic through attraction of financing from other development and commercial sources.

- The trend towards IDF investments being made in non-LICs that occurred during 2012-2016 should be reversed, with a renewed focus on LICs.

- As more than a quarter of the IDF portfolio is developed through regional or globally-oriented financial intermediary clients, closer monitoring of the monitoring of investments by such intermediaries is recommended, so that it is known in which countries the final beneficiaries are located. This would allow a detailed analysis of where projects supported by IDF, both directly and indirectly, are globally located.

Strengthening Revolvability and Financial Sustainability: the recommendations are framed to ensure that IDF 2 takes into account lessons learned from IDF 1 and from the ADE Revolvability Model.

- To reduce investment losses to acceptable levels in IDF there should be more focus during due diligence on identifying and mitigating risk. Start-ups in the agri-business sector, for example, should only be financed in exceptional circumstances.

- FMO should ensure that promoters of IDF projects have significant financial commitments to projects ('skin-in-the-game') and that the risk-to-return ratio for IDF is appropriate.

- Where possible FMO-A and IDF should co-invest (ideally with IDF in subordinated loans and FMO in senior loans).

- The IDF 1 portfolio should be liquidated more rapidly than is currently envisaged by FMO, especially direct equity stakes, so that more funding is available to IDF 2. The principle should be that IDF stays in a project only as long as necessary. More rapid recycling of the IDF 1 and IDF 2 portfolios should be the goal.

- The assumptions underpinning the ADE revolvability model need to be assessed by both FMO and DGIS for reasonableness and for making of the necessary adjustments. The RM should be updated regularly, at least on an annual basis, to retain its usefulness.

- Suggested or proposed Government loans should be handled with caution as they might threaten the revolvability of the IDF. Also, investments suggested or proposed by DGIS should not count in the revolvability ratio for IDF 2.

Environmental, Social and Governance Risk in Projects – while ESG on IDF projects is generally satisfactory, it is recommended that:

- for reputational purposes, in IDF projects an independent consultant should be appointed to report to IDF/FMO on compliance with ESG requirements (e.g. ESMP) and other contractual obligations of the client (and peer review of ESG studies, e.g. ESIA);

- a system is required for capturing and organising ESG experience gained from IDF projects at project and strategic levels so that lessons learned can easily be taken into account in new projects;

- reporting on GHG emissions (including GHG reduction) should be mandatory for all IDF projects.

Dutch Development Policy and Involvement of Dutch Companies in IDF Projects - IDF should prepare time-bound plans showing how IDF programmes comply with Dutch development policies and demonstrate the degree of such compliance in annual reports (together with proposed enhancement action if necessary).

Improving the Management of IDF - the following recommendations relate to improving the management by FMO and the accountability of IDF**:**

- The proposed €8m per year management fee for IDF 2, which was recently agreed by MFA, is an opportunity for ensuring *inter alia* better due diligence,

project monitoring, and fund reporting. Specifically, it is recommended that additional dedicated staff for IDF should be recruited or assigned by FMO. As a minimum, IDF should have a full-time fund manager and portfolio officer/analyst who work exclusively on IDF 2.

- IDF's reporting to MFA, and through the IDF website, should provide more detailed information on its overall performance and financial condition. While the reporting requirements on what FMO has to provide to pension funds whose assets it manages are probably excessive for IDF, they nevertheless provide a useful model. Reporting on portfolio performance in particular should be expanded so that trends can be identified from the start of the IDF mandate.

- As agri-business is now a priority sector, expertise in this field should be reinforced, especially for farming-related projects. IDF investments supporting agricultural projects that involve actual cultivation of primary products should only be made following in-depth technical due diligence investigations including site visits by experienced agricultural specialists.